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R2019-0108/1

May 8, 2019

Closing Date: Tuesday, May 28, 2019
at 6:00 p.m.

FROM: Vice President and Corporate Secretary

Paraguay – Paraguay Public Health Sector Strengthening Project

Project Appraisal Document

Attached is the Project Appraisal Document regarding a proposed loan to Paraguay for a Paraguay Public Health Sector Strengthening Project (R2019-0108), which is being processed on an absence-of-objection basis.

Distribution:
Executive Directors and Alternates
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Report No: PAD3229

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US$115 MILLION

TO THE

REPUBLIC OF PARAGUAY

FOR A

PARAGUAY PUBLIC HEALTH SECTOR STRENGTHENING PROJECT

May 6, 2019

Health, Nutrition & Population Global Practice
Latin America And Caribbean Region

CURRENCY EQUIVALENTS

Exchange Rate Effective March 31, 2019

Currency Unit =	Paraguayan Guaranies
US$1 =	6,159.30

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Axel van Trotsenburg
Country Director:	Jesko S. Hentschel
Senior Global Practice Director:	Timothy Grant Evans
Practice Manager:	Daniel Dulitzky
Task Team Leaders:	Luis Orlando Perez, Daniela Paula Romero

ABBREVIATIONS AND ACRONYMS

BCP	Central Bank of Paraguay - *Banco Central de Paraguay*
CPF	Country Partnership Framework
CRI	Corporate Result Indicators
DA	Designated Account
DALYs	Disability-Adjusted Life Years
DGAF	General Directorate of Administration and Finance – *Dirección General de Administración y Finanzas*
DIGESA	General Directorate of Environmental Health – *Dirección General de Salud Ambiental*
DINASAPI	Directorate of Indigenous Peoples Health of the MSPBS – *Dirección Nacional de Salud de los Pueblos Indígenas*
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FHCC	Family Health Care Center - *Unidad de Salud de la Familia*
FM	Financial Management
GDHNS	Directorate of Health Networks and Services
GDOD	General Directorate of Decentralization
GDoPE	General Directorate of Planning
GDP	Gross Domestic Product
GoP	Government of Paraguay
HCW	Health Care Waste
HIS	Health Information System
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development
ICS	Integrated Care Sets
IFR	Interim Financial Report
IP	Indigenous People
IPP	Indigenous Peoples Plan
IPPF	Indigenous People Planning Framework
IPS	Social Security Institute - *Instituto de Prevision Social*
IRR	Internal Rate of Return
LHC	Local Health Councils – *Consejos Locales de Salud*
LoC	Lines of Care
M&E	Monitoring and Evaluation
MoF	Ministry of Finance
MCH	Maternal and Child Health
MMR	Maternal Mortality Ratio
MSPBS	Ministry of Public Health and Social Welfare - *Ministerio de Salud Pública y Bienestar Social*
NCD	Non-Communicable Diseases
NPV	Net Present Value
OM	Operational Manual
OP/BP	Operational Policy/Bank Procedure
PAHO	Pan-American Health Organization
PDI	Project Development Objectives Indicators
PFA	Participation Framework Agreement
PHC	Primary Health Care
PIU	Project Implementation Unit
PPHCMN	Public Primary Health Care Micro Networks – *Microredes de Salud*

PPSD	Project Procurement Strategy for Development
RBF	Results-Based Financing
RHC	Regional Health Councils – *Consejos Regionales de Salud*
RMA	Results Management Agreement
SAU	User Attention Service - *Servicio de Atención al Cliente*
SCD	Systematic Country Diagnostic
SIG	Geographical Information System – *Sistema de Información Geográfico*
STD	Sexually Transmitted Diseases
STR	Request for Transfer
TB	Tuberculosis
U5MR	Under-5 Mortality Rate
UHC	Universal Health Coverage
WB	World Bank

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Paraguay	Paraguay Public Health Sector Strengthening	
Project ID	**Financing Instrument**	**Environmental Assessment Category**
P167996	Investment Project Financing	B-Partial Assessment

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[ ] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Disbursement-linked Indicators (DLIs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternate Procurement Arrangements (APA)	

Expected Approval Date	Expected Closing Date
28-May-2019	31-Dec-2024

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The objectives of this Project are to: (i) strengthen the public primary health care micro-networks; and (ii) expand access to quality primary health care services for the population covered by the Ministry of Public Health and Social Welfare (MSPBS).

Components

Component Name	Cost (US$, millions)
Investments to strengthen the service delivery capacity of Public Primary Health Care Micro-Networks	94.61
Improvements in the access to quality health services through priority Integrated Care Sets	15.00
Project Administration and Implementation Support	5.10

Organizations

Borrower:	Republic of Paraguay
Implementing Agency:	Ministry of Public Health and Social Welfare

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	115.00
Total Financing	115.00
of which IBRD/IDA	115.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	115.00

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2019	2020	2021	2022	2023	2024	2025
Annual	0.00	28.51	33.76	25.52	17.42	5.66	4.12
Cumulative	0.00	28.51	62.28	87.80	105.22	110.88	115.00

INSTITUTIONAL DATA

Practice Area (Lead)

Health, Nutrition & Population

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?	
a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF	Yes
b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment	Yes
c. Include Indicators in results framework to monitor outcomes from actions identified in (b)	Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	High
2. Macroeconomic	Low
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	High
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	
10. Overall	High

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✓	
Performance Standards for Private Sector Activities OP/BP 4.03		✓
Natural Habitats OP/BP 4.04		✓
Forests OP/BP 4.36		✓
Pest Management OP 4.09		✓
Physical Cultural Resources OP/BP 4.11		✓
Indigenous Peoples OP/BP 4.10	✓	
Involuntary Resettlement OP/BP 4.12		✓
Safety of Dams OP/BP 4.37		✓
Projects on International Waterways OP/BP 7.50		✓
Projects in Disputed Areas OP/BP 7.60		✓

Legal Covenants

Sections and Description

The Borrower, through MSPBS, shall establish, and thereafter operate and maintain, throughout Project implementation, a unit within the MSPBS (the PIU).

Schedule 2, Section I.A.1 of the Loan Agreement

Sections and Description

For purposes of making Capitation Payments under Part 2 of the Project the Borrower, through MSPBS, shall enter into an agreement for the participation of the LHC (the “Participation Framework Agreement” (PFA)) with the respective Participating LHC.

Schedule 2, Section I.A.2.(b) of the Loan Agreement

Sections and Description

The Borrower shall ensure that the Project does not include any activities involving resettlement, as defined under the Safeguards Policies.

Schedule 2, Section I.C.3 of the Loan Agreement

Conditions

Type	Description
Effectiveness	That the PIU has been established and staffed as provided under Section I.A.1 of Schedule 2 of the Loan Agreement and in a manner satisfactory to the Bank. Article V, paragraph 5.01.(a) of the Loan Agreement.
Type	Description
Effectiveness	That the Borrower has prepared and adopted the Operational Manual in a manner satisfactory to the Bank. Article V, paragraph 5.01.(b) of the Loan Agreement.

I. STRATEGIC CONTEXT

A. Country Context

1. **Paraguay has experienced an average growth rate of 4.7 percent over the last decade and is an upper middle-income country since 2016.** This sustained growth has been accompanied by sizeable reductions in poverty – between 2003 and 2017, moderate and extreme poverty decreased by 6.6 and 12.6 percentage points respectively.[1] The benefits of growth have also accrued to the population in the bottom 40 percent, increasing shared prosperity. Between 2006 and 2016, the average income growth rate of those in the bottom 40 percent was 5.2 percent relative to 3.5 percent for the overall population. Nevertheless, in the past few years, poverty reduction has slowed down (the poverty rate at US$3.20 a day has stagnated at 7 percent since 2013). Much of the remaining poverty is now concentrated in rural areas and affects the most vulnerable populations: nearly half of the extreme poor are children under 14 years, and the poverty incidence among indigenous populations is much higher. The economy also faces large output and price volatilities that further exposes the poor and vulnerable to economic risks.

2. **Paraguay's robust growth was largely driven by the export-oriented agriculture sector, followed by hydroelectric power generation.** This, together with good macroeconomic management, has allowed Paraguay to generate a fiscal surplus of 0.4 percent of Gross Domestic Product (GDP) on average for the 2004-2016 period and maintain public debt below 25 percent of GDP. However, public spending is inefficient and the state struggles to provide quality public services to the population. Furthermore, 71 percent of the population is self-employed in the informal sector.[2] The large informal sector impacts the structure of the health sector, since access to health services differs by employment formality. Those in the informal sector have access to public care networks, while employees from the formal private sector are covered through the Social Security Institute - *Instituto de Prevision Social* (IPS) and public employees receive subsidies to buy private health insurance.

3. **The country is undergoing a rapid demographic transition and urbanization.** Twenty eight percent of the population is young (between 15-29 years of age). The demographic structure combined with the low unemployment rate promises a high demographic dividend that the country can benefit from over the next few decades. Paraguay is also the least urbanized country in South America, with only 60 percent of the population living in cities. The country is rapidly urbanizing, particularly in the greater Asuncion area. Between 2004 and 2014, the urban population grew at an average growth rate of 1.8 percent, faster than most South American countries.

4. **To sustain the growth trends experienced in the last two decades, there is a need to address several structural challenges.** As the recent Systematic Country Diagnostic (SCD) for Paraguay (Report No. 127989) highlighted, the current rate of depletion of natural resources (mainly deforestation) is unsustainable. Moreover, in part due to the poor job creation in the formal labor market, the contribution of the demographic dividend to poverty reduction is fading. This is further exacerbated by the poor quality of human capital, and the fact that social

[1] Data are from World Development Indicators, World Bank (WB) (2018). In 2003, the 8.3 percent of people lived with under US$1.90 per day and 19.6 percent of people lived under US$3.10 per day. In 2016, the figures were 1.7 percent and 7 percent respectively.
[2] Data are from *Encuesta Permanente de Hogares* (EPH) (2015). See Ruber, Elizabeth (2017). "Jobs Diagnostics Paraguay". WB Report – Jobs Series No. 9.

expenditures are directed more towards the elderly than the young. It is essential to improve the quality of public services and increase human capital to put Paraguay on a sustainable growth path.

B. Sectoral and Institutional Context

5. **Fragmentation is inherent to the Paraguayan health care system, as the Ministry of Public Health and Social Welfare *(MSPBS, Ministerio de Salud Pública y Bienestar Social)* and the IPS operate independent service delivery networks.** The MSPBS is responsible for health sector stewardship and regulation, but also has the mandate to provide health services free of charge to the entire population that are financed by general taxation. The IPS provides insurance coverage to the formally employed and is mainly financed by a payroll tax. Combined, the two provision schemes cover 90 percent of the population. The remaining population is covered by private insurance, the police and military's separate provision networks, and the University of Asuncion Hospital. While IPS covers 18.5 percent in 2016, 74 percent of the population lacks formal insurance and relies primarily on the MSPBS facilities for their health needs.

