### Table S1. Key informant interviews conducted in Niger State, Nigeria.

| Level      | Institution                      | Thematic Area                                                                 | Key Informant Position (n=34)                                      |
|------------|----------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------|
| Federal    | Federal Ministry of Health       | Policy and governance; finance; supply chain and national logistics;           | Federal iCCM\(^a\) focal person                                |
|            |                                  | HMIS\(^b\) and data; Supply chain and logistics                               | National supply chain officer                                    |
|            |                                  |                                                                               | National HMIS officer                                            |
|            |                                  |                                                                               | National bids and procurement                                   |
| NGO-National | Malaria Consortium              | M&E\(^c\) and commodities; program management;                              | NGO\(^d\) iCCM program director                                  |
|            |                                  | Supply chain and logistics                                                    | NGO logistics officer                                            |
| State      | State Ministry of Health         | Policy and governance; finance; Budget and finance; statistics                | High Commissioner                                                |
|            |                                  | Policy and governance; finance; HMIS and statistics                            | Executive State Primary Health Care Director                     |
|            |                                  | Service delivery; malaria and policy; Supply chain and logistics               | State Director Public Health                                      |
|            |                                  | Refresher training; supervision                                               | Director of Planning, Research and Statistics                    |
|            | SPHCDA\(^e\)                    | Community and social mobilization; Policy and sustainability; IMCI and iCCM policy | Demand creation officer                                          |
|            |                                  |                                                                               | Sustainability group leader                                      |
|            |                                  |                                                                               | IMCI\(^f\) coordinator                                           |
| NGO-State  | Malaria Consortium               | Policy and governance; finance; HR; service delivery; recruitment, training, supervision | Program coordinator                                              |
|            |                                  | Social mobilization                                                           | NGO Service delivery officer                                    |
|            |                                  | Supply chain and logistics                                                    | Demand creation officer                                          |
|            |                                  | Budget and finance                                                            | NGO logistic officer                                              |
|            |                                  | HMIS                                                                          | Finance officer                                                  |
|            |                                  |                                                                               | Data entry officer                                               |
| LGA        | Lapai LGA\(^h\)                 | Governance; financing; Supply chain; HR; HMIS                                 | Lapai Director of Health                                          |
|            | Rijau LGA                        | Governance and financing; Supply chain; HR                                   | Lapai iCCM focal person                                           |
|            | Rafi LGA                         | Supply chain; HR                                                              | Lapai M&E officer                                                |
|            | Edati LGA                        | Supply chain; HR                                                              | Rijau Director of Health                                          |
|            |                                  |                                                                               | Rijau iCCM focal person                                           |
|            |                                  |                                                                               | Rijau M&E Officer                                                |

\(^a\)iCCM: integrated community case management.
\(^b\)HMIS: health management information systems.
\(^c\)M&E: monitoring and evaluation.
\(^d\)NGO: nongovernmental organization.
\(^e\)SPHCDA: State Primary Health Care Development Agency.
\(^f\)IMCI: integrated management of childhood illnesses.
\(^g\)HR: human resources.
\(^h\)LGA: local government area.
Table S2. Key informant interviews conducted in Malawi.

