OPERATIONS MANUAL

Support to Improve Maternal and Child Health (GY-L1058)

FIRST DRAFT

September 2016

ACRONYMS

CMO	Chief Medical Officer
EA	Executing Agency
ESMP	Environmental and Social Management Plan
GOG	Government of Guyana
ICAS	Institutional Capacity Assessment System
IDB	Inter-American Development Bank
MCH	Maternal and Child Health
M&E	Monitoring and Evaluation
MoPH	Ministry of Public Health
MoU	Memorandum of Understanding
OM	Operations Manual
PC	Project Coordinator
PMR	Progress Monitoring Report
PEP	Project Execution Plan
RDC	Regional Democratic Councils
RHA	Regional Health Authorities

Contents

I. INTRODUCTION

1.1 Background

This Operations Manual (OM) establishes the terms and conditions that will apply during the execution of the IDB-financed "Support to Improve Maternal and Child Health" (GY-L1058). The total cost for the project is US$8.0 million, 50% of which will be funded by the Inter-American Development Bank's (IDB) Ordinary Capital (OC) and 50% by the Fund for Special Operations (FSO). The executing agency for the project is the Ministry of Public Health (MoPH), who will be responsible for Project implementation through its Maternal and Child Health (MCH) Unit.

1.2 Scope and Objectives of the Operations Manual

This OM contains the rules and procedures for the execution of Project GY-L1058. The objectives of this OM are to:

1. Define the implementation arrangements for the execution of GY-L1058, including the roles and responsibilities of the management and support personnel responsible for the Government of Guyana (GOG) contributions;
2. Guide the financial management, procurement, and other operational procedures to be performed under the project, to ensure consistency, timeliness, accuracy and compliance with IDB norms and guidelines; and
3. Provide users with information and reference materials that will assist them with the implementation of GY-L1058.

This OM reflects the Loan Contract (XXXX/BL-GY) between the Government of Guyana (GOG) and the IDB. Nothing in this manual alters the rights and obligations of the parties as specified in the Loan Contract.

1.3 Operations Manual Use, Duration, and Modifications

The use of this OM will be considered as a requirement for all the parties involved in the Project and responsible for the achievement of the agreed objectives - provided that the national and sectoral authorities have free access to this document. It is recommended that the OM be revised every twelve (12) months or more frequently, if necessary.

II. PROJECT DESCRIPTION AND FINANCING STRUCTURE

2.1 Project Objective

The overall **objective of the project** is to contribute to the reduction of maternal, perinatal, and neonatal deaths in Guyana.

This project is consistent with the Update of the Institutional Strategy 2010-2020 (AB-3008) and is aligned with the development challenge of social inclusion and equality, by increasing access and use of health services and diminishing inequities. It is aligned with the cross-cutting theme of gender equality and diversity, by improving women and indigenous people's access to sexual and reproductive health services and enhancing their capacities to make informed choices. Additionally, it will contribute to the Corporate Results Framework 2016-2019 (GN-2727-6) by reducing maternal mortality and increasing the number of beneficiaries receiving health services.[1] It is also aligned with the Strategy on Social Policy for Equity and Productivity. It is consistent with the Sector Framework for Health and Nutrition and its priority that all people have timely access to quality health services. It will support the Country Strategy with the Cooperative Republic of Guyana: 2012-2016 (GN-2690) goal of improving access to basic social services to the indigenous people.

2.2 Project Components

GY-L1058 comprises the following three major components:

a) Component 1: "Strengthening reproductive, maternal and neonatal health services". Comprises two subcomponents:

   a. *Sub-Component 1: "Access and use of reproductive, maternal, and neonatal health services"*, whose objective is to increase access and use of reproductive, maternal, and neonatal health services. To achieve this objective, this component will finance: (i) strengthening of the community platform and the primary level of care for service delivery in regions 3, 4, and 9;[2] (ii) procurement of equipment/supplies; (iii) strengthening of the maternity waiting home strategy, including the development of individual and community plans to support women and newborns to access facilities in region 9; and (iv) design and implementation of behavior change communication strategies, including messages targeted at adolescents, men, and indigenous people.
   b. *Sub-Component 2: "Quality of reproductive, maternal, and neonatal health services"*, whose objective is to improve the quality of reproductive, maternal, and neonatal health services. To achieve this objective, this component will finance: (i) design and implementation of a QIS in hospitals of regions 3, 4, and 9, including the improvement of clinical and management practices and the promotion of patient-centered and culturally-appropriate care; (ii) revision and update of guidelines, protocols, and strategies; (iii) improvements in the supply chain for contraceptive

[1] Country Development Results, Intermediate Outcome Indicator "2" and Immediate Outcome Indicator "9".
[2] The distribution of repellent and insecticide-treated mosquito nets for the prevention of malaria and other mosquito-borne diseases, such as dengue and zika, will be included. Currently, only 7% of pregnant women sleep under insecticide-treated mosquito nets (MICS 2014).

methods, drugs, and blood products,[3] including procurement of equipment; (iv) improvements in health information; and (v) development of skills in the workforce of regions 3, 4, and 9 related to reproductive, maternal, and neonatal health.

b) Component 2: "Strengthening the healthcare network". Aimed at increasing the effectiveness of the maternal and neonatal health care network. To achieve this objective, this component will finance: (i) assessment and reorganization of Guyana's healthcare and referral networks, including the revision and adjustment of the portfolio of services and the roles of different cadres of health workers; (ii) infrastructure improvements to C.C. Nicholson Hospital; (iii) procurement of equipment for health facilities, including GPHC, C.C. Nicholson Hospital, and the Georgetown maternity waiting home; and (iv) ambulances and communication.

c) Component 3: "Administration and evaluation". Will support project administration and evaluation activities.

2.3 Cost and Financing Structure of the Project

The estimated total cost of the proposed operation is US$8.0 million. The budget is as follows:

Table 1: Table showing Components/Activities and Component Values

	Components and sub-components	IDB US$	%
1	**Strengthening reproductive, maternal, and neonatal health services**	**2,920,000**	**36.5**
	Access and use of reproductive, maternal, and neonatal health services	1,230,000	
	Quality of reproductive, maternal, and neonatal health services	1,690,000	
2	**Strengthening the healthcare network**	**3,734,000**	**46.7**
3	**Administration and Evaluation**	**1,196,000**	**15.0**
	Staff	984,000	
	Monitoring, follow up and evaluation process	212,000	
	Contingencies	**150,000**	**1.9**
	TOTAL	**8,000,000**	**100.0**

2.4 Project Duration

The project duration will be for five years or 60 months as of the signature of the Letter of Agreement.

[3] Consultancy services to analyze bottlenecks that may be contributing to disruptions in the supply chain (critical activities to guarantee the availability of inputs, such as purchasing, storage, and distribution).

III. INSTITUTIONAL ARRANGEMENTS FOR PROJECT EXECUTION

3.1 The Executing Agency

The Executing Agency (EA) is the MoPH. The MoPH, through its MCH Unit, will assume responsibility for project implementation, including planning, execution, monitoring and evaluation, and financial and procurement activities.[4] Under the MoPH's governance structure, the MCH Unit forms part of the Family Health Department - one of six divisions that report directly to the Chief Medical Officer (CMO), who leads all public health and clinical/technical decisions. The MCH Unit is headed by the MCH Officer, who will assume technical responsibility for the project to facilitate integration with complementary activities of the MoPH and to ensure the sustainability of results. In order to strengthen the project management capacity of the MCH Unit, loan resources will finance a project coordinator who will report to the MCH Officer on technical aspects of the program. In accordance with the existing structure at the MoPH, the MCH Unit will discharge its duties in coordination with the Office of the Permanent Secretary and the Office of the CMO.

An institutional capacity assessment of the MoPH was conducted in June 2016 using the Institutional Capacity Assessment System (ICAS) methodology. The ICAS assessment concluded that the fiduciary risk is considered as medium. A re-evaluation of the fiduciary risks will be conducted during execution as part of the regular fiduciary supervision to ensure efficient support to project execution.

As per ICAS findings, the Office of the Permanent Secretary ensures "proper allocation of organizational, personnel and financial resources towards the attainment of the Ministry's strategic and operational goals and broad sector objectives". All administrative responsibilities which include the fiduciary duties are placed under the direct responsibility of the Office of the Permanent Secretary. However, the CMO provides "technical leadership and guidance for the implementation of sector specific programs and actions", hence creating a need to coordinate activities involving planning, execution and monitoring and evaluation of the fiduciary activities.

3.1.1 Overall Responsibility

The MoPH, through the MCH Unit, will carry out the following functions:

1. Be responsible for the overall management and coordination;
2. Chair a Steering Committee, which will meet on a monthly basis to closely coordinate Project activities with Project stakeholders, including the Ministry of Finance (MOF), the Ministry of Presidency, the Ministry of Communities, the Ministry of Indigenous Affairs, the Environmental Protection Agency, and others, as required to guarantee the effective execution of the Project (See Section 3.3 for responsibilities of the Steering Committee);
3. Prepare and submit Project Semi-Annual Reports to the Bank, one (1) month after each six-month reporting period, detailing progress of Project execution, financial execution and compliance with contractual clauses, following the Bank's standard format for this type of report. These reports will describe physical and technical progress in Project implementation, both cumulatively and for the period covered by said report, explaining variances between actual and planned Project implementation, and will report on the progress of procurement activities in relation to the overall procurement plan presented;

[4] The results of the Institutional Capacity Assessment System (ICAS) indicate that the MoPH has the institutional capacity necessary for the implementation of GY-L1058.