6. **The effective implementation of the National Health Law (1.032/96) has been slow.** The National Health Law became effective in 2008 and led to the creation of the National Health System comprising a National Health Council and Regional and Local Health Councils (*Consejos Regionales y Locales de Salud,* RHCs and LHCs). One of the purposes of the reform was to decentralize health provision and encourage citizen participation (Law 3007) by establishing the RHCs and LHCs. However, the actual implementation of the law has been slow.

7. **The newly elected President (August 2018) called for a revolution of health care provision in the country to ensure access to quality health services for all communities of the country**. The Government of Paraguay (GoP) has announced a revision and full implementation of the National Health Law to improve the coordination between regional and local authorities and recently adopted the National Health Policy 2017-2030 with a focus on quality of care.[3] Health sector improvement is central to the Government's agenda, which includes the strengthening of community-oriented Primary Health Care (PHC) and the delivery of maternal, infant and child health services as key areas for improvement**.** The future development of the health sector in Paraguay has been amply debated in recent years.[4] In addition to the proposed Project, IBRD is supporting the GoP's health sector agenda through a Reimbursable Advisory Services (RAS) activity that provides analytical inputs for a broader future harmonization of the Paraguayan health sector.

8. **Over the last 15 years, the GoP has made significant investments in the public health sector to increase service coverage and utilization.** To make progress towards Universal Health Coverage (UHC), the GoP started implementing an ambitious primary health care strategy in 2008, which entailed the construction of Family Health Care Centers (*Unidades de Salud de la Familia*, FHCCs) and the abolishment of user fees in the public health system. The country had 801 such units as of 2017 but there is still a significant unmet need. Between

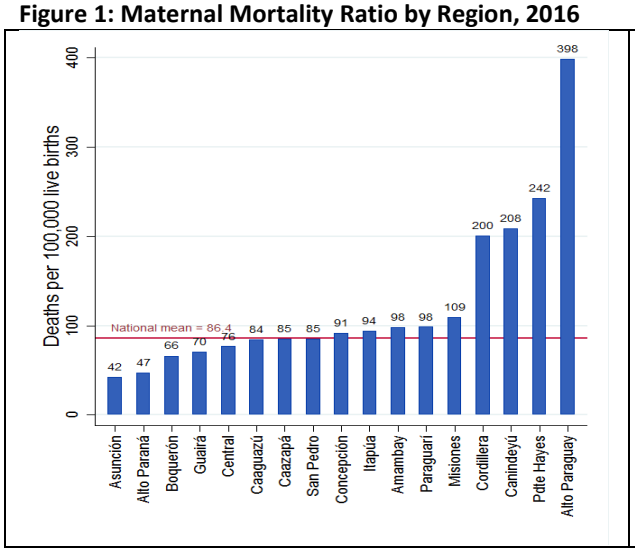
[3] The six strategic pillars of this policy are: (a) institutional strengthening; (b) quality of care based on best practices; (c) systematic and permanent improvement of quality of care; (d) patient security; (e) community involvement in monitoring of health care quality; and (f) development of operating manual for the evaluation of health care quality (MSPBS, 2018).

[4] *Unidad Técnica del Gabinete Social, Presidencia (2017): Nota Sectorial;* ILO (2016): *Panorama de la protección social: diseño, cobertura y financiamiento*; Serafini, Veronica (2017): *Paraguay: inversión en protección social no contributiva. Desafíos para el diseño la mediación de la política*. EU Policy Note. De Campos, Arnoldo: *Propuestas para el fortalecimiento del Sistema de Protección Social en Paraguay*. FAO Policy Note. Guillen, Maria Cristina; MSPyBS (2011). *Paraguay: Sistemas de Salud en Sudamérica: Desafíos hacia la Integralidad y Equidad.* Gaete (2017). *Financiamiento de la cobertura universal de salud en Paraguay.* CADEP Policy Note.

2014 and 2016, only 46 new FHCCs were incorporated into the system. In 2009, the MSPBS adopted a List of Essential Medicines to prioritize the procurement and availability of certain medicines. The MSPBS has also begun to transfer financial resources to LHCs, but without establishing health care-related targets for LHCs. These reforms led to an increase in service coverage and utilization. The fraction of people reporting that they accessed health care services increased from 16.4 percent in 2003 to 28.6 percent in 2016.[5] During the same period, the share of population that reported not accessing health care due to unaffordability fell from 16.6 to 3.9 percent.

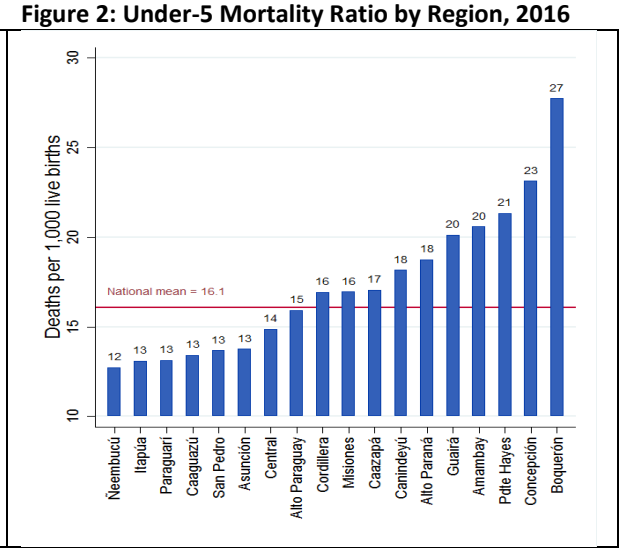
9. **Despite significant improvements in the last two decades, there are still challenges ahead.** Paraguay continues to perform below other countries in the region on key health indicators. Out of 20 Latin American and the Caribbean (LAC) countries, Paraguay is currently ranked 16th for Maternity Mortality Ratio (MMR), and 14th for Infant Mortality Rate (IMR) and Under-5 Mortality rate (U5MR).[6] Comparator countries in the region, like Guatemala and Bolivia, have made significant progress during the same period.[7] At the same time, substantial regional inequalities within the country persist. MMR in the remote and sparsely populated region of Alto Paraguay was 296 per 100,000 live births, eight times the rate for Asuncion (Figure 1). Similarly, U5MR is highest in the Boquerón department (27 per 1,000 live births), 1.5 times above the national average (Figure 2). Regional health outcomes are generally uncorrelated with poverty rates, which suggests that factors other than income are the main driver of lower performance.[8]

Figure 1: Maternal Mortality Ratio by Region, 2016



Source: Department of Statistics, Ministry of Health of Paraguay, 2016

Figure 2: Under-5 Mortality Ratio by Region, 2016



Source: Department of Statistics, Ministry of Health of Paraguay, 2016

[5] Data are from the EPH. The survey asks respondents about their health care needs and utilization behavior in the three months prior to the survey.
[6] Source: World Development Indicators, WB (2018).
[7] "Structurally similar" countries were identified for the SCD and PER.
[8] As an example, the poorest region in the country, Caazapá, where 33.5 percentage of the population was classified as poor in 2016, has MMR and IMR rates that are very close to the national mean.

10. **Primary health care infrastructure deficits continue being a critical factor for health care access.** Several studies have shown the lack of FHCCs in large areas of the country.[9] With a deficit estimated in 600 FHCCs,[10] the government expressed its commitment to build a total of 400 new FHCCs[11].

11. **While the burden of disease shifts towards chronic and Non-Communicable Diseases (NCDs), MCH issues and communicable and vector-borne diseases remain a concern.** With the demographic transition, NCDs such as diabetes, hypertension, cardiovascular disease and cancer are becoming increasingly common. Together with other chronic conditions, like mental disorders and disability, they pose a big challenge. In 1990, NCDs accounted for 53 percent of all disability-adjusted life years (DALYs). This share has increased to 69 percent in 2016. Simultaneously, in 2015 there was also an abrupt rise in confirmed cases of dengue – from 2,634 in 2014 to 17,028 in 2015. Tuberculosis (TB) incidence has remained high, increasing marginally from 33.8 per 100,000 population in 2014 to 34.9 in 2015. Similarly, in 2016, while Paraguay had a similar HIV/AIDS incidence as the LAC average (0.5 percent versus 0.6 percent), the antiretroviral therapy coverage was much lower in Paraguay (35 percent versus 50 percent).[12] This double disease burden requires targeted actions on both fronts.

12. **The WB Public Expenditure Review (June 2018, Report No. AUS223) identified the strengthening of the primary health care sector as a short-term priority**. The country's health outcomes suggest that the allocative efficiency of health spending can be improved, especially by strengthening primary health care networks at districts level and increasing the share of resources allocated to promotion and prevention activities. In 2016, 39.6 percent of all health care visits to MSPBS facilities were at hospitals, while FHCCs[13] accounted for only 5.3 percent of visits. This is because the rollout of FHCCs has been slow (801 of the 1,500 originally planned FHCCs at the end of 2017, covering 32 percent of the population). Furthermore, the existing FHCCs do not always provide adequate care for health care problems (for example, stockouts of Essential Medicines are frequent).

13. **Allocations to public health care providers continue to be based on historical budgets and do not reflect current health care needs and health outcomes.** The MSPBS directly allocates resources for infrastructure, human resources, medical supplies and pharmaceuticals to health facilities, without a mechanism to account for specific health priorities or geographical differences. Changing provider payment mechanisms from input to output-based could help to better target health care demand, prioritize specific areas, and improve outcomes and lower costs. To tackle priority areas, other countries have experimented with financing pre-defined benefits packages or diagnostic related groups (DRGs) or financial allocation to specific goals in selected lines of care, while continuing traditional budget allocation.[14] Similar interventions could help Paraguay to adapt the service delivery network to better address both the changing epidemiological profile and improve the sector's allocative efficiency as discussed above.

[9] Fiscalidad para la Equidad, Tomo 2. ISBN: 978-99967-892-3-9. © Decidamos, www.decidamos.org.py @ Centro de Análisis y Difusión de la Economía Paraguaya (Cadep), www.cadep.org.py.
[10] Mapping of Primary Healthcare in Paraguay (Ríos, 2014).
[11] MSPBS 2018. National Health Policy 2017-2030.
[12] Data are from World Development Indicators (2018). The vertical HIV transmission rate is also higher in Paraguay than the neighboring countries – 12.5 percent in Paraguay, 4.4 percent in Argentina, 5.1 percent in Chile, and 2.6 percent in Uruguay. See: Garcia, Patricia, Angela Bayer and Cesar P Carcamo (2015). "The Changing Face of HIV in Latin America and the Caribbean" *Curr HIV/AIDS* 11(2): 146-157.
[13] FHCC Family Health Care Center (USF-*Unidad de Salud de la Familia*) is a special type of primary health care facility (PHCF) oriented to provide health care to all the family members.
[14] For instance, Plan Nacer project from Argentina followed this approach.

14. **Additionally, the provider payment mechanisms generate few incentives for good performance.** As public servants, health facility staff are paid a fixed salary, without any premia for individual or health facility performance. Experiences from other countries tying a small portion of resources to specific outputs or outcomes have found large positive health impacts.[15] Strengthening the primary care sector and introducing changes to provider payment mechanisms could help improve effectiveness and efficiency.