| Level         | Institution                          | Thematic Area                      | Key Informant Position (n=30)                      |
|---------------|--------------------------------------|------------------------------------|--------------------------------------------------|
| National      | Malawi Ministry of Health            | Policy; finance; sustainability     | IMCI\(^a\) Coordinator                           |
|               |                                      | HMIS\(^b\)                         | National HMIS Officer                             |
| NGO\(^c\) -  | Save the Children                   | Policy; finance                    | NGO Senior Child Health Manager                  |
| National      |                                      | Supply chain; HMIS                 | Supply Chain Focal Person, Team Leader           |
| District      | Dedza DHO\(^d\), MoH \(^e\)         | Supervision; service delivery;     | Dedza District Health Officer                    |
|               | Ntcheu DHO, MoH                      | supply chain; HR; mobilization;    | Ntcheu District Environmental Health Officer     |
|               | Nkhatabay DHO, MoH                   | management; sustainability         | Nkhatabay District Environmental Health Officer  |
|               | Mzimba North DHO, MoH                |                                    | Mzimba North District Health Officer             |
|               |                                      |                                    |                                                 |
|               | Dedza DHO, MoH                       | Supervision; service delivery;     | Dedza District Environmental Health Officer     |
|               |                                      | supply chain; HR; mobilization;    | Ntcheu District Environmental Health Officer     |
|               |                                      | management; sustainability         | Nkhatabay District Environmental Health Officer  |
|               |                                      |                                    | Mzimba North Principal Environmental Health Officer |
|               | Ntcheu DHO, MoH                      | Supply chain and HMIS              | Dedza District Pharmacist                        |
|               | Nkhabata Bay DHO, MoH                | HMIS and M&E\(^g\)                | Nkhabata Bay District Pharmacist                 |
|               | Mzimba North DHO, MoH                |                                    | Nkhabata Bay District HMIS in-charge             |
|               |                                      |                                    | Mzimba North District HMIS in-charge             |
|               | Dedza DHO, MoH                       | supervision; service delivery;     | District IMCI Coordinator                        |
|               |                                      | supply chain; HR; mobilization;    | District IMCI Coordinator                        |
|               |                                      | management; sustainability         | District IMCI Coordinator                        |
|               | Ntcheu DHO, MoH                      |                                    | District IMCI Coordinator                        |
|               | Nkhabata Bay DHO, MoH                |                                    | District IMCI Coordinator                        |
|               | Mzimba North DHO, MoH                |                                    | District IMCI Coordinator                        |
|               | Dedza DHO, MoH                       | Supervision; mobilization;         | ADEHO\(^h\)                                     |
|               |                                      | management                         |                                                 |
|               | Ntcheu DHO, MoH                      |                                    |                                                 |
|               | Nkhabata Bay DHO, MoH                |                                    |                                                 |
|               | Mzimba North DHO, MoH                |                                    |                                                 |
|               | Mzimba North DHO, MoH                |                                    |                                                 |
| NGO - District | Save the Children                   | Supervision; service delivery;     | Save District program coordinator                |
|               |                                      | supply chain; HR; mobilization     | Save District program coordinator                |
| Community     | Chinteche Village                    | Mobilization and community         | Village Chief                                    |
|               |                                      | engagement                         |                                                 |

\(^a\)IMCI: integrated management of childhood illnesses.

\(^b\)HMIS: health management information systems.

\(^c\)NGO: non-governmental organization

\(^d\)DHO: district health office.

\(^e\)MoH: ministry of health.

\(^f\)HR: human resources.

\(^g\)M&E: monitoring and evaluation.

\(^h\)ADEHO: assistant district environmental health officer.
Table S3. Key informant interviews conducted in Abia State, Nigeria.

| Level       | Institution | Thematic Area                                      | Position (n=28) |
|-------------|-------------|---------------------------------------------------|-----------------|
| NGO National| SFH NGO     | Supply chain and national logistics                | SFH National logistics officers |
| State       | State Ministry of Health | Policy and governance; finance; sustainability Budget; finance; statistics | High Commissioner assistant Executive SPHCDAb Permanent Secretary Director of Planning, Research and Statistics Pharmacy director HMIS officer |
|             | SPHCDA      | Policy and governance; finance; sustainability IMCIa and iCCMc policy; logistics, service delivery; supervision | Executive Secretary SPCHDA iCCM Coordinator |
|             |             | IMIS and iCCMc policy                             | Agency M&Ed officer IMCI coordinator |
| NGO-State   | SFH NGO     | Policy and governance; finance HRg; service delivery; clinical audit; recruitment; training; supervision IMIS and statistics Budgets and finance | Program coordinator NGO consultant and logistics officer NGO HMIS officer Finance officer |
| LGA         | Ikwuano LGAi | Governance; financeing; supervision; sustainability HMIS | LGA Head of Department Data entry officer LGA M&E officer |
|             | Bende LGA   | Governance; financing Supply chain; HR HMISM | LGA Head of Department LGA iCCM focal person LGA M&E officer LGA chairman Social mobilization officer |
|             |             | Governance; financing Social mobilization and community | |
|             | Umuahia North LGA | Supply chain and logistics | LGA pharmacist LGA M&E officer Social mobilization officer |
|             | LGA         | HMIS Social mobilization and community | |
|             | Osisioma LGA | Supply chain; HR | LGA iCCM focal person |
|             | Ohafia LGA  | Supervision and policy; data and supplies | Clinical officer |

aNGO: nongovernmental organization.
bSFH: Society for Family Health.
cSPHCDA: State Primary Health Care Development Agency.
dHMIS: health management information system.
eIMCI: integrated management of childhood illnesses.
fiCCM: integrated community case management.
gM&E: monitoring and evaluation.
hHR: human resources.
iLGA: local government area.
### Table S4. Key informant interviews conducted in Democratic Republic of the Congo.