4. Monitor, manage, and report on financial progress of the Project, in compliance with the Bank's financial management requirements;
5. Prepare yearly execution plans and annual procurement and disbursement plans for the duration of the disbursement period of the Project, in compliance with Bank's procurement and legal requirements;
6. Provide any needed support to staff of the Bank during supervision missions as they evaluate performance of the Project on the basis of time-bound and contractually-agreed quantitative indicators; and
7. Meet the Bank's auditing requirements, including contracting auditing services and presenting to the Bank all required auditing reports in a timely manner, and all other related information as may be reasonably requested by the Bank's representatives with respect to questions arising from the audit reports; and
8. Prepare all required bidding documents and Terms of Reference for procurement of goods and services, clearly setting out the deliverables and schedules of payment as well as any conditions necessary for the successful execution of contract obligations.

3.1.2 GOG Staff Involved in Project Implementation

The **CMO at the MoPH** will provide technical supervision and guidance to the MCH Officer.

The **MCH Officer** will have overall responsibility for the execution of the Program, reporting to the IDB regarding Program activities, including implementation progress and financial reports and audits, supervision of technical consultants, and monitoring and evaluation. Staff involved in the Project will report directly to the MCH Officer. The Project Coordinator will also report to the Permanent Secretary on administrative and fiduciary issues.

The **Permanent Secretary of the MoPH** will provide oversight for all administrative and fiduciary issues and the general Project governance structure.

The **Director of Regional Health Services** will be responsible for enhancing the Project management and accountability at the local level in Regions 3, 4, and 9, providing support at local level, through local staff, for collecting and reporting data and information to the central level and by ensuring accuracy of data and information, as well as for coordinating technical support for Program activities at the local level.

The **Health System Information Unit of the MoPH** will be responsible for all M&E data, including extraction, consolidation, and processing of data needed for M&E and reporting at the central level, including research activities for the Project and data collection, analysis, monitoring and reporting on the Project performance indicators to the Project Coordinator.

3.1.3 Additional Staff Financed by the Project

In order to adequately address the workload demands of the project, the MCH Unit will be strengthened with five additional staff: a project coordinator, a health specialist, a monitoring and evaluation specialist, and two fiduciary officers (one procurement officer and one financial officer).

- The **Program Coordinator** will be in charge of coordinating and supervising all aspects of implementation, including planning, implementation, financial management, procurement, monitoring,

evaluation, and reporting, with the support of other personnel from the MCH Unit and other Units of the MoPH. The signature of the Program Coordinator will be required on all disbursement requests submitted to the Bank. In the absence of the Program Coordinator, a senior officer designated by the Minister shall fill this responsibility.

- The **Health Specialist** will be in charge of providing technical oversight for the implementation of all health related and institutional strengthening activities financed by the project. This will include all activities related to the design and implementation of interventions. The Health Specialist will be the main liaison between the MCH Unit and the consulting firm that will provide technical support to the Goverment throughout Project execution.

- The **Monitoring and Evaluation Specialist** will be in charge of strengthening the related function within the Unit by instituting monitoring and evaluation practices in line with the project Results Matrix and the Monitoring and Evaluation. S/he will be responsible for: (i) supporting data collection for M&E; (ii) monitoring the performance of technical inputs; (iii) supporting the implementation of the Program's M&E plan; and (iv)advising of linkages between the national M&E framework and the MoPH M&E function.

- The **Procurement Officer** will oversee procurement activities for the Project. In particular, the Procurement Officer will be responsible for finalizing the Terms of Reference, technical specifications, and estimated costs, as well as for the monitoring of time, payment scheduling, and other support functions for the various contracts (contract management). The Procurement Officer, who in addition to reporting to the MCH Officer and the Permanent Secretary will report to the Program Coordinator, is responsible for the integrity of the goods procurement process and ensuring that procurement is in accordance with the Procurement Plan. S/he will oversee goods procurement activities for the Project and schedule goods procurement activities and tasks associated with tendering, evaluation, approval and contract processing to the point of award. Furthermore, all reports from consultancies will be submitted to the Program Coordinator for approval before payment. As a mitigation measure, the newly recruited Procurement Officer will be trained in Bank's rules and procedures.

  His/her functions and responsibilities include, *inter alia*:

  i. Conferring with MoPH unit representatives to determine purchasing requirements and technical specifications;
  ii. Coordinating and participating in the development of bid specifications; soliciting and analyzing bids; recommending the award of bid contracts to the Project Coordinator;
  iii. In coordination with end-users, analyzing and evaluating the cost, quality, and suitability of supplies, services, materials, and equipment against specifications;
  iv. Preparing the Bid Package table, grouping the goods that may be provided by the same supplier;
  v. Preparing a timetable of procurement actions required for implementing each bid;
  vi. Preparing the Procurement Notices and Invitations to bid;
  vii. Advertising Procurement Notices and Invitations locally and internationally, as needed;
  viii. Maintaining records of all equipment purchased under the Project;
  ix. Assisting/guiding Project staff in the preparation of TORs and Requests for Proposals (RFP);

x. Obtaining the approvals required for contract signature and preparing the final contracts/Purchase Orders for the Procurement Specialist;
xi. Monitoring compliance with the timetable of procurement actions and assisting the Procurement Specialist in updating it every six months;
xii. Opening a file for each bid and organizing and keeping the procurement files, so as to ensure that each file contains all the corresponding procurement documents;
xiii. Providing clarification/information to potential bidders after discussions with the Procurement Specialist;
xiv. Participating in the Procurement Committee (see end of this section);
xv. Maintaining proper records of committee meetings, including records of the procurement;
xvi. Preparing the procurement evaluation report and documents for submission to the GOG for approval and to the Bank for clearance; and
xvii. Ensuring inventory control, so that items purchased under the Project can be located, identified, and audited.

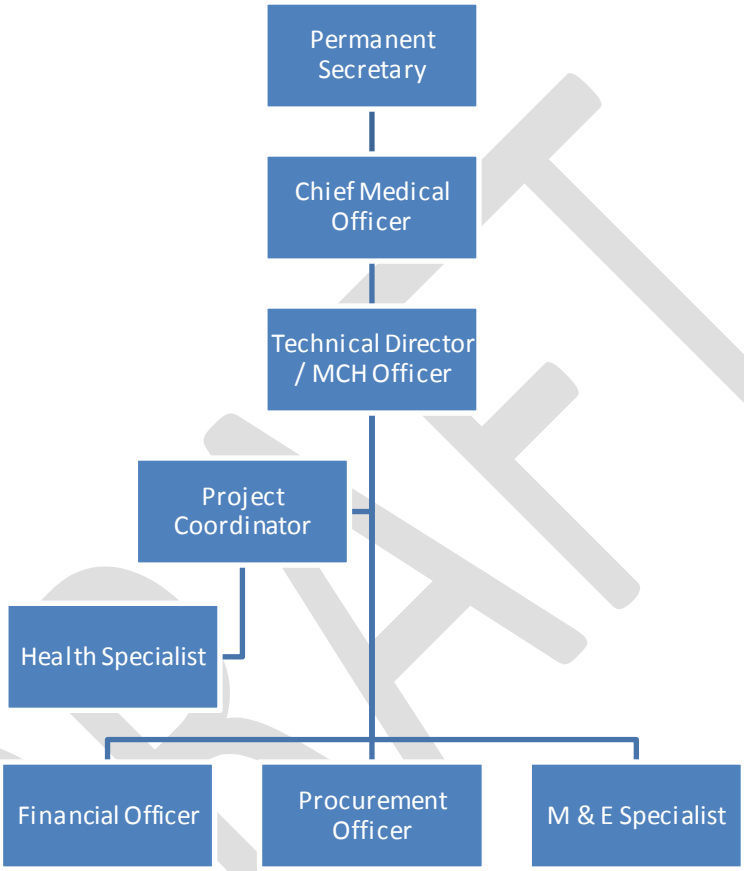
- The **Financial Officer** will be responsible for facilitating the disbursement of funds from the Bank for the replenishment of funds to the Program's Special Account. S/he is expected to work closely with all units within the Program and the MOH, and, specifically, to meet on a monthly basis with the individual MoPH units responsible for implementing the Program, and with the Program Coordinator on quarterly basis. All requests for disbursements prepared and submitted to the Bank by the Financial Officer, will be accompanied by a statement of expenses signed by the Project Coordinator. As a mitigation measure, the newly recruited Financial Officer will be trained in Bank's rules and procedures.

  The specific responsibilities of the Financial Officer will include but not be limited to:

  i. Establishing, implementing and maintaining the accounting and internal control system for the financial administration of project in accordance with generally accepted accounting principles, government accounting rules and regulations and IDB's policies and procedures (as applicable);
  ii. Preparing financial and implementation reports on the status of loan and counterpart resources to the Bank and the Ministry of Legal Affairs including monthly/quarterly progress reports, project budget, financial plans/ disbursement projections and reports on the status of advance of funds;
  iii. Preparing and following up on all payments, disbursement requests in accordance with component activities and financial plan;
  iv. Maintaining updated financial statements and audit reports to support disbursement requests to the Bank and GOG;
  v. Preparing the justification to access local counterpart funding if it is required for project execution;
  vi. Maintaining an adequate filing system for files and records for the financial administration of project resources;
  vii. Conducting monthly and mid-term reviews and formulating recommendations based on project performance.