15. **The MSPBS has started to implement information systems to improve its stewardship over the sector and facilitate a reform to prepare the service delivery network for its new challenges.** A web-based Geographic Information System (SIG) facilitates a better planning of the public service delivery system and provider networks at the macro-, meso- and micro-levels – (PPHCMNs) consisting of Family Health Care Facilities and District Hospitals. The SIG provides a technical solution for the operation of regional service delivery networks and lays the foundation for the development of care integration, as the utilization of different health care services and the compliance with quality standards can be tracked at the patient level through different levels of care. The data stored and shared through the SIG may be entered by healthcare teams online or offline, during or after interactions with patients, providing real-time information about service provision and quality of care using standardized protocols to control it.

16. **In order to address these challenges, the GoP requested IBRD financing and technical support to develop a Project to expand population access to quality health services and to contribute to the realignment of the service delivery system with priority disease areas**. The Project will do so by implementing Integrated Care Sets (ICS) which refer to primary health care services for selected health conditions and prevalent diseases provided in an integrated manner. The Project will promote three types of integration: clinical, service and functional. Clinical integration refers to a single and coherent process within/or across professions by means of, among others, using shared guidelines and protocols. Service integration involves the integration of different clinical services at an organizational level by, for example, establishing multidisciplinary teams. Functional integration means integration of non-clinical and back-office functions through, for example, shared electronic patient records.[16] The ICSs have been designed based on cost-effectiviness, equity and sustainability criteria, emphasizing promotion and prevention activities and an early control of health conditions for diseases with a high prevalence and a high share of the morbidity and mortality burden. The selection of the ICS was a critical stage of Project preparation based on an epidemiological analysis. It will equip the MSPBS for the first time with a tool to align its health care network and the provided care with the most prevalent health needs and ensure cost-effective interventions.

17. The Project envisions to strengthen the PPHCMNs composed of LHCs, district hospitals and FHCCs that all operate under the conceptual framework of the PHC strategy. To ensure that PHC facilities can provide services that otherwise would be delivered by hospitals, they will need to be adequately re-equipped with clinical equipment, and their physical infrastructure may need to be rehabilitated. New FHCCs will have to be built to expand access to PHC services to underserved populations. To ensure the quality of services delivered, health personnel needs to be re-trained. To ensure the adequate cost-effective implementation of a selected ICS, a results-based financing (RBF) mechanism will be implemented, providing incentives to LHCs and FHCCs. Finally,

[15] For example, see Celhay et al. (2018) for an evaluation of Argentina's Plan Nacer project.
[16] Lewis R, Rosen R, Goodwin N, Dixon J. Where next for integrated care organizations in the English NHS? London: The King's Fund; 2010, in: Satylganova, Altynai. (2016). Integrated care models: an overview. Copenhagen: WHO Regional Office for Europe; 2016.

and to ensure the MSPBS's capacity to manage the entire national health care network under the new arrangements and implement the Project, its implementation capacity will need strengthening.

C. Relevance to Higher Level Objectives

18. The proposed Project is in line with the World Bank Group's twin goals of eliminating extreme poverty and boosting shared prosperity by assisting Paraguay to accelerate progress toward the achievement of UHC. This is consistent with the Priority Directions of the Health, Nutrition and Population Global Practice 2016-2020. In addition, the proposed Project is aligned with the World Bank's Human Capital Project, which calls for countries to make greater investments in health and education to improve the productive capacities of their populations.

19. The World Bank Group's Country Partnership Framework (CPF) for Paraguay for FY2019-FY2023 (Report No. 131046) and the SCD highlight four policy priority areas for Paraguay: (i) rule of law, accountable institutions and business environment; (ii) natural wealth management; (iii) quality of public services; and (iv) human capital. The Project contributes to three of the four main priority areas. It is directly aligned to the third priority area through its objective to improve the quality of health services; and to the fourth priority area with direct contributions to health and education as productive inputs for human capital. The Project indirectly contributes to the first priority area by increasing the capacity and accountability of the MSPBS.

20. The proposed Project will contribute to the CPF Higher Level Objectives of: (i) improving the health of the population covered by the MSPBS for selected highly prevalent health conditions and illnesses; (ii) improving the stewardship and governance of the MSPBS, in particular the relationship with other key health stakeholders including Regional and Local Health Councils; (iii) redirecting MSPBS investments to more cost-effective activities to achieve some efficiency gains in a relatively short period of time and to boost health sector transformation across different policy cycles; and (iv) strengthening the delivery capacity of the public health sector to facilitate the progressive harmonization of existing coverage schemes in the long run.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

21. The objectives of this Project are to: (i) strengthen the public primary health care micro-networks; and (ii) expand access to quality primary health care services for the population covered by the MSPBS.

22. The primary health care services cover maternal and child care and the following prevalent diseases: (i) non-communicable diseases: diabetes, hypertension, cervical and breast cancer; and (ii) communicable diseases: HIV, sexually transmitted diseases (STDs) and TB.

PDO Level Indicators

(i) Strengthening the public primary health care micro-networks:

- Number of new public primary health care micro-networks established that report performance through the SIG
- Number of FHCCs operating according to the national standard

(ii) Expanding access for the population covered by the MSPBS:

- Percentage of population covered by the MSPBS with access to PHC through the FHCCs

(iii) Improving quality primary health care services:

- Percentage of pregnant women with early prenatal checkups
- Percentage of hypertension patients correctly diagnosed
- Percentage of TB cases diagnosed

B. Project Components

23. The Project will have three components:

24. **Component 1: Investments to strengthen the service delivery capacity of Public Primary Health Care Micro-Networks (US$94.61M).** This Component will finance activities for the strengthening of PPHCMNs, so they can provide quality health care services to people under different ICS. The component will finance the following activities:

a) Construction of new FHCCs, rehabilitation of infrastructure in district hospitals and existing FHCCs, and the conversion of health posts to FHCCs through Civil Works (US$55.73M). Specific activities include: (i) the construction of new FHCCs and the rehabilitation of existing infrastructure of district hospitals will be initially limited to four prioritized departments (Central, Paraguarí, Cordillera and Amambay). Prioritized departments could be expanded throughout Project implementation after prior agreement with the Bank; and (ii) rehabilitation of existing FHCCs and the conversion of health posts into FHCCs will happen in other departments as well. The Project will finance the construction of 152 new FHCCs facilities and the rehabilitation of 114 existing FHCCs and 10 district hospitals. New FHCCs will be built according to a standardized model that will include an energy-efficient design to reduce the energy consumption of buildings contributing to mitigate climate change (see Section IV) . Civil works will only be financed in those health facilities whose land ownership right is under rule and belongs to the MSPBS or has a Usufruct Agreement signed between the MSPBS and other state institutions or between the MSPBS and Indigenous Communities. The Project will not finance civil works that require land purchase or expropriation or generate physical or economic displacements of populations. The Operational Manual (OM) will include provisions to ensure compliance with these criteria. Annex 3 describes the details of the methodology to define the number, size and location of the new FHCCs to be built under the Project.

b) Provision of medical equipment, furniture, information and communication technology (US$28.11M) for: (i) all FHCCs and rehabilitated district hospitals under Component 1(a)(i) will be needed to improve the quality of primary health care services; and (ii) the central level of the MSPBS to support the central management and monitoring of the functioning of PPHCMNs and the maintenance and management of a national database of beneficiaries.

c) The carrying out of capacity building activities for MSPBS staff and other health staff working on the public health sector selected pursuant to the criteria set forth in the OM (US$4.00M). Activities will include training of health care personnel (health promotion workers, nurses, doctors) on delivering quality services under the selected ICSs, using health information systems (HIS) and health planning tools at the community level. Administrative personnel will also be trained in the use of HIS and administrative tools, whereas managerial teams will be trained in implementing the result-based

financing scheme, developing purchaser-provider agreements, financial control mechanisms and technical auditing tools.

d) The provision of specific support services (US$6.77M) for the: (i) institutional strengthening to improve the performance of PPHCMNs at central and local levels; (ii) design of a mass communication and social media strategy to promote the population's behavioral change (i.e. generating awareness regarding health promotion and self-care on ICS); and (iii) establishment of efficient procurement and logistic mechanisms for medicines and medical supplies.

25. **Component 2: Improvements in the access to quality health services through priority Integrated Care Sets (US$15.00M)** The objective of this component is to expand population access to quality health care services for the following health ICS: (i) maternal and child health; (ii) highly prevalent NCDs (i.e. hypertension and diabetes) and cancers prevalent among women (i.e. cervical-uterine and breast cancer); and (iii) infectious diseases, (i.e. TB and STDs such as syphilis and HIV).

26. **This component will finance capitation payments for the provision of ICS under a RBF scheme.** Through the strategic purchasing of health results, the MSPBS will promote the development of public PPHCMNs to provide access to quality health services through the primary health care network and particularly through the FHCCs, and the implementation of population-level interventions for health promotion by municipalities, developing the Healthy Municipalities Strategy. The capitation payment will function as a quasi-health insurance premium. The capita value has been calculated to cover the incremental cost of providing PHC coverage for the selected ICS considering the size of the population under MSPBS coverage and gaps in service provision. Based on the number of people assigned to each FHCC grouped under each LHC, the Project will make capitation payments to the LHCs.

27. **Outcomes to be rewarded under the Project are related to: (i) stewardship; governance and PPHCMNs performance monitoring; (ii) health promotion; and (iii) health outcomes**. Specific progress indicators will be grouped in Result Areas. The list of indicators to track the achievement of results together with their targets, operational definition and the verification protocols will be defined in the OM. See the list of indicators for each Result Area in Table 1.2, Annex 1. The initial share of the capitation payment allocated to each area is described in Table 1 below. This distribution could be modified during Project implementation to ensure validity of the incentive scheme after prior agreement with the Bank. Annex 3 includes a detailed conceptual description of Component 2.

Table 1 – Capita Payment distribution between Result Areas

Result Areas	Capitation Payment Share (%)
1- Stewardship, governance and PPHCMNs performance monitoring	26
2 - Health Promotion	29
3 - Health Outcomes	45

28. **Component 3: Project Administration and Implementation Support (US$5.10M).** This component will support and finance the Project implementation and supervision efforts, including Project management, fiduciary tasks, the management of environmental and social risks, monitoring and evaluation (M&E) and the financial audit through consulting, non-consulting services and operating costs. The Project will be managed by a stand-alone Project Implementation Unit (PIU) that will be housed within the MSPBS. This design will contribute to a more

effective launch and implementation of the Project, permitting a progressive transfer of activities and capabilities to the internal administration of the MSPBS.

C. Project Beneficiaries

29. The primary Project beneficiaries will be the population with the most prevalent NCDs and contagious diseases and women of fertile age and children that are covered by the MSPBS. These groups account for nearly 70 percent of population of the country (around 4.6 million people). This population lacks health insurance due to the lack of a formal employment arrangements (they either belong to the informal labor market or are unemployed and are more likely to be poor than an average citizen[17]). The Project will be implemented country-wide, with a focus on prioritized departments (Central, Paraguarí, Cordillera and Amambay) to develop new FHCC infrastructure where the population is currently underserved. The Strategy for Healthy Municipalities, by its nature as a population-level policy, will reach and benefit the entire population of a given municipality, not only those exclusively covered by the MSPBS.

