

3. Outputs

Description: Broadly, outputs are *immediate results achieved at the program level through the execution of activities*.¹³ Within the CI, this corresponds to provision and utilization of health services. Quality of services should be documented as a program output where data are available through program reports or complementary studies. In most cases, quality of services and client satisfaction are outside the scope of documentation, and will be addressed through other sub-studies conducted as part of the independent evaluation.

Measures: Table 3 presents examples of the minimum documentation required to describe the program outputs within CI countries. If any of the quantitative indicators presented below highlights a problem, this will require further investigation using more qualitative methods. All measures should be disaggregated to the lowest geographic level possible given available data and feasibility of collection.

Data sources: The documentation of outputs relies heavily on the compilation of routine program reporting and meeting notes. Description and explanations of the level of outputs will rely on routine program narratives and interviews with program implementers.

Periodicity: Outputs should be monitored at least every six months.

¹³ Frankel, N. & Gage, A. Monitoring and Evaluation Fundamentals: A mini-course. Chapel Hill, NC, MEASURE Evaluation, 2007.

4. Changes in the program as a result of the independent evaluation.

Description: An additional part of program documentation involves careful recording of any monitoring results or other information provided to program managers by the independent evaluation team and changes in programming that result from this feedback. The feedback provided by independent evaluators may prompt changes in program planning or implementation, and must be carefully documented. For example, assessment of the potential impact of different intervention packages using the Lives Saved Tool (LiST) may stimulate changes in the program focus on certain interventions.

Measures: Table 4 presents examples of the types of evaluation activities that may prompt changes and minimum documentation required to describe the program changes as a result of the independent evaluation. Documentation in this area will be primarily qualitative in nature, although quantitative measures should be recorded, if available. All descriptions and measures should consider changes at the lowest geographical level possible.

Data sources: The documentation of changes as a result of the independent evaluation relies on reports generated by the independent evaluation and narrative accounts of program managers and implementers. We recommend interviews with program managers and implementers at the national level annually, using the questions presented in table 4 as a guide.

Periodicity: Any changes in the program as a result of the independent evaluation should be documented for every “evaluation event” (for example, design workshops, results presentations, etc) and assessed regularly every twelve months.

Table 4. Documentation of changes in the program as a result of the independent evaluation	
Examples of evaluation activities / “events”	<ul style="list-style-type: none"> • Early assessment of program inputs and processes (e.g. LiST projections of potential impact of different intervention packages, program assessment templates); • Coordination with other development partners around evaluation activities; • Reporting of documentation and quality of services results; • Reporting of contextual factors and program mapping results; and/or • Reporting of outcomes and/or impact results.
Description of potential changes	<p>Did any of the following change as a result of an evaluation activity or event? How did they change?</p> <ul style="list-style-type: none"> • Partner coordination? • Interventions, or a focus on certain interventions? • Target populations or targeted geographic areas? • Delivery strategies? • Funding allocation for certain interventions, geographic areas, delivery strategies? • Processes, such as types of training, IEC activities, community mobilization, supervision, etc? • Program monitoring? • District or national planning processes? • Consideration of contextual factors and/or other partner activities in program planning and processes
Additional checks that the evaluation activity resulted in the changes	<ul style="list-style-type: none"> • Is the evaluation activity consistently mentioned as the primary reason for the change in the program? • Did the changes occur after the evaluation activity? • Is it plausible that the change occurred because of the evaluation activity?
Data sources/ notes	Notes for the record, workshop reports, reports on evaluation results, and follow-up interviews

DOCUMENTATION METHODS

Documentation consists primarily of extraction of data from routine and other sources, and involves limited collection of primary data. Some descriptive information will require supplementary interviews with key informants.

At the ***national level***, information will be extracted from routine plans, budgets and reports. Interviews with program managers and implementers are likely to be required every six months to supplement written information and to assess any changes that may have occurred due to independent evaluation activities.

At the ***district level***, documentation should be conducted by a team that is consistent over time. The team should visit the district level regularly, at least every six months, to collect all available information. Information extracted at the district level should include district-specific plans and budgets; district-level partner coordination; training, supervision, IEC, and community mobilization activities; district-level monitoring; service provision and utilization; and the availability of commodities in facilities and community. All information should be sourced, and the documentation team should look for primary data sources and evidence to support the collected information. Additionally, during the district level visits, brief interviews with program managers and implementers will be necessary to provide supplemental information.

Model templates for data extraction and compilation at the national and district level are under development. Specific methods and tools for documentation will need to be adapted in collaboration with the in-country and IIP/JHU teams in each country taking into consideration the local data collection platforms.

Periodic interactions with program managers and implementers will be necessary to feed-back documented information and to ensure that the collected and summarized information is correct and consistent.

DATA BASE CONSTRUCTION AND MAINTENANCE

Preliminary guidance is provided here; further direction will be provided as the first countries move forward in their plans. Please contact the IIP/JHU research team before beginning work on the construction of the data base for documentation.