The Financial Officer, in collaboration with the Project Coordinator and the Procurement Officer, will be responsible for the preparation of the annual disbursement plan for the execution of activities, will signal limits of expenditure within the budget, and will monitor expenditure with a view to achieving cost effectiveness and efficiency.

Figure 1: Project Governance Structure Overview



3.2 Designation of Signature of Officials

3.2.1 Operations and Administrative Transactions

The official signatories as it relates to procurement and other operational transactions are:

- The Permanent Secretary
- The Technical Director
- The Project Coordinator

These persons will be acting individually.

3.2.2 Disbursements

In the case of requests for disbursements/reimbursements and payments, the following designated officials will act:

- The Permanent Secretary
- The Technical Director
- The Project Coordinator
- The Fiduciary Officer

These persons will be acting individually.

3.3 Mechanisms for Cooperation

The **Steering Committee** will monitor the development and progress of the Project and make decisions to ensure that the interaction between the Project participants and the Project's organization, management, and resource allocation enables the achievement of the milestones. The Steering Committee must ensure that the project participants collaborate towards common goals throughout the investment period. In particular, it will have the specific objectives of, among others: (i) providing the strategic and policy framework, guidance and direction for Program execution; (ii) facilitating and providing for the necessary inter-institutional coordination and collaboration, by promoting routinely meetings amongst the various public sector actors directly involved in the Program; (iii) monitoring the effective compliance with the strategic objectives of the Program, by periodically assessing the progress and results, in accordance with the Results Framework of the Program; (iv) informing Program Management of any variations to GOG policies and priorities which may impact the strategic direction and/or implementation of the Program; and (v) contributing to securing the timely allocation of financial resources to Program execution. The Steering Committee will also oversee the implementation of the Environmental and Social Management Plan (ESMP); a sub-committee will be composed for this purpose.

This committee will be chaired by the MoPH and will comprise senior representatives from the inter-alia following agencies: Ministry of Finance, Ministry of the Presidency, Ministry of Communities (under which Regional Democratic Councils (RDC) and Regional Health Authorities (RHA) lie), and Ministry of Indigenous Affairs. A Memorandum of Understanding (MoU) will be signed amongst the participating ministries/agencies to formalize roles and responsibilities in the Steering Committee.

The Steering Committee shall meet at least six times a year or as required by any of its members and will have the responsibility of formalizing the priorities and goals for the corresponding period. An agenda for the meeting will be sent out by the MoPH with the call for the meeting. Any supplementary documents must be sent out at least a week before the meeting if possible. Every member may request an item to be put on the agenda.

IV. FINANCIAL MANAGEMENT

4.1 Investment Schedule

The Program will be implemented over a five year execution period. The total cost of the Project is US$ 8.0 million dollars.

4.2 Disbursement Period

The period for final disbursement of the resources of the Financing shall expire five years from the effective signature date of the loan agreement.

4.3 Procedures for disbursements

4.3.1 Resources of the Bank can only be used for eligible expenses, including cash grants and other goods and services detailed in the procurement plans and Plans of Operations and acquired according to Bank procurement policies and procedures and consistent with the terms herein and for such other purposes as are indicated in the Loan Contract.

4.3.2 The resources of the Financing for the Program shall only be used for payments of goods and services originating in the member countries of the Bank.

4.3.3 The Bank may make disbursements against the resources of the Financing by:
(a) Transferring to the Borrower the sums to which it is entitled under the Loan Contract;
(b) Making payments on behalf of and in agreement with the Borrower to third parties; and
(c) Utilizing such other modality as the parties may agree upon in writing. Unless the parties agree otherwise, disbursements shall be made only in amounts of not less than the equivalent of each.

V. PROCUREMENT PROCEDURES

5.1 Organisation of the Procurement Function

5.1.1 The Project Coordinator will be responsible for the successful coordination of the procurement of all goods and services as advised by the MCH Officer and the Procurement Officer and approved by the Permanent Secretary.

5.1.2 The Permanent Secretary will provide oversight to the MCH Unit as per the Project Governance Structure. The acquisition of goods and related services shall be subject to the Procurement Procedures specified in the Contract.

5.2 Procurement policy

The procurement of works, goods, and consulting services will be conducted in accordance with the Bank's procurement policies and procedures: for the Procurement of Goods and Works (GN-2349-9) and for the Selection and Contracting of Consultants (GN-2350-9).

5.3 Procurement methods

Procurement methods through which works can be contracted are:

- International Competitive Bidding (ICB);
- Limited International Bidding (LIB): The Limited International Bidding is essentially ICB by direct invitation without open advertisement;
- National Competitive Bidding (NCB);
- Shopping or Price Comparison (PC); and
- Direct Contracting: Direct contracting is contracting without competition. In order to utilize this method of contracting the reasons for this procurement method must be justified. Upon reception of the no-objection, this process can proceed.

Further information about the procurement methods can be found in the IDB procurement policies GN-2349-9 document. The guidelines provided by the Bank for the contracting of consultants can be found in the document GN-2350-9 "Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank".

5.3.1. Firms

Procurement methods to be used in the case of contracting consultancy firms are:

- Quality Cost Based Selection (QCBS): uses a competitive process among short-listed firms that takes into account the quality of the proposal and the cost of the services in the selection of the successful firm;
- Quality Based Selection (QBS);
- Fixed Budget Selection (FBS);
- Least Cost Selection (LCS);
- Selection based on the Consultants Qualification (CQS); and
- Single Sources Selection (SSS): In order to utilize this method the reasons for this must be justified. Upon receipt of the no-objection, this process can proceed.

Further information about the procurement method for consultants can be found in the IDB procurement policies GN-2350-9 document.

5.3.2. Individual Consultants

For individual consultants, the procurement procedures shall follow the provisions mentioned in chapter 5 of GN-2350-9.

5.4 Procurement Plan

5.4.1 The Procurement of goods, works, and services will be in accordance with the Project's Procurement Plan that is prepared by the Ministry of Health and approved by the IDB. The Executing Agency will update the Procurement Plan in the course of its semi-annual reports and its annual operating plan.

5.4.2 During the execution of the Project, the Executing Agency will submit an updated Procurement Plan to the Bank on a semi-annual basis via the Semi-Annual Progress Report and the Annual Operating Plan. Adjustments may be made to the procurement plan as they become necessary, provided they are in agreement with Bank's procurement policies and procedures.

5.5 Mis-procurement

The Bank has the authority to audit the Program documents at any time during the term of the Amendatory Contract. If during this audit, the Bank determines that all or portions of the goods or services were not procured in accordance with the agreed procedures in the Amendatory Contract, the Bank will declare it "Misprocurement" (See Para. 1.12 of the IDB Guidelines on Procurement). In such a case, the Bank may cancel that portion of the loan allocated to those goods or services procured in non-compliance of the Guidelines.

5.6 Procurement Monitoring and Evaluation

Procurement processes are subject to post review and audit by the Bank in order to ensure that the Program has fulfilled all the procurement procedures stipulated in the Loan Contract. In order to ensure that the ex-post reviews and audits reflect the process used, the Program management will maintain adequate Procurement Records to reflect, in accordance with sound procurement practices (including related supervision, review and auditing), the procurement activities of the Program and ensure that all such Procurement Records evidencing such procurement activities are retained until at least three (3) years after the Closing Date.

For the purposes of this OM, Procurement Records refer to:

1. With respect to procurement of goods and non-consulting services: public notices of bidding opportunities; bidding documents and addenda; bid opening information; bid evaluation reports; formal appeals by bidders and outcomes; signed contracts, addenda and amendments; records on claims and dispute resolution; and records of time taken to complete key steps in the process; and
2. With respect to selection of consultants: public notices for expressions of interest; requests for proposals and addenda; technical and final evaluation reports; formal appeals by firms and related outcomes; signed contracts, addenda and amendments; records on claims and dispute resolution; and records of time taken to complete key steps.

VI. INTERNAL AND EXTERNAL AUDITS

6.1 Internal Audits

6.1.1 The Internal audit will be conducted by the Field Audit Department under the Office of the Permanent Secretary twice per year and on a period basis, as may be necessary.

6.2 External Audits

6.2.1 The Financial Statements and Audit will be in keeping with guidelines in the following Bank document *"Guidelines for Financial Reports and External Audits for operations financed by the Inter-American*

Development Bank"; and the relevant Acts of Guyana; and in accordance with international audit standards.

6.2.2 Financial audits will be conducted in accordance with IDB requirements:

a) An annual financial audit report of the project is to be submitted by the MoPH within 120 days of the end of each fiscal period ended 2017 beginning with the year in which the project was made effective.
b) A final financial audit report of the project is to be submitted by the MoPH within 120 days after the date of the last disbursement.

6.2.3 The external audit will be performed by the General Auditor of Guyana, in accordance with International Accounting and Reporting Standards. Also, information related to independent auditors engaged in the external audit must be presented to the Bank.