D. Results Chain

30. The Project aims to reorient health care services by establishing clear priorities to be achieved and by strengthening the primary health care sector to provide better services for these priority areas (both at the patient and population-level). The capacity of the primary health care network to solve cases is poor due to the lack of human resources as well as due to the lack of adequate physical and medical infrastructure, but also because care teams work in a reactive manner, solving spontaneous demand (i.e. acute cases) instead of providing preventive services for priority diseases.

31. The theory of change for this Project builds on the notion that, if staff of the FHCCs: (i) are trained to provide quality health care services for the priority ICS; (ii) can make use of adequate physical infrastructure and medical equipment; (iii) are well incentivized to perform; and (iv) have access to the right information about their target populations, then significant improvements in the functioning of the primary health care network can be achieved. This will then refocus the health system more on prevention and early detection of high-cost illnesses and reduce spending on expensive curative care. At the same time, support to the development of the Healthy Municipalities Strategy will contribute to a better awareness of the population about key risk factors under the ICS. Since health (together with education) is a key dimension of human capital formation, its preservation and resilience, the theory of change envisages that the Project interventions which target the poor and vulnerable populations will lead to greater human capital accumulation and inclusion.

32. In line with this notion, as shown in Figure 3 below, the Project proposes interventions to support transformational changes in the health sector, particularly at the primary care level. In doing so, the Project brings together and expands institutional capacities of stakeholders at all levels – primary health care providers, the LHCs and municipalities and the Central Ministry – to improve the overall quality of services provided in the health sector. The Project takes a gradual approach towards building institutional capacity and aims to work with six priority disease areas. The Project will accomplish its objectives by: (i) strengthening the national norms and protocols for health service delivery and expanding the national capacities for management, planning and

[17] Estimates suggest that people in the poorest decile of income accounted for 15.3 percent of all MSPBS out-patient services and 11.5 all in-patient services. In MSPBS, both out-patient and in-patient shares decline as households get richer – from 15.3 percent in the poorest decile to 2.8 percent in the richest decile for out-patient services and from 11.5 percent to 3.4 percent for in-patient services. Estimated utilization patterns for IPS, follows the opposite pattern. PER (Public Expenditure Review).

implementation, which will lead to a better alignment of health programs with the population needs in an efficient manner; (ii) increasing the preventative role and the capacities of primary health care networks to provide population services and care for priority disease areas; and (iii) improving health promotion and preventive population-based activities for the ICS.

Figure 3: Paraguay Public Health Sector Strengthening Project - Theory of Change

The objectives of this Project are to: (i) strengthen the public primary Health Care Micro-networks; and (ii) expand access to quality primary health care services for the population covered by the MSPBS

Components	Activities	Outputs	Outcomes	
			During the project Short-term outcomes (PDOs)	After the Project Mid-term outcomes
Component 1: Investments to strengthen the service delivery capacity of Public Health Care Micro-Networks	Construction of new FHCCs; rehabilitation of existing FHCCs and selected district hospitals; reconversion of existing health centers to FHCCs	FHCCs are constructed, rehabilitated and adequately equipped to provide quality services for priority lines of care	(i) Strengthening the MSPBS's primary health care network: • 152 of new public primary health care micro networks established that report performance through the SIG • 225 FHCCs operating according to the national standard	Better health for the poor and vulnerable population who rely solely on MSPBS facilities for their care needs by increasing their access to preventative and quality health services Inclusive growth, reduced burden of out-of-pocket health expenditures and better human capital investments for the poor and vulnerable populations
	Provision of medical equipment, infrastructure, furniture and ICT tools for FHCCs	Population roster for each FHCCs listing their catchment populations Increased knowledge among beneficiaries about the role of USFs		
	Purchase of ICT equipment for the central level to improve of management and monitoring capacity	Functional ICT equipment for efficient management, coordination and monitoring of health networks		
	Training and technical assistance for the implementation of the RBF model for priority ICS (population enrollment, implementation of llinical guidelines for each ICS, establishment of referral and counter-referral system, design and implementation of social communication tools, monitoring and evaluation of services rendered under the priority ICS)	Protocols, guidelines and tools are reviewed for the implementation of priority ICS Mechanisms for training of staff, updating and use of protocols are established Mechanisms for referrals and counter-referrals to higher level care for priority ICSs are established and monitorized MOH monitors the overall performance of the public health system at Regional, Local and Provider level.		
	Technical assistance for optimizing the procurement and logistical of pharmaceuticals and medical supplies	Medicines and medical supplies for priority ICS are procured efficiently and available at the USFs.	Health Information System for medicine stock control in place	
Component 2: Improvements in the access to quality health services through priority Integrated Care Sets	Financial assistance (RBF) to the LHC for stewardship; governance and PPHCMNs performance monitorings and through the LHCs to PPHCMNS for delivery of quality services on the basis of capitation payments (which can be invested in quality improvement, logistic support and FHC mantainance)	LHC are involved in management of monitoring of FHCCs, and population health promotion activities. Also are responsible to the community for the health results of the PPHCMN of their territory	(ii) a) Expanding access for the population covered by the MSPBS: • 40 % of population covered by the MSPBS with access to PHC through the FHCCs (iii) b) Improving quality primary health care services: • 40 % of pregnant women with early prenatal checkups • 40 % of hypertension patients correctly diagnosed • 88 % of TB cases diagnosed	
	Financial assistance (RBF) to LHC for the development of population health activities for the priority ICS under the healthy municipality strategy	Staff are adequately trained to provide quality health services for priority ICS Health workers are incentivized to provide quality health care services		
Component 3: Project Administration and Implementation Support	Monitoring and evaluation activities			

E. Rationale for Bank Involvement and Role of Partners

33. Beyond the direct contribution of the proposed project to Paraguay's socioeconomic development, the added value of IBRD's support consists in its international experience and technical expertise in health sector strengthening to boost UHC. IBRD will also continue to develop the client's institutional capacity during Project implementation through trainings and knowledge experiences with other countries.

34. To maximize synergies in the participation and involvement of different international partners, the MSPBS has created a working group consisting of international organizations to ensure that partners' strategies are aligned with the strategy of the MSPBS supported by IBRD. Key project activities were coordinated with the Pan-American Health Organization (PAHO) to support MSPBS during Project preparation. Activities with other partners will be coordinated during the implementation stage. During project preparation, PAHO provided support for managerial training of MSPBS's general directors, training in the design and use of health indicators to monitor progress. Training activities for health personnel and periodic review of guidelines and protocols for MCH and prevalent diseases will be coordinated on during Project implementation. The Global Fund will be providing technical support to the MSPBS 's activities to reach Project goals for the HIV and TB ICS.

35. The MSPBS has requested technical and financial support from the Inter-American Development Bank (IADB) to strengthen the capability of secondary and tertiary hospitals to deliver inpatient services for the same ICS the IBRD project supports, using the same project guidelines and protocols. These coordinated efforts will ensure that patients receive coordinated and integrated care across all levels.

F. Lessons Learned and Reflected in the Project Design

36. The Bank's experience using RBF for health care delivery indicates that RBF schemes, rather than traditional input-based financing, have the potential to foster good governance in service delivery and improve health results.[18] Agreements signed with subnational government entities in charge of service delivery ensure sustainability over time, even when changes in Government administrations at the national level occur. Performance agreements and results-based transfer mechanisms with effective monitoring have offered clear incentives to subnational levels and health service providers to accomplish specific health results. Projects in other countries, in particular *Plan Nacer* in Argentina (Projects P071025 and P095515), have successfully experimented with financing pre-defined benefit packages and introducing financial allocations for specific goals under selected lines of care, while continuing traditional budget allocation.

37. RBF experiences have proved that organizational changes introduced are demanding, both technically and institutionally. Project implementation will require substantial Technical Assistance from the PIU to the LHCs, Health Care Networks and health care providers, as well as an intense policy dialogue and technical supervision by IBRD. In addition, RBF experiences show that the strengthening of the supply side is a necessary condition to support the expansion of quality health services using incentives. For instance, experience from the *Previniendo* RBF pilot of the NCD Prevention Project in Uruguay (P050716) showed that

[18] Policy Research Working Paper 6884, Rewarding Provider Performance to Enable a Healthy Start to Life. Evidence from Argentina's Plan Nacer Project.

strengthened supply is a necessary condition to ensure the provision of systematized and high-quality preventive and control services for NCDs.[19] Therefore, the Project includes a large component to strengthen the PPHCMN delivery capacity, which will support the revamping of existing infrastructure, the construction of new FHCCs and the provision of equipment. This support will set the base to improve the quality of the services provided.

38. A Pilot Project[20] implemented by the MSPBS in Alto Parana during 2015-2016 using the RBF scheme has demonstrated the positive changes to be obtained from the simultaneous implementation of different variables: [21]
    a) Supply side: promoting the geographical organization of health services in micro networks with District Hospitals as the reference center.
    b) Information system: a geographic information system was implemented to track, measure, and link the supply and the demand, including patient-level information. This system has contributed to ensuring users receive health care in the appropriate place and that the different levels of health facilities (micro networks) are connected and coordinate efforts.
    c) MSPBS stewardship was strengthened through the use of performance agreements with the LHC to transfer financial resources based on the level of PPHCMNs compliance with the goals previously agreed upon.

39. The experience proved that it is possible to implement an RBF scheme in the MSPBS of Paraguay, and has also shown how a different payment mechanism, representing a relative low percentage of the total budget, encourages different types of organizational behavior, and why performance-based payment schemes are more likely to help achieve the desired health goals than traditional payment schemes based on incremental budgets.

40. The experience from previous projects focusing on NCDs shows that population-based preventive interventions, the reorientation of public facilities to provide quality NCD-related care, and the achievement of patient adherence to control treatments involve important cultural and behavioral changes that require several years to materialize. [22] The proposed Project provides the foundations required to build greater capacity to plan, deliver and manage health care services for NCD-patients. The rich existing literature on interventions and policies aimed at changing habits of health care professionals shows that education,

[19] Uruguay NCD Prevention Project (P050716 Implementation Completion and Results Report).

[20] "Pilot Project of Integrated Health Services Networks with Emphasis on Obstetric and Neonatal Essential Care in Alto Parana region" (pregnant women and newborn). This one-year pilot project covered 6 municipalities (Itakyry, Minga Porá, Hernandarias, Santa Fe, Mbaracayú y San Alberto) with a population of 165 thousand altogether, located in the north of Alto Paraná region that concentrated the higher maternal mortality ratio of the region and the country.

[21] As a result of the pilot project implementation, changes in indicators were observed, such as the expansion of access and the increase in demand for maternal and child health services that were documented in the SIG and in the routine HIS of the MOH and regional level. The reports of the health region office itself indicate a decrease in home births (eg: Itakyry, from 60 in 2014 to 10 in 2015, and as of June 2016, none were registered), an increase of institutional deliveries (it went from 7 in 2014 to 100 in 2015 and by June 2016 were registered 70); an increase in Family Planning coverage in puerperal women (eg, in Minga Porá, it went from 7 percent in 2014 to 73 percent in 2016). The increase in the number of deliveries in the northern area in Itakyry and Minga Porá (which in the process of territorial organization were defined as expanded USFs with the capacity to provide the delivery service for the districts in the northern area) implied a decrease in referrals for deliveries to the District Hospital of Hernandarias (reference center), where all deliveries were previously sent. There wasn't an external impact evaluation of the pilot project.