Data bases will be constructed as Excel workbooks. Each sheet within a workbook will address one aspect of documentation. Within each sheet, rows will represent the geographic subunits and columns will be the variables in the documentation plan.

Pre-coded (numeric) variables should be used whenever possible. Where text is needed, narrative statements will be used initially, and then transformed into categorical variables after sufficient data are available to support an analysis of the range of responses. Work is on-going on developing a standard structure for the data base.

ASSESSING LEVELS OF PROGRAM INTENSITY

Information collected through prospective documentation activities will be utilized to estimate the level of program intensity across districts. Further technical work is planned to develop methods for estimating levels of program intensity.

DOCUMENTING CONTEXTUAL FACTORS

The CI program is adapted to each country's health system; and documentation efforts must therefore also be adapted to collect information on contextual factors affecting maternal and child health in the areas included in the evaluation design. There are two main objectives for documenting contextual factors within the scope of the evaluation:

- As a basis for selecting comparison areas and/or conducting dose-response analysis; and
- To identify possible confounding factors and effect modifiers.

In order to capture the most detailed, accurate information, it is useful to collect contextual factors at the district or sub-district level and continuously monitor changes as they occur in real time.

Selection of comparison areas and/or dose-response designs

To estimate the differential impact of the CI program over routine services, one evaluation design option is to assess coverage and impact in a CI area compared to a non-CI area. To maximize internal and external validity of the evaluation, non-CI comparison areas should have similar baseline characteristics to the CI implementation areas, especially baseline mortality, poverty and access to health care. Additionally, the comparison area should have similar demographic patterns and cause-of-death profiles since these factors may affect the impact of CI interventions.

Governments and partners are committed to reducing child mortality, creating a dynamic environment where various development organizations are implementing similar strategies within one country. In some situations, an ecological design will be required if an adequate "untouched" comparison area is not available. A newly proposed paradigm for large-scale effectiveness evaluations does not rely on the assumption of "untouched" comparison areas, and instead is based on an "evaluation platform" that can support ecological designs across an entire country.¹⁴ As more large-scale evaluations move towards ecological designs, tracking contextual factors across all evaluated areas is vital.

Identify possible confounding factors and effect modifiers

Confounding factors are associated with both the program and the outcome without being an intermediate factor. For instance, the presence of other, external child health programs in the intervention or comparison area is a possible confounding contextual factor. As part of the CI evaluation, we can ask for each country:

1. *What factors would independently affect child health and mortality outside of the CI program?*
2. *Are these factors different in the CI districts versus the non-CI districts?*

In addition to confounding, we would also need to document factors that could modify the effect of the CI program on child health and survival such as access to health care, drug availability and governmental health policies.

¹⁴ Victora CG, Black RE, Bryce J. Large-scale programmes in child survival: Why we need evaluation platforms. *Bulletin of the World Health Organization* 2009; 87(2):83.

1. What intermediate factors would modify the effect of the CI program on child mortality, but are not a component of the CI program?

The minimum set of contextual factors that should be documented in each participating country is listed in Annex 1, along with the recommended indicators and source of data. Indicators should be updated at least annually throughout the evaluation period.

ANNEX 1 : Contextual factors to be collected for each district in the evaluation areas.

Contextual Factors	Indicators	Timing	Source
Rainfall patterns	Average annual rainfall Seasonal rain patterns	Baseline	
Altitude	Height above sea level	Baseline	
Epidemics	Qualitative	Annually	Key informant interviews
Humanitarian crises	Qualitative	Annually	Key informant interviews
Socio-economic factors	Main language spoken in HH Women's education & literacy Wealth quintiles Ethnicity of head of HH Occupation of head of HH Poverty maps	Baseline; Endline	Survey
Other Child Health Programs	<i>See document on program mapping</i>	Baseline; Every 12 months	Program mapping exercise
Mortality	Under-five, infant and neonatal mortality Maternal mortality were applicable	Baseline; Endline	Survey
Cause of death profile	Cause of death for under-five children	Baseline	Countdown report; only available at national
Malnutrition	Stunting	Baseline; Endline	Survey
Demographic	Population Population density Urbanization Total fertility rate Family size	Baseline; Endline	Survey & census data
Access to health facility	Average travel time to nearest health facility per HH % of population within xx km of a health facility	Baseline; Endline	Survey & GIS mapping
Health facility quality	Health facility assessment	Baseline; Endline	Health facility assessment tool

Contextual Factors	Indicators	Timing	Source
Health worker/population ratio	Doctor/pop ratio Nurse/pop ratio Trained midwife/pop ratio	Baseline; Endline	Health facility assessment tool
Drug availability	ACT stocks Cotrimoxazole stocks Other drugs	Baseline; Every xx months	Health facility assessment & key informant interviews
User fees	What services require a fee? How much is the fee?	Baseline; Every xx month	Health facility assessment & key informant interviews
Health Policies	Health insurance scheme Change in national drug policy	Baseline; Every xx months	Key informant interviews