VII. REPORTING, MONITORING AND EVALUATION

7.1 Project Reporting Schedule

Table 2: Project Reporting Schedule

DOCUMENT	DATE FOR SUBMISSION	FREQUENCY OF SUBMISSION	REFERENCE DOCUMENT
Operations Manual	15st November	**Once** At project start Special Condition precedent to First Disbursement	**Loan Contract** Chapter on Conditions relating to First Disbursements (Special Condition): *Section on Period for fulfilling the Conditions Precedent to First Disbursement.*
Semi-Annual Reports	August 31th and February 30th respectively	**Semi-annually** Every semester[5]	**Loan Contract** Chapter on Financial Information and Internal Control Systems, Inspections, Reports and External Audit (General Conditions): *Article on Reports*
Annual Operating Plan (Inclusive of Procurement Plan). [2]	January 31th	**Annually**	**Loan Contract** Chapter on Execution of the Program (Special Conditions or Annex): *Section on Procurement of Goods and Works*: Review by the Bank of Procurement Decisions – Procurement Planning.
Audited Financial Statements	Within 120 days following the closing of each fiscal year of the	**Annually** (for the life of the	**Loan Contract** Chapter on Supervision (General

[5] 1st and 2nd 6 month period of a calendar year

[2] The AOP consists of the Implementation Plan, the Procurement Plan and the Financial Plan.

	Executing Agency (August 30th).	project/program)	Conditions): *Section on Financial Statements*
Final audited Financial Statement	Within 120 days following the date of last disbursement of the Financing.	**Once** At project end	**Loan Contract** Chapter on Supervision (Special/General Conditions): *Section on Financial Statements*
Mid-term Evaluation report	When the resources committed achieved 50% of the Financing OR as indicated in the Loan contract.	**Once**	**Loan Contract** Chapter on Execution of the Program (Special Conditions): *Section on Evaluation.*
Final Evaluation report	90% of loan resources have been committed (to include ex-post economic evaluation).	**Once** At project end	**Loan Contract** Chapter on Execution of the Program (Special Conditions): *Section on Evaluation.*
Closing reports	Within a period of 90 days from the date stipulated for the final disbursement of the Financing	**Once** At project end	**Loan Contract** Chapter on Conditions relating to Disbursements (General Conditions): *Article on Closing Period*
Maintenance reports	February 28th and August 30th	**Semi-annually**	**Loan Contract** Chapter on Execution of the Program (Special Conditions): *Section on Maintenance of Equipment*

7.2 Monitoring and Evaluation

7.2.1 Monitoring

The MoPH, through its MCH Unit and in coordination with the Bank, will be responsible for the monitoring activities. The MCH Unit will provide the Bank all the required information to assess the project execution. The Bank will supervise the execution and provide technical assistance when needed. The Bank and the borrower have agreed to use the Results Matrix and the activities defined in the Progress Monitoring Report (PMR) to monitor the operation. Other key monitoring tools are: (i) Semi-annual Monitoring Reports; (ii) Financial Audits Reports; (iii) Project Execution Plan (PEP); (iv) Procurement Plan; (v) Project Completion Report (PCR); and (vii) Supervision and monitoring meetings.

The Result Matrix proposes a series of indicators to monitor the performance of the loan operation. Those indicators are proxies to capture outputs, outcomes and results. Table 3 presents the monitoring indicators agreed between the MoPH and the Bank. The specific construction and formula for each indicator is described in the Indicators Manual. A preliminary version of the Indicators Manual is attached at the end of this document (see Annex I).

The Result Matrix will be fed both by primary and secondary data. The MoPH will be responsible for compiling the existing data and consolidating them in progress reports that must be submitted to the Bank according to the Monitoring and Evaluation (M&E) Plan.

Table 3.
RESULTS MATRIX

EXPECTED IMPACTS

Indicators	Unit	Baseline		Goals		Means of verification	Observations
		Value	Year	Value	Year		
Objective: Contribute to the reduction of maternal, perinatal, and neonatal deaths in Guyana by 2021							
Maternal Mortality Ratio (MMR).	Maternal deaths x 100,000	121.7	2014	87.9[6]	2021	Chief Medical Officer (CMO) Report	MMR at the national level estimated using preliminary data from the CMO Report[7].
Neonatal Mortality Rate (NMR).	Neonatal deaths x 1,000	21.7	2014	15.2[8]	2021	CMO Report	NMR at the national level estimated using preliminary data from the CMO Report[9].

EXPECTED RESULTS

Indicator	Unit	Baseline		Goals		Means of verification[10]	Observations
		Value	Year	Value	Year		
COMPONENT 1. STRENGTHENING REPRODUCTIVE, MATERNAL, AND NEONATAL HEALTH SERVICES							

6 Maternal mortality in Guyana, according to available information, has reduced approximately 1.8 percentage points per year (Hogan, MC et al. 2010. Maternal mortality for 181 countries, 1980–2008: a systematic analysis of progress towards Millennium Development Goal 5. The Lancet, 1609-1623). With the project, an additional reduction of 3.8 percentage points per year is expected. This rate was estimated based on trend analysis published in Hogan, MC et al. (2010).

7 Maternal mortality is a "rare" event. Therefore, the maternal mortality ratio in small areas is difficult to estimate. In addition, although the actual death may occur in one location, the onset of the problem usually originates in another location. Guyana, as many other countries, reports maternal mortality ratios at the national level.

8 Neonatal mortality in Guyana, according to available information, has reduced approximately 1 percentage points per year (World Bank data, in http://data.worldbank.org/indicator/SH.DYN.NMRT?locations=GY). With the project, an additional reduction of 5 percentage points per year is expected. This rate was estimated based on trend analysis published in Hogan, MC et al. (2010).

9 Neonatal mortality is a "rare" event. Therefore, the neonatal mortality ratio in small areas is difficult to estimate. In addition, although the actual death may occur in one location, the onset of the problem may originate in another location. Guyana, as many other countries, reports neonatal mortality ratios at the national level.

10 Measurement criteria for indicators measured through the Health Facility Surveys will be defined in the Indicators Manual included as an annex in the Operations Manual.

Indicator	Unit	Baseline		Goals		Means of verification[10]	Observations
		Value	Year	Value	Year		
Sub-Component 1.1. Objective: Increase access and use of reproductive, maternal, and neonatal health services							
First time users of family planning methods for the year.	Number of clients	5,799	2014	9,799	2021	MCH Report, Clinic Summary Report (CSR)	Calculated for intervention areas.
Pregnant women with anemia at first antenatal visit (hemoglobin under 11 g/dl).	%	21.1%	2014	11.1%	2021	MCH Report, CSR	Calculated for intervention areas. Excludes "result not known".
Births from adolescent mothers (19 years and younger).	%	19.1%	2012	15.1%	2021	Vital Statistics, Ministry of Health Statistical Bulletin	Calculated for intervention areas.
Women who receive antenatal care before 12 weeks pregnant.	%	23.9%	2014	30.9%	2021	MCH Report, CSR	Calculated for intervention areas. Excludes "unknown".
Women who gave birth in a health facility in the rural interior.	%	15.8%	2014	25.8%	2021	MCH Report, CSR	Calculated for region 9. Numerator considers "hospital" and "health center" deliveries.
Sub-Component 1.2. Objective: Improve quality of reproductive, maternal, and neonatal health services							
Pregnant women receiving quality antenatal care according to best practices.	%	(1)	2017	+15PP	2021	Health Facility Surveys (HFS), Medical Record Review (MRR) module	Calculated for health facilities in intervention areas that provide antenatal care.
Deliveries for which the partograph was used according to best practices.	%	(1)	2017	+20PP	2021	HFS, MRR	Calculated for health facilities in intervention areas that provide routine birth services.
Institutional deliveries for which oxytocin was administered immediately following birth as part of Active Management of the Third Stage of Labor.	%	(1)	2017	85%	2021	HFS, MRR	Calculated for health facilities in intervention areas that provide routine birth services.
Institutional deliveries for which immediate neonatal care was provided to the infant according to the norms	%	(1)	2017	85%	2021	HFS, MRR	Calculated for health facilities in intervention areas that provide routine birth services.
Neonates with complications (prematurity, low birth weight, asphyxia and sepsis) managed according to norms.	%	(1)	2017	+20PP	2021	HFS, MRR	Calculated for health facilities in intervention areas that provide routine birth services.

Indicator	Unit	Baseline		Goals		Means of verification[10]	Observations
		Value	Year	Value	Year		
Obstetric complications (sepsis, hemorrhage, severe pre-eclampsia and eclampsia) managed according to norms.	%	(1)	2017	+20PP	2021	HFS, MRR	Calculated for health facilities in intervention areas that provide routine birth services.
Women that received immediate postpartum care according to best practices (every 15 minutes in the first hour and every 30 minutes in the second hour).	%	(1)	2017	85%	2021	HFS, MRR	Calculated for health facilities in intervention areas that provide routine birth services.
COMPONENT 2. STRENGTHENING THE HEALTHCARE NETWORK							
Objective: Increase the effectiveness of the maternal and neonatal healthcare network							
Women that are referred to the national hospital for obstetric conditions that could have been resolved at another level of care.	%	(1)	2017	Decrease by 50PP	2021	HFS, MRR	Calculated for health facilities in intervention areas.
Health facilities with continuous availability of inputs and equipment to provide essential and emergency obstetric and neonatal care.	%	(1)	2017	85%	2021	HFS, MRR	Calculated for health facilities in intervention areas that provide routine birth services.
Health facilities with continuous availability of inputs and equipment to provide quality antenatal and post-natal care.	%	(1)	2017	85%	2021	HFS, MRR	Calculated for health facilities in intervention areas that provide antenatal and postnatal care.

(1) Data will be updated with the baseline Health Facility Survey results.
PP: Percentage Points to increase over baseline value.