[22] Uruguay NCD Prevention Project (P050716), Argentine Protecting Vulnerable People Against Non-Communicable Disease, (P133193); Argentina - Essential Public Health Functions and Programs II Project – (P110599) Implementation Completion and Results Report.

training, and enablement of providers in the context of team-based approaches are key for successful interventions (both the strengthening of FHCC teams and a national training agenda address these aspects).

41. Care integration initiatives have shown their potential to reduce costs, avoidable (hospital) care and to increase patient satisfaction. A meta-analysis incorporating systematic reviews and nine additional studies of integrated care interventions concluded that these interventions were associated with a reduction of avoidable hospital admissions by 19 percent, compared to usual care delivery. The introduction of ICSs at the primary health care level under this Project will be setting the base for further development of integrated care at the hospital level.

42. Projects with a strong focus on capacity building need to be realistic about what can be achieved within the project lifetime. Project design must not underestimate the time and resources needed to equip, motivate and train primary care providers about the importance of preventing NCDs and to define, measure and monitor provider performance (and the learning process involved in the continuous redefining and adjusting of those measures). Targets for indicators tracking behavioral and/or institutional changes should be relatively conservative considering the time needed to implement these changes.

43. To avoid the risk that implementation through the Ministry's internal administrative structure results in long decision-making processes, the PIU will be established at a high hierarchical level within the Ministry.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

44. The Project will be implemented by the MSPBS through the PIU established within the MSPBS, reporting directly to the Minister. The PIU will be responsible for working with MSPBS Directorates and the Regional and Local Health Councils to implement the Project in a timely manner, conforming to agreed-upon quality standards. The PIU will work closely with the MSPBS teams that are institutionally responsible for the health programs implementing the priority ICS such as MCH, Immunizations, Sexual and Reproductive Health, Adolescent Health, Diabetes, Hypertension, HIV, STDs, TB, cervix and breast cancer and the additional teams such as the Directorate of Indigenous People Health (DINASAPI) and others working on the Healthy Municipalities Strategy: School Health and Tobacco Control. In addition, the PIU would have the primary responsibility for tracking progress related to Project activities, outcomes and results.

45. The PIU will be led by a Project Coordinator appointed by the MSPBS. It will be staffed by a multidisciplinary team that will include a Monitoring and Evaluation Specialist, a Financial Management (FM) Specialist, a Procurement Specialist, a Social Safeguards Specialist, an Environmental Safeguards Specialist, and a Result Based Financing Specialist. All of them will be recruited according to specific terms of reference which are part of the OM. The PIU will also be supported by technical staff of the MSPBS for specific areas of the Project, such as health financing, public health, strategic planning, human resources for health, HIS, epidemiology, among others. The main relationship regarding the implementation of component 2 will be established with the Directorate of Health Networks and Services and the Decentralization Directorate. The PIU is expected to be established, fully staffed and operational by Project effectiveness.

46. The PIU will assume the fiduciary functions. The Project will be supported by a dedicated fiduciary team comprised of a Procurement Specialist and a FM Specialist that will be responsible for carrying out the following activities: managing the procurement processes; monitoring contract administration; processing payments to suppliers and consultants; managing the project finances, including control of the Designated Account (DA) and flow of funds; accounting and financial reporting; and collecting the information needed for disbursements. For fiduciaries purposes, the PIU will report directly to the MSBPS General Directorate of Administration and Finance (DGAF).

47. The PIU will also be supported by a dedicated safeguards team comprised at least of a Social Specialist and an Environmental Specialist. The first will be responsible for: (i) supporting DINASAPI in the preparation of the Indigenous Peoples Plans (IPPs) and annual planning of their implementation; (ii) monitoring IPPs implementation including timely consultation with Indigenous Peoples (IPs) and management of the redress mechanism for IPs; (iii) preparing social programs for the package of constructions of FHCC; (iv) monitoring social programs implementation; (v) filing all documentation related to IPPs; and (vi) preparing reports on the previous cited aspects for the reports prepared for IBRD. Among other needs that might surface, the Environmental Specialist will be responsible, in articulation with the General Directorate of Environmental Health (DIGESA) for: (i) elaborating terms of reference needed for environmental management of the civil works financed by the Project; (ii) guiding and monitoring related work; and (iii) training in Health-Care Waste management.

48. All the activities under Component 1 and Component 3 of the Project will be implemented in accordance with regular World Bank Procurement Regulations.

49. For the implementation of Component 2, the MSPBS will enter into an agreement (the “Participation Framework Agreement” (PFA)) with each participating LHC, setting forth the technical, financial, administrative, safeguard and fiduciary aspects of the MSPBS and LHC participation in the implementation and use of funds under the Project. After entering into the respective PFA, the MSPBS will sign a “Results Management Agreement” (RMA) with each participating LHC, setting forth periodic performance indicator targets for the Results Areas, work programs, resource requirements for the implementation of the Project, and the monitoring and accountability arrangements, all under terms and conditions acceptable to the Bank.

B. Results Monitoring and Evaluation Arrangements

50. Measurement and verification of the progress toward achievement of the program’s objectives will be based on the country’s existing monitoring and evaluation systems. The MSPBS, through the PIU, would have the primary responsibility for tracking progress related to Project activities, outcomes and results. The PIU will prepare Project reports including the following information: (i) compliance with the planned Project activities under component 2; (ii) updated Procurement Plan for each expenditure category; (iii) progress on the achievement of indicators (Project Development Indicators and Monitoring Indicators), as defined in the Result Framework; and (iv) progress on environmental and social management. The PIU will submit to the Bank Project reports twice a year prior to the respective disbursement requests, but not later than 45 days after the end of the period covered by such report.

51. The proposed Project will strengthen the MSPBS’s capacity to monitor the public health sector performance, program execution and health status of the population through the use of the SIG, since it will permit the

collection of patient-level health information for each citizen receiving care in the public health care network. This strategy will use program indicators for program management and policy decision making. Additionally, the Project will support the MSPBS to implement the use of the SIG system to track the performance and production of each health program at different country levels: local, regional and national level through a standardized regular reporting mechanism with core indicators. The Project will also measure WB's Corporate Result Indicators (CRIs) included in the Project indicators. Project health indicators will be segregated by gender, and the ethnicity of users will be registered.

C. Sustainability

52. The key element of the Project that ensures its sustainability is its focus on a low-resource setting for health care delivery, namely PHC – thereby leading to better use of existing resources and allowing for a more sustainable approach. Investments in the construction of new FHCC facilities do not only prepare the health sector to shift care delivery from hospital and inpatient settings to PHC, but these investments will also be better maintained through the financing obtained from the implementation of the RBF scheme. Some savings (though difficult to quantify) in the provision of health care will be generated from reductions in or early detection of high-risk pregnancies and deliveries and through the timely treatment of chronic conditions which lead - in the mid and long term - to decrease the number of patients facing early complications.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

53. The Project will support coordination and promote an integrated model of care for key ICS with a strong focus on primary health care. After consultation with technical experts, it was decided to focus on three integrated care functions, based on the burden of disease and common conditions in the country: (i) maternal and child health (low-risk pregnancies, high-risk pregnancies, and care for children under 6 years of age); (ii) common chronic diseases/conditions (type 2 diabetes, hypertension and cervical and breast cancer); and (iii) still prevalent communicable diseases (TB, HIV and other STDs). Project interventions will be selected accordingly to focus on these priority ICSs. Additional priority ICSs may be introduced later, as needed.

54. The economic analysis of the Project demonstrates the high potential value of Bank support to the health sector. The economic analysis weighs all Project costs against selected tractable direct and indirect benefits that could accrue from the Project. The benefits considered are accrued from life savings from increases in vaccination rates of children and reduction in maternal and child mortality, cost savings from the successful control of NCDs, and reduction in mortality from communicable diseases. Even under medium project impacts (which assumes that PDO indicators are achieved at the 80 percent level) and high time-value of resources (9 percent opportunity cost plus 3 percent inflation rate), the present value of economic benefits from the project is US$187.33M which compares to the present value of economic costs of US$86.91M. This yields to a net present value (NPV) of US$100.42M which corresponds to a 17 percent internal rate of return (IRR). Note that these calculations only consider selected benefits and not all benefits - for instance those benefits arising from productivity increases of the beneficiary population - are not taken into account. Estimates likely represent, hence, a lower bound on the true benefits.

55. The fiscal costs of sustaining the project range from 0.85 percent to 2.54 percent of MSPBS's budget during the project years. The average cost of sustaining the Project in the five years after project completion is estimated to be 2.54 percent of MSPBS expenditures in those years (see Annex 2, Table 2.1). Therefore, the cost to sustain the Project is small in relation to MSPBS's budget and the benefits accrued. The full details of the economic analysis, including assumptions made, is available in Annex 2.

56. **Climate Change Co-Benefits.** The Project has been screened for short and long-term climate change and disaster risks and no major risks have been identified. Therefore, the level of risk to the outcome/service delivery of the project is Low. Main findings are related to the impact of extraordinary rains on the effluent systems of FHCCs, which compromises the possibility of providing services to the client. The potential increase in temperature and rainfalls under certain scenarios of climate change could affect the population health status for decades to come. There could be an increase in mosquito populations, responsible for vector-borne diseases like dengue (2020-2030) and malaria (2030). Waterborne diseases, such as acute diarrheal diseases, and other diseases, such as acute respiratory infections, could increase by 2050.[23] Flooding could have a direct impact on the operation and functionality of the FHCC systems, which will in turn compromise the provision of services to the population served.

57. This project will include the following climate change mitigation measures: the construction of new FHCCs, the rehabilitation of existing FHCCs, and the conversion of health facilities to FHCCs. New health facilities will be designed and built or rebuilt using climate-smart healthcare approaches, thereby reducing GHG emissions. Compared to existing infrastructure, this approach will be more energy efficient, leading to significantly reduced energy consumption of buildings through: (i) thermal insulation of ceilings; (ii) an efficient state of openings (windows and access doors), which will allow better interior climate conservation; (iii) improvements in lighting efficiency; and (iv) appliances and medical equipment with certification of energy efficiency. Architectural designs for these facilities will make the best use of shading and reduce passive solar gain which will improve energy efficiency and reduce cooling losses. This is estimated to save between 35 and 50 percent of energy usage. Also, the use of incandescent or halogen bulbs versus LED will lead to a 90 percent reduction in electricity use. This activity is included in the list of Eligible Mitigation Activities defined in the "Joint MDB Methodology for Tracking Climate Finance". The construction of new FHCCs, the rehabilitation of existing ones and the conversion of health post to FHCCs accounts for US$55.73 million allocated to Component 1(a). Under Comp 1(b), total cost US$28.24 million, the project also supports the outfitting of the FHCCs with equipment, furniture and ICT which promote the purchase of equipment that is climate-friendly and low carbon (energy efficient). In addition, there will be improvements in primary health care and disease prevention, which can be seen as forms of climate change mitigation (World Health Organization, 2008[24]), as they reduce the need for energy-intensive health care services and hence the climate footprint of the health sector.