| Level     | Institution         | Thematic Area                                                                 | Key Informant Position (n=28)                                      |
|-----------|---------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------|
| National  | National MoH\(^a\)  | Policy and governance; finance                                                 | IMNNMCIC\(^b\) program coordinator                              |
|           | UNICEF\(^c\)       |                                                                                | UNICEF ICCM coordinator 1                                          |
|           |                     |                                                                                | UNICEF ICCM coordinator 2                                          |
| Province  | DPS\(^d\), Province | Policy; finance; supply chain; supervision; M&E\(^e\); mobilization            | Encadreur Provincial                                            |
|           |                     | HMIS\(^f\) and M&E                                                               | DPS data manager                                                |
| NGO-Prov  | IRC\(^g\)           | Policy and governance; finance                                                 | PCIME\(^h\) coordinator IRC                                    |
| Zone      | Kalemie Zone, BCZ   | Supervision; supply chain; HR; HMIS; management; sustainability               | Focal person ICCM\(^i\), BCZ                                   |
|           | Moba Zone, BCZ      |                                                                                | Focal person ICCM, BCZ                                           |
|           | Kansimba, BCZ       |                                                                                | Focal person ICCM, BCZ                                           |
|           | Nyemba Zone, BCZ    |                                                                                | Focal person ICCM, BCZ                                           |
|           | BCZ, Tanganyika Province |                                                                                | Focal person ICCM, BCZ                                           |
|           | Kalemie Zone, BCZ   | Supply chain and logistics                                                      | BCZ pharmacist                                                   |
|           | Nyemba Zone, BCZ    |                                                                                | BCZ pharmacist                                                   |
|           | Kansimba, BCZ       |                                                                                | BCZ pharmacist                                                   |
|           | Moba Zone, BCZ      |                                                                                | BCZ pharmacist                                                   |
|           | Kalemie Zone, BCZ   | HMIS and M&E                                                                    | Data management officer                                         |
|           | Moba Zone, BCZ      |                                                                                | Data management officer                                         |
|           | Kalemie Zone, BCZ   | Supervision; supply chain; HR; HMIS; management; sustainability               | BCZ pharmacist                                                   |
|           | Nyemba Zone, BCZ    |                                                                                | BCZ pharmacist                                                   |
|           | Kansimba, BCZ       |                                                                                | BCZ pharmacist                                                   |
|           | Moba Zone, BCZ      |                                                                                | BCZ pharmacist                                                   |
|           | Kalemie Zone, BCZ   |                                                                                | MCZ                                                            |
|           | Nyemba Zone, BCZ    |                                                                                | MCZ                                                            |
|           | Kansimba, BCZ       |                                                                                | MCZ                                                            |
|           | Moba Zone, BCZ      |                                                                                | MCZ                                                            |
| NGO-Zone  | Kalemie Zone, IRC   | Program management; stakeholder relations; supervision; supply chain; HR;     | IRC focal person                                                |
|           | Nyemba Zone, IRC    | HMIS; management; sustainability                                                | IRC focal person                                                |
|           | Kansimba, IRC       |                                                                                | IRC focal person                                                |
|           | Moba Zone, IRC      |                                                                                | IRC focal person                                                |

\(^a\)MoH: ministry of health.
\(^b\)IMNNMCIC: integrated management of neonatal, maternal, and child health.
\(^c\)UNICEF: United Nations Children’s Fund.
\(^d\)DPS: divisions provinciales da la santé (provincial health divisions).
\(^e\)M&E: monitoring and evaluation.
\(^f\)HMIS: health management information system.
\(^g\)IRC: International Rescue Committee.
\(^h\)PCIME: prise en charge intégrée des maladies de l’enfance (ICCM of childhood illness).
\(^i\)BCZ: bureau central de la zone de santé (health zone central office).
\(^j\)HR: human resources.
\(^k\)ICCM: integrated community case management.
\(^l\)MCZ: médecin(e) chef de zone (area chief physician).