PRODUCTS

Products	Estimated Cost (US$)	Unit	Baseline	Y1	Y2	Y3	Y4	Y5	Final goal	Means of verification	Observations
Component 1. Strengthening reproductive, maternal, and neonatal health services											
Sub-Component 1.1. Access and use of reproductive, maternal, and neonatal health services											
Community health workers (CHWs) trained and equipped to provide reproductive, maternal, and neonatal services.	470.000	CHWs	0	00	200	225	0	0	425	Report from technical assistance with documental evidence that CHWs have been trained and equipped	Calculated for CHWs in intervention areas.
Communities with plans for institutional birth implemented.	225.000	Communities	0	0	50	38	0	0	88	Report from technical assistance with documental evidence that plans have been implemented	Calculated for communities in region 9. "Implemented" refers to communities that have designed and operationalized plans for institutional birth.
Communities with communication strategy for behavior change implemented.	535.000	Communities	0	0	50	100	75	0	225	Report from technical assistance with documental evidence that the communicati on strategy was aired in each community	"Implemented" refers to communities that have received the messages/spots aired by the communication strategy by radio, television, social media, printed media or others.

Sub-Component 1.2. Quality of reproductive, maternal, and neonatal health services											
Health facilities with integrated health care strategy for women of reproductive age implemented.	255.000	Health facilities	0	0	50	50	43	0	143	Report from technical assistance with documental evidence that guidelines and procedures have been implemented	Calculated for health centers in intervention areas that provide primary care. “Implemented” refers to health facilities that have updated and operationalized guidelines and procedures on the health of women of reproductive age.
Health facilities with new family planning strategy implemented.	170.000	Health facilities	0	0	50	50	43	0	143	Report from technical assistance with documental evidence that guidelines and procedures have been implemented	Calculated for health centers in intervention areas that provide primary care. “Implemented” refers to health facilities that have updated and operationalized guidelines and procedures for family planning.
Health facilities with updated model for prenatal, birth, postnatal, and post-partum care implemented.	125.000	Health facilities	0	0	100	50	0	0	150	Report from technical assistance with documental evidence that guidelines and procedures have been implemented.	Calculated for health facilities in intervention areas. “Implemented” refers to health facilities that have updated and operationalized guidelines and procedures for prenatal, birth, postnatal, and post-partum care.

Hospitals with Quality Improvement Strategy (QIS) for maternal and neonatal health implemented.	455.000	Hospitals	0	0	1	3	3	0	7	Report from technical assistance with documental evidence that processes have been mapped and optimized	Calculated for hospitals in intervention areas. "Implemented" refers to hospitals that have mapped and optimized key clinical, management, and support processes.
Health facilities with supply chain management improved.	100.000	Health facilities	0	0	0	90	60	0	150	Report from technical assistance with documental evidence that supply chain have improved	Calculated for health facilities in intervention areas. "Improved" refers to health facilities that have adopted best practices in estimating need, planning, requesting, storing, and distributing critical supplies to the population
Health workforce trained to provide quality reproductive, maternal, and neonatal care.	235.000	Health staff	0	0	120	90	46	0	256	Report from technical assistance with documental evidence that workers have been trained	Calculated for health facilities in intervention areas.
Health facilities with health information system strengthened.	350.000	Health facilities	0	0	0	60	60	30	150	Report from technical assistance with documental evidence that health facilities have strenghtened	Calculated for health facilities in intervention areas. "Strengthened" refers to health facilities that collect and report key statistics on a routine basis.

										health information system	
Component 2. Strengthening the healthcare network											
Integrated healthcare network for reproductive, maternal, and neonatal health enabled.	759.000	Network	0	0	1	2	0	0	3	Report from technical assistance with documental evidence that network has been enabled	Calculated for intervention areas. "Enabled" refers to regions that have revised and adjusted the service and referral and counter-referral networks
Health facilities with infrastructure improved to provide reproductive, maternal, and neonatal services.	500.000	Health facilities	0	0	0	1	0	0	1	Project's semi-annual monitoring reports with documental evidence that infrastructure improvements have been concluded and that the health facility is in operation	Calculated for health facility in region 4.
Health facilities with equipment improved to provide reproductive, maternal, and neonatal services.	2.250.000	Health facilities	0	0	0	2	2	0	4	Project's semi-annual monitoring reports with documental evidence that the new equipment is operating	Calculated for health facilities in intervention areas.
Ambulances equipped for emergency obstetric and newborn care	225.000	Ambulances	0	0	3	0	0	0	3	Project's semi-annual monitoring	Calculated for health facilities in intervention areas.

delivered.										reports with documental evidence that ambulances are operating	
Component 3. Administration and Evaluation											
Final evaluation conducted.	20.000	Evaluation	0	0	0	0	0	1	1	Evaluation completed and published in the Ministry's webpage	
Health facility survey conducted.	100.000	Survey	0	1	0	0	0	1	2	Survey completed and published in the Ministry's webpage	

7.2.2 Evaluation

The main evaluation question is related to the effectiveness of the interventions implemented in the Guyana's rural interior to improve access and use of health services amongst indigenous people. This project will focus on the interventions implemented in region 9 to contribute to answering this question.

A quasi-experimental evaluation will be performed at the end of the project to estimate the impact of one major project sub-component. The chosen methodology is synthetic control and the preliminary identified outcome indicators are those of the Result Matrix. This evaluation will be financed by the loan with close IDB's technical support.

The indicators included in this list will be available at national, regional, community, and/or health facility level, depending on the source used. Time series will be collected from Ministry of Health's administrative sources. All health facilities report monthly selected outcome indicators described in the following table. This data will be aggregated.

Table 4: Outcome indicators for impact evaluation

Indicator	Unit	Frequency	Source
Reducing maternal, perinatal, and neonatal deaths			
Maternal Mortality Ratio (maternal deaths x 100,000)	Ratio	Quarterly	Ministry of Health Statistics
Neonatal Mortality Rate (neonatal deaths x 1,000)	Ratio	Quarterly	Ministry of Health Statistics
Access and use of reproductive, maternal, and neonatal health services:			
First time users of family planning methods for the year	number of clients	monthly	Ministry of Health Statistics
Pregnant women with hemoglobin under 11 g/dl at first antenatal visit	Percentage	Monthly	Ministry of Health Statistics
Births from adolescent mothers (19 years and younger)	Percentage	Monthly	Ministry of Health Statistics
Women who receive antenatal care before 12 weeks pregnant	Percentage	Monthly	Ministry of Health Statistics
Women who gave birth in a health facility in the rural interior	Percentage	Monthly	Ministry of Health Statistics

7.3 Supervision by the Bank

In addition to the ongoing supervision provided by the country office, the Bank and the Executing Agency will hold monthly meetings to monitor and review the execution of the Program. The Executing Agency will invite the Bank to participate in presentations and discussions related to the results of the studies financed by the Project. The Bank and the GOG will use the final results of all studies to define the future directions for the National Nutrition Strategy and possible Bank support.

ANNEXES

ANNEX I

GUYANA

SUPPORT TO IMPROVE MATERNAL AND CHILD HEALTH
GY-L1058

INDICATOR MANUAL

August 26, 2016

This document will be discussed with Guyana´s Ministry of Health and reviewed to ensure alignment of indicator criteria with country norms and the country's operation. The Indicator Manual will be an Annex in the Operations Manual.

Indicator Manual

Contents

Indicator Manual

CHAPTER1: IMPACT INDICATORS

1.1. Maternal mortality rate

Indicator: Number of maternal deaths per 100, 000 live births

Measurement Period: Yearly

Formula:

Numerator: Number of maternal deaths at the national level

Denominator: Number of live births at the national level

Indicator calculation: Number of maternal deaths / number of live births x 100,000

Source of Verification: Vital Statistics, Chief Medical Officer (CMO) Report

1.2. Neonatal mortality rate (1020)

Indicator: Number of deaths during the first 28 days of life per 1,000 live births in a given year or period

Measurement Period: Yearly

Formula:

Numerator: Number of deaths in the first 28 years of life

Denominator: Number of live births at the national level

Indicator calculation: Number of maternal deaths / number of live births x 1,000

Source of Verification: Vital Statistics, Chief Medical Officer (CMO) Report

CHAPTER 2: RESULTS INDICATORS. STRENGTHENING REPRODUCTIVE, MATERNAL, AND NEONATAL HEALTH SERVICES

2.1. First time users of family planning methods

Indicator: First time users of family planning methods for the year.

Measurement Period: Yearly

Formula:

Indicator calculation: Number of clients attended a health facility and reported using family planning methods for the first time each year.

Source of Verification: Maternal and Child Health Report: Clinic Summary Report.

2.2. Anemia in first antenatal visit

Indicator: Pregnant women with anemia at first antenatal visit (hemoglobin under 11 g/dl).

Measurement Period: Yearly

Formula:

Numerator: Pregnant women with hemoglobin < 11 g/dl in the first antenatal care visit

Denominator: Pregnant women who attended at least 1 antenatal care visit

Indicator calculation: Women with hemoglobin < 11 g/dl / Women who attended at least 1 antenatal visit x 100

Source of Verification: Maternal and Child Health Report: Clinic Summary Report.

2.3. Births from adolescents

Indicator: Births from adolescent mothers (19 years old and younger).