B. Fiduciary

(i) Financial Management

[23] SEAM/PNUD/FMAM. 2017. Plan Nacional de Adaptación al Cambio Climático. Proyecto TCN e IBA. Asunción, Py. 160P.2016, in https://climateknowledgeportal.worldbank.org/country/paraguay/adaptation.

[24] "Healthy Hospitals Healthy Planet Healthy People: Addressing Climate Change in Health Care Settings." Discussion draft paper published by the WHO (2008).

58. An FM Assessment was carried out to assess the adequacy of the FM arrangements in place at the PIU seated under the DGAF of the MSPBS to support project implementation. It was determined that FM arrangements in place at the PIU are acceptable to the Bank because they are capable of producing timely and reliable financial reporting to monitor Project activities, safeguarding the project assets, and are subject to auditing arrangements acceptable to the Bank.

(ii) Procurement

59. Procurement will be conducted in accordance with the WB's Procurement Regulations for Investment Project Financing (IPF) Borrowers, issued in July 2016 and revised in November 2017 and August 2018. The assessment of the PIU's procurement capacity concluded that there is an adequate capacity to implement the type of activities envisaged in the Project. However, it is recommended to strengthen the PIU based on increasing workload during project implementation and the need to reinforce contract management. Considering there are no high-risk and/or high-value contracts, the PIU has worked on a simplified version of the Project Procurement Strategy for Development (PPSD). The PPSD's conclusions for the main activities are reflected in Annex I and will be updated as necessary during project implementation.

C. Safeguards

(i) Environmental Safeguards

60. The Project triggers the Bank Operational Policy/Bank Procedure (OP/BP) 4.01 Environmental Assessment and is classified as Category B because its activities include management of health care waste (HCW) and minor civil works on existing FHCCs or construction of new ones. Most of the investments are planned to support the existing service delivery networks through rehabilitation and/or enlargement of selected district hospitals and existing FHCCs and conversion of small health centers and sanitary posts into FHCCs in prioritized departments (mainly Central, Paraguarí, Cordillera and Amambay). The specific locations of the proposed interventions will be defined during Project implementation, but all of them will take place on land owned and previously occupied by the MSPBS. Consequently, none of the works will imply impacts on natural habitats, forests or physical cultural resources.

61. The Project requires environmental management for: (i) HCW related mainly with diabetes and infectious diseases as TBC, STDs, HIV and cervical and breast cancer; (ii) the referred minor civil works; and (iii) elimination of old equipment caused by provision of new medical, IT equipment and communication equipment for FHCCs and the MSPBS. Paraguay has a comprehensive national legislation to guide HCW management, and the Ministry of Environment and Sustainable Development (MADES) will be responsible for environmental permits of the Project-financed works. DIGESA prepared an Environmental and Social Management Framework (ESMF) which was deemed satisfactory to the Bank. The ESMF guides identification of environmental and social risks and impacts for the above described activities and foresees the adoption of good practices and measures to prevent, minimize and mitigate the same, and to maximize environmental and social value added. The ESMF includes e.g. the staff training, the technical specifications for equipment used for HCW management and a model of an Environmental and Social Management Plan for civil works (ESMP) designed for the standardized model for new and rehabilitated FHCCs that the MSPBS has used since 2016, that must be prepared and presented by the contractor. The social provisions of the ESMP comprise communication, feedback and redress mechanism as well as community health and safety. The ESMP will be included in the bidding and contract documents of the Project-financed civil works.

62. The ESMF consultation took place on March 6, 2019. The consultation yielded no adjustment needs in the ESMF, and the Ministry of Environment and Sustainable Development validated it and declared the Project with its ESMF of "Environmental Interest" through Resolution 140/19. The final ESMF was disclosed in-country and on the WBG's external website on March 20, 2019. ESMF will be the responsibility of a technical team from DIGESA, which has a solid experience in HCW management. DIGESA is equipped with a minimum staff and maintains effective institutional relations with hospitals, FHCCs and health centers and posts. For the purposes of full compliance with the ESMF, DIGESA will be strengthened with support by the environmental specialist to be contracted for the PIU. Further, each FHCC will designate a professional to be responsible for the implementation and control of adequate HCW management.

63. To develop a training plan for the staff of the targeted FHCCs, DIGESA will collaborate with the National Strategic Directorate of Human Resources in Health that has experience in preparing and offering training through virtual courses associated with PAHO. There will also be periodic training for the FHCC staff that manages HCW to prevent negative impacts potentially due to increased generation of HCW. The training will be coordinated by the National Institute of Health (INS) which has the responsibility for training human resources and research in the Health Area.

(ii) Social Safeguards

64. The Project is expected to have positive impacts on vulnerable population's health, including women, children and Indigenous Peoples, through expanding access and utilization of health services for maternal and child care and prevalent health problems to the poor and vulnerable populations in the national territory. Since specific areas of interventions and targeted beneficiaries will not be determined before Project implementation, the MSPBS prepared and consulted two frameworks to be used during Project implementation to identify and manage social risks and impacts: the ESMF and the Indigenous Peoples Planning Framework (IPPF), described below.

65. Key Project's stakeholders identified are the LHCs involved in Component 2 implementation and monitoring, the Indigenous Peoples Health Council (CONASAPI), and indigenous organizations and indigenous beneficiaries of the Project. LHCs – comprised by local government authorities, civil society organizations and health service providers – are involved in the management and of monitoring of FHCCs and population health promotion activities and will be responsible for monitoring results areas, goals, and also promoting social accountability through periodic presentation of accountability reports about the progress of Project activities to the community.

Indigenous Peoples (OP/BP 4.10)

66. The Project triggers OP/BP 4.10 - Indigenous Peoples, since there are IPs in the Project's area due to the nationwide nature of all components, except for civil works under Component 1 (to be implemented in the departments of Central, Paraguarí, Cordillera and Amambay). In Paraguay there are around 118.000 IP (1.8 percent of total population). They belong to 19 ethnic and 5 linguistic families that are present in 14 out of the 18 departments of the country (exceptions are departments of Cordillera, Paraguari, Misiones and Ñeembucú). The need for a differentiated approach for IP health has been recognized by the GoP through the National Policy on IP Health (2008) and the Law of IP Health (2015). Based on these two regulations and the OP/BP 4.10, an IPPF, was prepared by the DINASAPI. Culturally adequate consultations on the IPPF with

the CONASAPI, and relevant indigenous organizations from the departments of Central and Amambay were carried out on January 4, 2019 and January 22, 2019 respectively. Consultations emphasized the need for having IPs' participation throughout project implementation and strengthening of an interculturality approach in indigenous health, aspects that were already considered in the IPPF. The final version of the IPP, satisfactory to the Bank, was disclosed in-country on March 6, 2019 and on the WB's website on March 7, 2019.

67. The IPPF includes provisions to extend Project's benefits to IPs present in the Project's area in a culturally adequate manner through IPPs that will be prepared during Project implementation. The IPPs will be designed by the DINASAPI as part of an annual process of objective setting and planning of activities of the MSPBS to ensure that adequate cultural adaptations or complementary activities for IPs are carried out. IPPs will include activities at two levels: (i) training, monitoring, research, consulting, communication and intercultural health care at the national level; and (ii) intercultural health care and registration of ethnic variable in HIS by FHCCs.

68. The IPPs will be implemented by the different areas of the MSPBS involved in the Project. Activities foreseen in the IPPs will also be included in the RMA signed between the MSPBS and LHCs. Free, prior and informed consultations with IPs will be conducted by the DINASAPI or the relevant LHC, depending on the level of the activities to be consulted (national or local), following the directives of a new consultation protocol recently approved by the GoP. The PIU and the Directorate of Health Networks and Services (GDHNS), in coordination with the DINASAPI, will monitor results.

69. DINASAPI has extensive experience in working with IP health and conducting free, prior and informed consultations with IP leaders, but it does not have experience with the Bank safeguards and lacks enough human and physical resources to ensure adequate implementation of the IPPF. Thus, strengthening measures were established in the IPPF, including: (i) adequate number and expertise of skilled staffing for the DINASAPI; (ii) provisions to cover logistic expenses for consultation activities; and (iii) training on Bank safeguard policies and Project's administrative schemes. The IPPF includes training for MSPBS officials and FHCCs' health teams in intercultural health throughout the Project implementation period.

70. The IPPF also includes a specific Grievance Redress Mechanism (GRM) for IPs with measures respectful to indigenous peoples' culture by considering participation of the Indigenous Peoples' Health Council, the use of indigenous language, and the adoption of their own conflict resolution mechanisms when needed, among others.

Involuntary Resettlement (OP/BP 4.12)

71. The Project does not trigger OP 4.12 on Involuntary Resettlement as none of the planned Project activities will generate physical or economic displacement of people. Civil works will only be financed in those health facilities whose land ownership right is under rule and belongs to the MSPBS, or those that have a Usufruct Agreement signed between the MSPBS and another state institution or between the MSPBS and Indigenous Communities. The Project will not finance civil works that require land purchase or expropriation or generate physical or economic displacement of people. The OM will include the appropriate provisions to ensure the compliance with these criteria.

(iii) Other Social Issues

72. **Gender.** The Project analyzes the needs and health patterns of women and foresees monitoring of these activities throughout the Project cycle. Specifically, the project includes gender-oriented actions to address the needs of women, girls, and boys by establishing criteria to reach preventive and curative services in a customized manner for each gender group. The Project also includes indicators to monitor the increase in primary health care utilization rates disaggregated by gender.

73. The Project will have a strong focus on the gender dimension of health outcomes and health care utilization. Key findings of gender-disaggregated analysis show: first, utilization of key ambulatory health services is substantially lower among men than women, for both NCD-related care and in general (66 percent of NCD-related visits are by women and 68 percent of all visits). Second, there are significant differences between women and men in the burden of disease. For instance, the share of the burden of disease due to cardiovascular diseases s among men is higher than for women (13.51 percent of DALYs vs. 11.7 percent). Likewise, the burden of disease from HIV and STDs (4.8 percent vs. 3.7 percent) and TB (0.67 percent vs. 0.28 percent) affects men more strongly than women. In contrast, breast and cervical cancer impose a high burden of disease among women (2.0 percent and 2.2 percent, respectively).

74. Reducing these gender gaps in utilization and outcomes will be key under the Project and are reflected in the Project's activities. Improvements in the utilization of key preventative health services by men, for instance, against cardiovascular diseases, are expected to be fostered through increased access to FHCCs supported under Component 1. The Project will also support better PHC services under Component 2 for hypertension (one of the main risk factors of cardiovascular diseases) and other prioritized health conditions and diseases through improved care integration. This will allow implementing specific measures to close the gap in access to early diagnosis of this pathology through reach-out activities carried out by the FHCCs' health teams. This will be measured through an indicator tracking the percentage of hypertension patients correctly diagnosed, disaggregated by gender. Improved care for pregnant women is an important part of the Project, and this will also help reduce the burden of pregnancy-related diabetes among women. In addition, the Project places emphasis on breast and cervical cancer, by fostering early diagnosis and integrated health care within the public health system for these conditions.

75. **Citizen engagement.** The Project actively engages citizens and key stakeholders by promoting broad dissemination of work plans on supported care and promotion of health and prevention and will monitor public accountability for the execution of those plans. The Project will also enable beneficiaries and stakeholders to provide feedback and integrate received feedback to improve results throughout the Project cycle. This will be done through the Project's public citizen engagement system, which will be built on two pillars: (i) the current User Attention Service (SAU) of the MSPBS, mainly to receive and respond to user's complaints; and (ii) a strong mechanism for social accountability, including the presentation of annual LHC work plans which are the basis for the Results Management Agreement and the periodical delivery of its development results to the community. This social accountability mechanism will be further incentivized through financial transfers to the LHCs, as part of Results area 1 of the Project (1- Stewardship, governance and PPHCMNs performance monitoring) and is also being monitored as an intermediate indicator of the Project ("Percentage of municipalities implementing social accountability actions"), as further described under the Project's M&E arrangements.

76. The Project's GRM will build on a strengthened version of the SAU of the MSPBS. To ask for information, make claims and bring up grievances, users of the public health system can currently access SAU services in person at the MSPBS, by phone or email. Prior to Project implementation, the SAU processes for the reception, response, derivation and resolution of grievances will be properly assessed and adapted to the needs of the Project as pertinent.

Grievance Redress Mechanisms

77. Communities and individuals who believe that they are adversely affected by a WB supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the WB's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the WB's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the WB Inspection Panel, please visit www.inspectionpanel.org.

V. KEY RISKS

78. **The overall Project Risk is assessed as High.** The main risks associated with this operation are related to: (i) the political and governance risk related to the need for congressional ratification before effectiveness; and (ii) Fiduciary (FM and Procurement) risks due to both the PIU's lack of experience implementing WB-financed projects and to the fact that the capitation payments scheme involve complexity in terms of planning, flows of funds and verification of outputs.

79. **Measures to help manage these risks include:** (i) for the political and governance risk, the National Health Policy 2017-2030 - designed before the current administration came into power – serves as the Project's policy and operational framework. Current MSPBS activities that serve as preparation for the Project (especially the SIG implementation and the use of financial transfers to LHCs using the 1.032 Legal framework) help to ensure that Project interventions would be ready to implement at the time of the Project approval; (ii) strong implementation support from the Bank team aimed at strengthening the PIU and the internal control audit to leverage oversight capabilities for monitoring RBF scheme; the review of the Interim Financial Report (IFR) for disbursement under Component 2 by the Task Team throughout the Project's life; annual audit of Project's financial statements under terms of reference acceptable to the Bank; and continued close support and supervision.

80. **Sector strategies and policies, technical design and institutional capacity risks have been rated as substantial** because interventions to improve efficiency in the health sector are in general hard to implement; and the Project's specific interventions require behavioral changes of health care providers that are also hard to achieve. A challenge is that both PPHCMN and FHCCs need to change their service delivery model. This task involves a difficult cultural change, which requires new capabilities of clinicians and managers. Health promotion and preventive services for NCDs are not traditional services. NCDs prevention

requires capability to provoke change of life habits in patients. Also, at the time they are established, chronic conditions are incurable or require prolonged care and treatment. Both, the literature[25] and WB experience, show that the kind of cultural transformation needed to refocus the model of care towards health promotion, preventive services, and the management of NCD patients are complex and difficult to implement. This experience is the basis for assessing both the institutional capacity risk and the technical design risk as Substantial.

81. To mitigate risks related to the technical design and institutional capacity, a detailed implementation plan has been developed. The close participation of MSPBS' administrative structure in the implementation will increase the ownership and sustainability of the activities supported by the Project beyond completion. In addition, a WB Trust Fund for Statistical Capacity Building on "Improving Administrative Records for SDGs implementation and evidence-based policymaking in Paraguay" with focus on SIG implementation will be supporting Project execution to effectively hedge the implementation risk. The Project would also benefit from implementation support by the PAHO and The Global Fund to fight AIDS and Tuberculosis.

[25]Holman & Lorig, BMJ. 2000 Feb 26; 320(7234): 526–527.

RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Paraguay

Paraguay Public Health Sector Strengthening

Project Development Objectives(s)

The objectives of this Project are to: (i) strengthen the public primary health care micro-networks; and (ii) expand access to quality primary health care services for the population covered by the Ministry of Public Health and Social Welfare (MSPBS).

Project Development Objective Indicators

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Strengthening the primary public health care micro-networks							
Number of new public primary health care micro-networks established that report performance through SIG (Number)		0.00	5.00	25.00	64.00	114.00	152.00
Number of FHCCs operating according to the national standard (Number)		0.00	0.00	0.00	56.00	192.00	225.00
Expanding access for the population covered by the MSPBS							
Percentage of population covered by the MSPBS with access to PHC through the FHCCs (Percentage)		32.00	32.00	32.00	34.00	38.00	40.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Improving quality primary health care services							
Percentage of pregnant women with early prenatal checkups (Percentage)		31.00	31.00	34.00	36.00	38.00	40.00
Percentage of hypertension patients correctly diagnosed (Percentage)		32.00	32.00	34.00	36.00	38.00	40.00
Percentage of hypertension women correctly diagnosed (Percentage)		32.00	32.00	34.00	36.00	38.00	40.00
Percentage of hypertension men correctly diagnosed (Percentage)		32.00	32.00	34.00	36.00	38.00	40.00
Percentage of TB cases diagnosed (Percentage)		78.00	78.00	82.00	84.00	86.00	88.00

Intermediate Results Indicators by Components

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Investments to strengthen the service delivery capacity of Public Primary Health Care Micro Networks							
Number of new FHCCs built (Number)		0.00	0.00	40.00	80.00	120.00	152.00
Number of health staff trained (Number)		0.00	500.00	1,000.00	1,500.00	2,000.00	2,500.00
Number of Clinical Practice Guidelines revised (Number)		0.00	2.00	4.00	6.00	6.00	9.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Percentage of population assigned to a FHCC with patient-level information in a centralized database (Percentage)		0.00	0.00	0.00	25.00	50.00	70.00
Health Information System for medicine stock control developed (Yes/No)		No					Yes
Improvements in the access to quality health services through priority Integrated Care Sets							
Percentage of LHCs with Results Management Agreements signed (Percentage)		0.00	0.00	10.00	25.00	45.00	60.00
Percentage of FHCCs with work program agreed with LHC (Percentage)		0.00	0.00	10.00	25.00	45.00	60.00
Percentage of municipalities implementing social accountability actions (Percentage)		0.00	0.00	10.00	25.00	45.00	60.00
Percentage of LHCs that report work progress through SIG (Percentage)		0.00	0.00	10.00	25.00	45.00	60.00
Number of Progress reports produced by the MSPBS's Health Programs on the ICSs based on the SIG (Number)		0.00	0.00	2.00	9.00	16.00	23.00
Screening for global health risk (Percentage)		0.00	5.00	10.00	20.00	25.00	30.00
Percentage of men aged 15 or older voluntarily screened for HIV (Percentage)		1.30	2.00	2.50	3.00	3.50	4.00

Indicator Name	DLI	Baseline	Intermediate Targets				End Target
			1	2	3	4	
People who have received essential health, nutrition, and population (HNP) services (CRI, Number)		0.00	3,067.00	6,097.00	10,401.00	14,812.00	19,115.00
Number of children immunized (CRI, Number)		0.00	3,087.00	6,097.00	10,401.00	14,802.00	19,115.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Number of new public primary health care micro-networks established that report performance through SIG	PPHCMNs established referred to those that: (i) have been formalized in a document prepared by the LHC describing their composition and their referral and counterreferal mechanisms; and (ii) that have been validated by the MSPBS. PPHCMNs performance will be reported by the LHC through SIG	Annual	SIG and GDHNS Management Report	Administrative	GDHNS - MSPBS
Number of FHCCs operating according to the national standard	Number of FHCCs that have been strengthened under the Project in terms of	Annual	GDHNS Report - MSPBS	Administrative data	GDHNS - MSPBS

	human resources, equipment or infrastructure and that are operating according to the national standard.				
Percentage of population covered by the MSPBS with access to PHC through the FHCCs	Numerator: Number of people covered by the MSPBS with access to PHC through the FHCCs Denominator: Number of people covered by the MSPBS. Access to PHC through the FHCC means that there is an operating FHCC ready to provide PHC services to the population in its catchment area.	Annual	SIG, HIS/Outpatient Service System	Administrative	GDHNS - MSPBS
Percentage of pregnant women with early prenatal checkups	Numerator: Number of pregnant women covered by the MSPBS receiving at least one prenatal checkup service before the 20th week of pregnancy. Denominator: Number of estimated pregnant women covered by the MSPBS	Annual	SIG/HIS/ Outpatient Services Information System	Administrative Data	MCH Program - MSPBS
Percentage of hypertension patients correctly diagnosed	Numerator: Number of people covered by the MSPBS aged 18 - 65 years diagnosed with	Annual	SIG, Outpatient Service Information	Administrative Data	Cardiovascular Disease Program - MSPBS

	hypertension Denominator: Number of estimated people covered by the MSPBS aged 18-65 with hypertension according to the national risk factor survey. This indicator will be measured disaggregated by gender.		System, National Risk Factor Survey - MSPBS & Population Estimates - General Directorate of Statistics, Surveys and Census.		
Percentage of hypertension women correctly diagnosed	Numerator: Number of women covered by the MSPBS aged 18 - 65 years diagnosed with hypertension Denominator: Number of estimated women covered by the MSPBS aged 18-65 with hypertension according to the national risk factor survey.	Annual	SIG, Outpatient Service Information System, National Risk Factor Survey - MSPBS & Population Estimates - General Directorate of Statistics, Surveys and Census.	Administrative Data	Cardiovascular Disease Program - MSPBS
Percentage of hypertension men correctly diagnosed	Numerator: Number of men covered by the MSPBS aged 18 - 65 years diagnosed with hypertension Denominator: Number of	Annual	SIG, Outpatient Service Information System,	Administrative Data	Cardiovascular Disease Program - MSPBS

	estimated men covered by the MSPBS aged 18-65 with hypertension according to the national risk factor survey.		National Risk Factor Survey - MSPBS & Population Estimates - General Directorate of Statistics, Surveys and Census.		
Percentage of TB cases diagnosed	Numerator: Number of new and relapsed TB cases of people covered by the MSPBS Denominator: Number of estimated people covered by the MSPBS with TB according the WHO incidence. This indicator will be measured disaggregated by gender.	Annual	SIG, Outpatient Service Information System - MSPBS & WHO incidence estimates	Administrative Data	TB Program - MSPBS

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Number of new FHCCs built	FHCC built according to the standard design defined by the MSPBS	Annual	GDHNS Report - MSPBS	Administrative Data	GDHNS - MSPBS