Measurement Period: Yearly

Formula:

Numerator: Births from adolescent mothers (19 years old and younger) registered in health facilities

Denominator: Total number of births registered in health facilities

Indicator calculation: Births from adolescent mothers / Total number of births x 100

Source of Verification: Vital Statistics, Ministry of Health Statistical Bulletin.

2.4. Early antenatal care

Indicator: Women who receive antenatal care before 12 weeks pregnant.

Measurement Period: Yearly

Formula:

Numerator: Women who attended their first antenatal visit before 12 weeks of pregnancy

Denominator: Total number of pregnancies

Indicator calculation: Women who attended antenatal care before 12 weeks / Total number of pregnancies x 100

Source of Verification: Maternal and Child Health Report: Clinic Summary Report.

2.5. Institutional birth in rural interior

Indicator: Women who gave birth in a health facility in the rural interior.

Measurement Period: Yearly

Formula:

Numerator: Births in a health facility registered in region 9

Denominator: Total number of births registered in region 9 (in or outside a health facility).

Indicator calculation: Births in health facilities / Total number of births x 100

Source of Verification: Maternal and Child Health Report: Clinic Summary Report.

2.6. Antenatal care according to best practices

Indicator: Women receiving quality antenatal care according to best practices.

Measurement Period: Yearly

Formula:

Numerator: Women that received antenatal care by doctor or nurse according to best practices

We generated a variable ANTENATAL_BESTPRA to represent 4 antenatal visits according to best practices. The variable ANTENATAL_BESTPRA takes a value of 1 for medical records that have the following:

BASIC EONC HEALTH FACILITY ANTENATAL CARE RECORDS: four antental visits by doctor or nurse + (in each visit: weight + blood pressure) + (after 13 weeks of gestation: fundal height) + (after 20 weeks of gestation: fetal movements + fetal heart rate) + (lab tests at least once: blood type + Rh factor + glucose + HIV test + hemoglobin + urine test)

Denominator: Total number of antenatal care records in the sample

Indicator calculation: ANTENATAL_BESTPRA/ total number of antenatal records in the simple = ANTENATAL_BESTPRA1

ci ANTENATAL_BESTPRA

Source of verification: Health Facility Survey (medical record review)

2.7. Partograph according to best practices

Indicator: Deliveries for which the partograph was used according to best practices.

Measurement Period: Yearly

Formula:

Denominator: Total number of birth records in the sample

Numerator: Number of records for which partograph was filled according to the norm. A variable PARTOGRAH was created that takes a value of 1 for medical records that have the following:

MEDICAL RECORDS FROM BASIC AND COMPLETE EONC HEALTH FACILITIES: partograph included and filled (when the woman did not arrive on imminent birth or planned C-section) + fetal heart rate and alert curve are registered if dilation > 4.5 cm + there is a note on the partograph or medical records within 30 min if the fetal heart rate < 120 bm or the alert curve was surpassed.

Indicator calculation: PARTOGRAH / Total number of birth records in our sample = PARTOGRAH1

ci PARTOGRAH1, binomial

Source of verification: Health Facility Survey (medical record review)

2.8. Oxytocin administration after birth

Indicator: Institutional deliveries for which immediate neonatal care was provided to the infant according to the norms

Measurement Period: Yearly

Formula:

Numerator: Number of records with oxytocin administration after delivery

We generated a variable OXYTOCIN to represent oxytocin administration after delivery.

This variable OXYTOCIN carries a value of 1 if: oxytocin (or any other uterotonics) were administered after delivery

Denominator: Total number of delivery records in our sample

Indicator calculation: OXYTOCIN / total number of delivery records in our sample = OXYTOCIN1

ci OXYTOCIN1

Source of verification: Health Facility Survey (medical record review)

2.9. Immediate neonatal care

Indicator: Institutional deliveries for which immediate neonatal care was provided to the infant according to the norms

Measurement Period: Yearly

Formula:

Numerator: Number of neonates who received care according to standards from medical personnel within the first 48 hours following birth:

We generated a variable NEONATALCARE to represent this indicator. For indicator calculation we took into account all checkups that are recorded.

This variable NEONATALCARE carries a value of 1 when all below mentioned items are observed:

IMMEDIATE POSTNATAL RECORDS BASIC HEALTH FACILITY: newborn was attended by doctor, nurse or midwife + all procedure and checkups recorded (vitamin K + Application oxytetracycline ophthalmic prophylaxis or chloramphenicol + Apgar score + Heart rate + Respiratory rate + Weight + Height + Head circumference)

IMMEDIATE POSTNATAL RECORDS COMPLETE HEALTH FACILITY: newborn was attended by doctor, nurse or midwife + all procedure and checkups recorded (vitamin K + Application oxytetracycline ophthalmic prophylaxis or chloramphenicol + Apgar score + Heart rate + Respiratory rate + Weight + Height + Head circumference)

Denominator: Total number of postpartum care records in the sample

Indicator calculation: NEONATALCARE / total number of postpartum care records in our sample = NEONATALCARE1

ci NEONATALCARE1

Source of verification: Health Facility Survey (medical record review)

2.10. Neonatal complications managed according to norms

Indicator: Neonates with complications (prematurity, low birth weight, asphyxia and sepsis) managed according to norms.

Measurement Period: Yearly

Selection criteria:

Diagnosis	**ICD 10**
Low Birth Weight:	
Extremely low birth weight	P07.0
Other low birth weight	P07.1
Preterm:	
Extreme immaturity	P07.2
Other preterm infants	P07.3

Asphyxia:	
Severe birth asphyxia	P21.0
Mild and moderate birth asphyxia	P21.1
Birth asphyxia, unspecified	P21.9
Sepsis:	
Sepsis of new born due to streptococcus, group B	P36.0
Sepsis of new born due to other and unspecified streptococci	P36.1
Sepsis of new born due to Staphylococcus aureus	P36.2
Sepsis of new born due to other and unspecified staphylococci	P36.3
Sepsis of new born due to Escherichia coli	P36.4
Sepsis of new born due to anaerobes	P36.5
Other bacterial sepsis of new born	P36.8
Bacterial sepsis of new born, unspecified	P36.9

Formula:

Denominator: Total number of neonatal complication records in the sample

Numerator: Number of neonates with complications (low birth weight, prematurity, birth asphyxia and sepsis) managed according to standards in the last two years

We generated a variable [NEO_COMP_MAN_NORM] to represent management of complications according to the norm. For indicator calculation we took into account all checkups, lab tests (where applicable) and medications are recorded.

This variable [NEO_COMP_MAN_NORM] carries a value of 1 when all below mentioned items are observed:

LOW BIRTH WEIGHT RECORDS (BASIC): Evaluated by doctor + Gestational age (Capurro or Ballard) + Weight + classification according to weight (Low weight<2500 gr or extreme low weight < 1500 gr) + Heart rate + Respiratory rate + Length + Head circumference + Skin color + Early breastfeeding or any glucose solution (oral or IV) + Warm Chain (warm sheets or radiant warmer or incubator) + if no complications are present: (observation or Transfer to Complete) + if complications are present {(respiratory: pneumonia or respiratory distress) or (neurologic: convulsions) or digestive(diarrhea) or metabolic(hypoglycemia if glucose< 25mg/dl)} or weight less than 1500gr: Transfer to Complete

LOW BIRTH WEIGHT RECORDS (COMPLETE): Evaluated by specialist or doctor + Gestational age + Weight + classification according to weight (Low weight<2500 gr or extreme low weight < 1500 gr) + Heart rate + Respiratory rate + Length + Head circumference + Skin color + Early breastfeeding or any glucose solution (oral or IV) + Warm Chain (warm sheets or radiant warmer or incubator) + (if pneumonia: antibiotics) or (if diarrhea: IV solution + antibiotics) or (if convulsions: anticonvulsive) or (if hypoglycemia if glucose< 25mg/dl: glucose IV)

PRETERM RECORDS (BASIC): Evaluated by doctor + Gestational age (Capurro or Ballard) + Classification of newborn according to gestational age (small, large or adequate) + Weight + Heart rate + Respiratory rate + Glycemia + Head circumference + Skin color + Warm Chain (warm sheets or radiant warmer or incubator) + Breastfeeding or any glucose solution (oral or IV) + if no complications are present: (observation or Transfer to Complete) + if complications are present {(respiratory: pneumonia or respiratory distress) or (neurologic: convulsions) o digestive(diarrhea) or metabolic(hypoglycemia if glucose< 25mg/dl } or less than or equal to 34 weeks of gestation: Transfer to Complete}

PRETERM RECORDS (COMPLETE): Evaluated by specialist or doctor + Gestational age (Capurro or Ballard) + Classification of newborn according to gestational age (small, large or adequate) + Weight + Heart rate + Respiratory rate + Glycemia + Oxygen saturation + Head circumference + Skin color + Warm Chain (warm sheets or radiant warmer or incubator) + Breastfeeding or any glucose solution (oral or IV) + (if pneumonia: antibiotics) or (if diarrhea: IV solution + antibiotics) or (if convulsions: anticonvulsive) or (if hypoglycemia if glucose< 25mg/dl: glucose IV)

ASPHYXIA (BASIC) [Only if birth was in the hospital]: Evaluated by doctor + Warm Chain (warm sheets or radiant warmer or incubator) + Heart rate + Respiratory rate + APGAR score at 1 minute + APGAR score at 5 minutes + if APGAR score at 5 minutes <3 [Oxygen (mask or head box or cone or hood or nasal cannula or mechanic ventilation or oxygen tank) + Ambu (Positive pressure ventilation) + Transfer to Complete (unless child died)]

ASPHYXIA (COMPLETE) [Only if birth was in the hospital]: Evaluated by specialist or doctor + Warm Chain (warm sheets or radiant warmer or incubator) + Heart rate + Respiratory rate + APGAR score at 1 minute + APGAR score at 5 minutes + if APGAR score at 5 minutes <3 [Oxygen (mask or head box or cone or hood or nasal cannula or mechanic ventilation or oxygen tank) + Ambu (Positive pressure ventilation) or endotraqueal intubation or chest compressions + Oxygen saturation]

SEPSIS RECORDS (BASIC): Evaluated by doctor + Temperature + Heart rate + Respiratory rate + Antibiotic + (if no pediatrician present: transfer to Complete) + (if pediatrician present: admission or [if hemodynamic failure or shock: transfer to Complete])

SEPSIS RECORDS (COMPLETE): Evaluated by specialist or doctor + Temperature + Heart rate + Respiratory rate + Oxygen saturation + Complete blood count (platelets + leukocytes + neutrophil count + hemoglobin + hematocrit) + Antibiotic + Protein C Reactive + Abdominal exam

Indicator calculation: NEO_COMP_MAN_NORM / total number of neonatal complication records in the sample = NEO_COMP_MAN_NORM1

ci NEO_COMP_MAN_NORM1

Source of verification: Health Facility Survey (medical record review)

2.11. Obstetric complications managed according to norms

Indicator: Obstetric complications (sepsis, hemorrhage, severe pre-eclampsia and eclampsia) managed according to norms.

Measurement Period: Yearly

Selection criteria:

Diagnosis	ICD 10
Hemorrhage:	
Delayed or excessive hemorrhage following incomplete spontaneous abortion	O03.1
Delayed or excessive hemorrhage following complete or unspecified spontaneous abortion	O03.6
Delayed or excessive hemorrhage following abortion and ectopic and molar pregnancy	O08.1
Placenta previa with hemorrhage	O44.1
Premature separation of placenta with coagulation defect	O45.0
Premature separation of placenta, unspecified	O45.9
Rupture of uterus during labor	O71.1
Postpartum inversion of uterus	O71.2
Third-stage hemorrhage	O72.0
Other immediate postpartum hemorrhage	O72.1
Delayed and secondary postpartum hemorrhage	O72.2
Severe Pre-Eclampsia / Eclampsia:	
Severe pre-eclampsia	O14.1
HELLP syndrome	O14.2
Eclampsia in pregnancy	O15.0
Eclampsia in labor	O15.1
Eclampsia in the puerperium	O15.2
Eclampsia, unspecified as to time period	O15.9
Sepsis:	
Puerperal sepsis	O85

Formula:

Denominator: Total number of maternal complications records in our sample

Numerator: Number of women with obstetric complications (sepsis, hemorrhage, severe pre-eclampsia and eclampsia) managed according to the norm in the last two years

We generated a variable [MAT_COMP_MAN_NORM] to represent management of complications according to the norm. For indicator calculation we took into account all checkups, lab tests (where applicable) and medications are recorded.

This variable [MAT_COMP_MAN_NORM] carries a value of 1 when all below mentioned items are observed:

HEMORRHAGE RECORDS (BASIC): Pulse + blood pressure + Ringer/Hartman lactate or saline solution + (adequate management or transfer to Complete)

Management options:

If hemorrhage following incomplete or complete abortion: MVA or instrumental curettage or transfer to Complete

If ectopic pregnancy: laparotomy or salpingectomy or surgical repair or transfer to Complete

If placenta previa with hemorrhage: C-section or hysterectomy or transfer to Complete

If uterine rupture: laparotomy or hysterectomy or surgical repair or C-section or transfer to Complete

If uterine atony: uterotonics (oxytocin or others) + bimanual compression or uterine massage or hydrostatic balloon or uterine tamponade or hypogastric artery ligation or uterine artery ligation or B-lynch suture or transfer to Complete

If uterine inversion: uterotonics (oxytocin or others) + repositioning of the uterus with anesthesia or sedation (nonsurgical procedures or surgical procedures) hysterectomy or transfer to Complete

If retained product: uterotonics (oxytocin or others) + manual extraction or instrumental curettage or transfer to Complete

HEMORRHAGE RECORDS (COMPLETE): Pulse + Hematocrit + Hemoglobin + platelet count + blood pressure + Ringer/Hartman lactate or saline solution + adequate management

Management options:

If hemorrhage following incomplete or complete abortion: MVA or instrumental curettage

If ectopic pregnancy: laparotomy or salpingectomy or surgical repair

If placenta previa with hemorrhage: C-section or hysterectomy

If uterine rupture: laparotomy or hysterectomy or surgical repair or C-section

If uterine atony: uterotonics (oxytocin or others) or bimanual compression or uterine massage or hydrostatic balloon or uterine tamponade or hypogastric artery ligation or uterine artery ligation or B-lynch suture or hysterectomy

If uterine inversion: uterotonics (oxytocin or others) + repositioning of the uterus with anesthesia or sedation (nonsurgical procedures or surgical procedures) or hysterectomy

If retained product: uterotonics (oxytocin or others) + manual extraction or instrumental curettage

SEVERE PRE-ECLAMPSIA AND ECLAMPSIA (BASIC): systolic BP + diastolic BP + check for urine protein + Ringer/Hartman lactate or saline solution + magnesium sulfate + transfer to Complete

SEVERE PRE-ECLAMPSIA AND ECLAMPSIA (COMPLETE): systolic BP + diastolic BP + pulse + respiratory rate + patellar reflex + if diastolic BP>110: (hydralazine or labetalol or nifedipine) + magnesium sulfate + check for urine protein+ platelet count + (Aspartate aminotransferase or serum glutamic oxaloacetic transaminase) + (Alanine aminotransferase or serum glutamate-pyruvate transaminase) + if 24=< gestational age <34 weeks: (Dexamethasone or betamethasone)

SEPSIS (BASIC): Temperature + pulse + blood pressure + antibiotic administration + adequate treatment

Treatment options:

If septic abortion: MVA or instrumental curettage or hysterectomy or transfer to Complete

If uterine perforation: surgical repair or hysterectomy or transfer to Complete

If pelvic abscess: laparotomy or drainage or hysterectomy or surgical repair or transfer to Complete

If postpartum endometritis: antibiotic administration or transfer to Complete

If retained product: instrumental curettage or laparotomy or hysterectomy or transfer to complete

If puerperal fever: antibiotic administration or transfer to Complete

SEPSIS (COMPLETE): Temperature + pulse + blood pressure + complete blood count (hemoglobin + hematocrit + platelets + leukocytes) + antibiotic administration + adequate treatment

Treatment options:

If septic abortion: MVA or instrumental curettage or hysterectomy

If uterine perforation: surgical repair or hysterectomy

If pelvic abscess: laparotomy or drainage or hysterectomy or surgical repair

If postpartum endometritis: antibiotic administration

If retained product: instrumental curettage or laparotomy or hysterectomy

If puerperal fever: antibiotic administration

Indicator calculation: MAT_COMP_MAN_NORM / total number of obstetric complication records in the sample = MAT_COMP_MAN_NORM1

ci MAT_COMP_MAN_NORM1

Source of verification: Health Facility Survey (medical record review)

2.12. Immediate postpartum care according to best practices

Indicator: Women that received immediate postpartum care according to best practices (every 15 minutes in the first hour and every 30 minutes in the second hour).

Measurement Period: Yearly

Formula:

Numerator: Number of postpartum patients, evaluated and recorded in medical records at least once every 15 minutes during the first hour after birth, then every 30 minutes until completing two hours, and at discharge.

We created a variable [ALL_CHECK_DIS] to represent this indicator. To calculate the indicator we consider all checkups registered.

This variable [ALL_CHECK_DIS] takes a value of 1 when all the following items are observed:

BASIC EONC IMMEDIATE POSTPARTUM RECORDS: 4 times during the first hour (blood pressure + temperature + respiratory rate + pulse) + 2 times during the second hour: (blood pressure + temperature + respiratory rate + pulse) + at discharge (blood pressure + temperature + respiratory rate + pulse)

COMPLETE EONC IMMEDIATE POSTPARTUM RECORDS: 4 times during the first hour (blood pressure + temperature + respiratory rate + pulse) + 2 times during the second hour: (blood pressure + temperature + respiratory rate + pulse) + at discharge (blood pressure + temperature + respiratory rate + pulse)

Denominator: Total number of immediate postpartum records in our sample

Indicator calculation: [ALL_CHECK_DIS] / total number of postpartum care records in our sample = [ALL_CHECK_DIS1]

ci ALL_CHECK_DIS1

Source of verification: Health Facility Survey (medical record review)

CHAPTER 3: RESULTS INDICATORS. STRENGTHENING THE HEALTHCARE NETWORK

3.1. Unnecessary referrals

Indicator: Women that are referred to the national hospital for obstetric conditions that could have been resolved at another level of care.

Measurement Period: Yearly

Formula:

Numerator: Number of delivery patients referred to the national hospital that could be attended elsewhere

We created a variable [UNNECESSARY_REFERRALS] to represent this indicator.

This variable [UNNECESARY_REFERRALS] takes a value of 1 when all the following items are observed:

RECORDS OF DELIVERY PATIENTS REFERRED TO NATIONAL HOSPITAL: Patient referred for normal delivery + Patient age is younger than 18 or older than 25 years old or (prior C-section or low birth weight baby or preterm birth) or risk of birth before 37 weeks of pregnancy or (underlying conditions: diabetes, high blood pressure, anemia or epilepsy) or (pregnancy complications) or (multiple pregnancy)

Denominator: Total number of delivery patients referred to the national hospital in the sample

Indicator calculation: [UNNECESSARY_REFERRALS] / total number of postpartum care records in our sample = [UNNECESSARY_REFERRALS1]

ci [UNNECESSARY_REFERRALS1]

Source of verification: Health Facility Survey (medical record review)

3.2. Inputs and equipment for emergency obstetric and neonatal care

Indicator: Health facilities with continuous availability of inputs and equipment to provide essential and emergency obstetric and neonatal care.).

Measurement Period: Trimestral

Criteria:

Health Faclity Level	Items checked
basic	Emergency obstetric and neonatal care room Oxygen tank or central oxygen supply Reanimation resuscitation bag for adult Neonatal resuscitation bag Laryngoscope
	Pharmacy: Dexamethasone or Betamethasone Atropine or Epinephrine Penicillin crystals or ampicillin or amoxicillin Gentamicin

	Magnesium sulfate Hydralazine Ergometrine or Oxytocin
Complete	Emergency obstetric and neonatal care room Pediatric stethoscope or neonatal stethoscope Oxygen tank or central oxygen supply Reanimation resuscitation bag for adult Neonatal resuscitation bag Laryngoscope MVA kit Equipment for anesthesia Equipment for C-section
	Pharmacy: Dexamethasone or Betamethasone Amikacin sulfate Atropine or Epinephrine Ampicillin or Penicillin crystals or Amoxicillin Ceftriaxone Chloramphenicol or Metronidazole Magnesium sulfate Hydralazine or Hydralazine chlorohydrate Nifedipine Furosemide Diazepam or Midazolam chlorohydrate Sevoflurane 100% or Isoflurane Succinylcholine chloride (suxamethonium) Ergometrine or Oxytocin

Formula:

Denominator: Total number of basic and complete health facilities in our sample that provides emergency care

Numerator: Health facilities with continuous availability of supplies and equipment needed for emergency obstetric and neonatal care

We generated a variable [INPUTS_EMERGENCY] to represent the availability of all inputs and equipment needed for emergency obstetric and neonatal care.

This variable [INPUTS_EMERGENCY] carries a value of 1 when all below mentioned items are observed:

BASIC HEALTH FACILITY that have the following: Oxygen Tank or Central oxygen supply + Reanimation resuscitation bag for adult + Neonatal resuscitation bag + Laryngoscope + Starter kit for curettage + no stock out of all drugs for emergency obstetric and neonatal care in the last 1month + 2months + 3months

COMPLETE HEALTH FACILITY that have the following: Pediatric stethoscope or neonatal stethoscope + Oxygen Tank or Central oxygen supply + Reanimation resuscitation bag for adult + Neonatal resuscitation bag + Laryngoscope + MVA kit + Equipment for anesthesia + Equipment for C-section + no stock out of all drugs for emergency obstetric and neonatal care in the last 1month + 2months + 3months

Indicator calculation: [INPUTS_EMERGENCY] / total number of basic and complete health facilities in our sample that provides emergency care = [INPUTS_EMERGENCY1]

ci [INPUTS_EMERGENCY1]

Source of verification: Health Facility Survey (observation and stock card review)

3.3. Inputs and equipment for quality antenatal and postnatal care

Indicator: Health facilities with continuous availability of inputs and equipment to provide quality antenatal and post-natal care.

Measurement Period: Trimestral

Criteria:

Health Facility Level	Items checked
Ambulatory	Pre and postnatal care room: Scale with measuring rod Gynecological examination table or stretcher Obstetric tape for CLAP or measuring tape Swan neck lamp or pelvic examination lamp or headlight Sphygomanometer (tensiometer) Stethoscope Oral or axillary thermometer Perinatal maternal medical history Perinatal maternal card
	Pharmacy: Multivitamin or (iron and folic acid)
Basic	Equipment and supplies: Autoclave or Dry heat sterilizer Scale with measuring rod Gynecological examination table or stretcher Obstetric tape for CLAP or measuring tape Swan neck lamp or pelvic examination lamp or headlight Sphygmomanometer (tensiometer) Stethoscope Set for IUD insertion Fetoscope (Pinard stetoscope or doppler) Oral or axillary thermometer Perinatal maternal medical history Perinatal maternal card
	Pharmacy: Multivitamin or (iron and folic acid) Tetanus vaccine Nitrofurantoin Eritromicine or Ampiciline or Bensatinic penicillin Ayre palettes (for consideration of cervical cytology) or swabs PAP Smear slides
	Lab:

	Rapid syphilis test's kit Rapid HIV/AIDS test's kit Urine protein strips (Urine dipstick) Blood glucose strip Hemocue Microcuvettes Pregnancy test kit If syphilis rapid test is not observed check Dark field microscope If syphilis rapid test or dark microscope is not observed check Equipment for enzyme immunoassay If HIV/AIDS rapid test is not observed check Fluorescence Microscope If Urine protein strips are not observed check Urinanalysis equipment If Blood glucose strips are not observed check Glucose meter If glucose meter is not observed check Automated equipment for blood chemistry If hemocue is not observed check Automated cell counter or (manual cell counter + optic microscope)
	Reagents: If Equipment for enzyme immunoassay is observed Syphilis antigen HIV/AIDS antigen Checking in any case Blood type antibody RH factor antibody
Complete	Equipment and supplies: Autoclave or Dry heat sterilizer Scale with measuring rod Gynecological examination table or stretcher Obstetric tape for CLAP or measuring tape Swan neck lamp or pelvic examination lamp or headlight Sphygmomanometer (tensiometer) Stethoscope Set for IUD insertion Fetoscope (Pinard stetoscope or doppler) Oral or axillary thermometer Perinatal maternal medical history Perinatal maternal card
	Pharmacy: Multivitamin or iron and folic acid Tetanus Nitrofurantoin Cefalexin Ayre palettes (for consideration of cervical cytology) or swabs PAP Smear slides

	Lab: Rapid syphilis test's kit Rapid HIV/AIDS test's kit Urinanalysis equipment Glucose meter or automated equipment for blood chemistry Automated cell counter or (manual cell counter + optic microscope) If rapid tests for HIV/AIDS are not observed check: Fluorescence Microscope If rapid tests for syphilis are not observed check: Dark field microscope If rapid tests for syphilis or dark field microscope are not observed check: Equipment for enzyme immunoassay
	Reagents: If Equipment for enzyme immunoassay is observed Syphilis antigen HIV/AIDS antigen Checking in any case Blood type antibody RH factor antibody

Formula:

Denominator: Total number of health facilities that provides pre and postnatal services (and lab for basic and complete type of health facilities) in our sample

Numerator: Health facilities with continuous availability of supplies and functional equipment needed for pre and postnatal care

We generated a variable [INPUTS_ANTENATAL] to represent the availability of all inputs and functional equipment needed for pre and postnatal care.

This variable [INPUTS_ANTENATAL] carries a value of 1 when all below mentioned items are observed:

AMBULATORY that have the following: Scale with measuring rod + Gynecological examination table or stretcher + Obstetric tape for CLAP or measuring tape + Swan neck lamp or pelvic examination lamp or headlight+ Sphygmomanometer (tensiometer) + Stethoscope + Oral or axillary thermometer + Perinatal maternal medical history + Perinatal maternal card + no stock out of all drugs for pre and postnatal care in the last 1month + 2months + 3months

BASIC HEALTH FACILITY that have the following: Autoclave or Dry heat sterilizer + Scale with measuring rod + Gynecological examination table or stretcher + Obstetric tape for CLAP or measuring tape + Swan neck lamp or pelvic examination lamp or headlight + Sphygmomanometer (tensiometer) +Stethoscope + Set for IUD insertion + Fetoscope (Pinard stetoscope or doppler) + Oral or axillary thermometer + Perinatal maternal medical history + Perinatal maternal card + no stock out of all drugs for pre and postnatal care in the last 1month + 2months + 3months + lab equipment or rapid test (if lab is available) + no stock out of lab inputs in the last 1 month + 2months + 3months + no stock out of lab reagents in the last 1 month+2months+3months) (if lab is available)

COMPLETE HEALTH FACILITY that have the following: Autoclave or Dry heat sterilizer + Scale with measuring rod + Gynecological examination table or stretcher + Obstetric tape for CLAP or measuring tape + Instrument or equipment cart or stand + Swan neck lamp or pelvic examination lamp or headlight + Sphygmomanometer (tensiometer) +Stethoscope + Set for IUD insertion + Fetoscope (Pinard stetoscope or doppler) + Oral or axillary thermometer + Perinatal maternal medical history + Perinatal maternal card + no stock out of all drugs for pre and postnatal care in the last 1month + 2months + 3months + lab equipment (if lab is available) + no stock out of lab reagents in the last 1 month + 2months + 3months (if lab is available)

Indicator calculation: INPUTS_ANTENATAL] / total number of health facilities that provides pre and postnatal services (and lab for basic and complete type of health facilities) in our sample = [INPUTS_ANTENATAL1]

ci [INPUTS_ANTENATAL1]

Source of verification: Health Facility Survey (observation and stock card review)