Number of health staff trained	Number of public health staff working at the central, regional, local or provider level who received training per year on: (i) health system management; (ii) MCH and prevalent diseases prioritized under the Project; or (iii) Information systems. The number of total staff trained is reported on an accumulated basis since the beginning of the Project.	Annual	National Health Institute Report- MSPBS	Administrative Data	National Health Institute - MSPBS
Number of Clinical Practice Guidelines revised	Number of Clinical Practice Guidelines related to MCH conditions or prevalent diseases prioritized under the Project that have been revised and updated when necessary. The number of total Clinical Practice Guidelines revised is reported on an accumulated basis since the beginning of	Annual	Health Program Directorate Report/Health Surveillance General Directorate and Instituto Nacional del Cancer (INCAN) Report - MSPBS	Administrative Data	Health Program Directorate Report/Health Surveillance General Directorate and INCAN - MSPBS
Percentage of population assigned to a FHCC with patient-level information in a centralized database	Numerator: Number of people assigned to an operating FHCC with patient-level information in	Annual	MSPBS's beneficiaries centralized database	Administrative Data	GDHNS - MSPBS

	a centralized database Denominator: Number of people assigned to an operating FHCC				
Health Information System for medicine stock control developed	Health information system with a special module for medicine stock control developed	Once a time	General Directorate of Health Strategic Inputs Report	Administrative	
Percentage of LHCs with Results Management Agreements signed	Numerator: Number of LHCs with Results Management Agreements signed with the MSPBS Denominator: Number of LHCs	Annual	GDHNS Report - MSPBS	Administrative Data	GDHNS - MSPBS
Percentage of FHCCs with work program agreed with LHC	Numerator: Number of FHCCs with work program on the prioritized ICS agreed with LHC Denominator: Number of FHCCs	Annual	GDHNS Report - MSPBS	Administrative Data	GDHNS - MSPBS
Percentage of municipalities implementing social accountability actions	Numerator: Number of municipalities with a work program agreed with the LHC implementing social accountability actions for the community. Denominator: Number of municipalities with a work program agreed with the LHC.	Annual	GDHNS Report - MSPBS	Administrative	GDHNS

	This indicator will track municipalities, through their LHCs, that present to their communities the action plan and activities developed under the Project and the results achieved.				
Percentage of LHCs that report work progress through SIG	Numerator: Number of LHCs with Performance Agreement signed with the MSPBS that report work progress related to the ICS through SIG Denominator: Number of LHC with Performance Agreement signed with the MSPBS	Annual	SIG/ GDHNS Report - MSPBS	Administrative Data	GDHNS
Number of Progress reports produced by the MSPBS's Health Programs on the ICSs based on the SIG	Number of Progress reports on the performance of the prioritized ICS produced by the MSPBS's Health Programs based on the information provided by SIG	Annual	Health Program Directorate Report/Health Surveillance General Directorate and INCAN reports/SIG	Administrative Data	Health Program Directorate Report/Health Surveillance General Directorate and INCAN - MSPBS
Screening for global health risk	Numerator: Number of people aged 18-65 covered by the MSPBS with the body mass index measured	Annual	SIG/HIS/Outpatient Service Information System	Administrative Data	GDHNS

	Denominator: Number of people aged 18-65 covered by the MSPBS This indicator will be measured disaggregated by gender.				
Percentage of men aged 15 or older voluntarily screened for HIV	Numerator: Number of men aged 15 or older covered by the MSPBS voluntarily screened for HIV Denominator: Number of men aged 15 or older covered by the MSPBS	Annual	SIG/HIS/ Pronasida Information System	Administrative Data	GDHNS
People who have received essential health, nutrition, and population (HNP) services		Annual	Immunization Program Information System /SIG	Administrative	General Directorate of Health Surveillance - MSPBS
Number of children immunized		Annual	Immunization Program Information System /SIG	Administrative Data	General Directorate of Health Surveillance - MSPBS

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Paraguay
Paraguay Public Health Sector Strengthening

1. The Project will be implemented by the MSPBS through the PIU established within the MSPBS. The PIU will report directly to the Minister of Health. The PIU will be responsible for working with MSPBS Directorates and the Regional and Local Health Councils to implement the Project in a timely manner, in accordance to agreed-upon quality standards. The PIU will work closely with the MSPBS teams institutionally responsible for the health programs implementing the priority ICS such as Maternal and Child, Immunizations, Sexual and Reproductive Health, Adolescent Health, Diabetes, Hypertension, HIV, ITS, TB, cervix and breast cancer and the additional teams such as the DINASAPI and the others included to work together in the Healthy municipalities Strategy: School Health and Tobacco Control.

2. The PIU will have the primary responsibility for tracking progress related to Project activities, outcomes and results. The PIU will prepare Project reports including the following information: (i) compliance with the planned Project activities under component 2; (ii) updated Procurement Plan for each expenditure categories; (iii) progress on the achievement of indicators (PDIs and Monitoring Indicators), as defined in the Result Framework; and (iv) progress on environmental and social management. The PIU will submit to the Bank Project reports twice a year prior to the respective disbursement requests, but not later than 45 days after the end of the period covered by such report.

3. The PIU will be led by a Project Coordinator appointed by the MSPBS. It will be staffed by a multidisciplinary team that will include a Monitoring and Evaluation Specialist, a FM Specialist, a Procurement Specialist, a Social Specialist, an Environmental Specialist, and a Result Based Financing Specialist. All of them will be recruited according to specific terms of reference which are part of the OM. The PIU will also be supported by technical staff of the MSPBS for specific areas of the Project, such as health financing, public health, strategic planning, human resources for health, HIS, epidemiology, among others. GDHNS will be responsible for implementing Component 2, with the administrative support from the General Directorate of Decentralization (GDOD). The General Directorate of Planning of the MSPBS will be responsible for verifying the accomplishment of results under this component. The PIU is expected to be completed, fully staff and operational by Project effectiveness.

4. The PIU will assume the fiduciary functions. The Project will be supported by a dedicated fiduciary team comprised of a Procurement Specialist and a FM Specialist that will be responsible for carrying out the following activities: managing the procurement processes; monitoring contract administration; processing payments to suppliers and consultants; managing the project finances, including control of the DA and flow of funds; accounting and financial reporting; and collecting the information needed for disbursements. For fiduciary purposes, the PIU will report directly to the MSBPS DGAF. The DGAF will be responsible for supervising the FM and procurement arrangements under the Project. The DGAF has experience working with internationally financed projects since it has a Project Management Unit that currently supports the implementation of an IADB-funded Project.

5. The PIU will also be supported by dedicated safeguards team comprised at least by a Social Specialist and an Environmental Specialist. The first will be responsible for: (i) supporting DINASAPI in the preparation of the

IPPs and annual planning of their implementation; (ii) monitoring IPPs implementation including timely consultation with IPs and management of the redress mechanism for IPs; (iii) preparing social programs for the package of constructions of FHCC; (iv) monitoring social programs implementation; (v) filing all documentation related to IPPs; and (vi) preparing reports on the previous cited aspects for the Project reports prepared for the Bank. Among other needs that might surface, the Environmental Specialist will be responsible for: (i) elaborating terms of reference needed for environmental management of the civil works financed by the Project; (ii) guiding and monitoring related work; and (iii) training in HCW management.

6. The Project will finance 100 percent of the PIU staff. During Project execution, the special capacities developed under the PIU will be transferred to the MSPBS to ensure the sustainability of Project activities by Project closing date. Once the Project is completed, the MSPBS will assume full economic responsibility for PIU staffing.

7. All Project's activities under Component 1 and 3 will be implemented in accordance with regular WB Procurement Regulations.

Key institutional arrangements for the results-based capitation payments for ICS under Component 2

8. This component will finance capitation payments for the provision of ICS under an RBF scheme. Resources will be transferred to LHCs based on the population assigned to each FFHC and the outcomes related to the following health functions: (i) regulation; and (ii) service delivery. In terms of regulation, the Project will promote results linked to: stewardship; governance and PPHCMNs performance monitoring (Result Area 1). Under the second function, the Project will promote: health Promotion (Result Area 2) and health outcomes (Result Area 3). Although it is expected that Component 2 will have a nationwide rollout, the target is to reach 60 percent of the total number of LHCs (152 out of 254 LHCs) by the end of Project implementation.

9. For the implementation of component 2 the MSPBS will enter into an agreement PFA with each participating LHC, setting forth the technical, financial, administrative, safeguard and fiduciary aspects of the MSPBS and LHC participation in the implementation and use of funds under the Project. The implementation of Component 2 will follow the Law 1032 which establishes that the Framework Agreements for the transfer of resources from the MSPBS and the LHCs are signed by the Minister of Health and the President of the LHCs or their statutory delegates.

10. After entering into the respective PFA the MSPBS will sign an RMA with each participating LHC, setting forth periodic performance indicator targets for the Results Areas, work programs, resource requirements for the implementation of the Project, and the monitoring and accountability arrangements, all under terms and conditions acceptable to the Bank.

11. The capitation payment will function as a quasi-health insurance premium. This capita value has been calculated to cover the incremental cost of providing PHC coverage for the selected ICS. It has been calculated based on the coverage gaps estimates that will need to be closed for the micro health networks to adequately provide quality services to the target population for the priority ICSs. These gaps have been brought to a per-capita average accounting for the size of the target population. The estimation of the capita value considers the prevalence of illnesses in the population, the proportion of MSPBS beneficiaries affected and their current level of health services utilization, their cost, and the total population that needs increased access to

preventative and primary health services. Costs related to new infrastructure and equipment were excluded from the estimations because they are financed through Component 1. The MSPBS and the Bank will review the capita value annually. However, the MSPBS may ask the Bank to review it at any time according to procedures established in the OM, providing technical and institutional evidence to support the change.

12. **Under current regulations, each FHCC serves at least 3,500 people.**[26] In practice, FHCCs could have more than 3,500 people. Currently, each FHCC maintains a roster of nominalized population covered on paper which is then consolidated at the central level. In eight departments, these records are also maintained in the SIG. The electronic system provides accurate data in real time and is populated by staff of the FHCCs. In addition, health care service provision at the FHCC is registered in the regular statistical system, which is consolidated periodically at the central level. This system is being gradually replaced by the HIS which includes electronic medical records.

13. Based on the number of total population assigned to each FHCC, the Project will make capitation payments to the LHC conditional on the accomplishment of results related to the three Result Areas bi-annually. The initial share of the capitation payment allocated to each area is described in the following table and will be defined in the OM. This distribution could be modified during Project implementation with prior agreement with the Bank.

Table 1.1 – Capita Payment distribution between Result Areas

Result Areas	Capitation Payment Share (%)
1- Stewardship, governance and PPHCMNs performance monitoring	26
2 - Health Promotion	29
3 - Health Outcomes	45

14. Every four months, the Project will transfer a share of the capitation payment to the LHCs conditional on the accomplishment of results linked to: (i) the strengthening of the MSPBS's stewardship and governance over the intermediate actors of the public service delivery network needed to produce the Results defined by the central level according to the MSPBS's priorities; and (ii) the monitoring and evaluation of the PPHCMNs (Result Area 1). The remaining share of the capitation payment will be transferred subject to the achievement of key milestones related to: (i) the implementation of health promotion activities based on the Healthy Municipalities Strategy (Result Area 2); and (ii) health outcomes for the ICS (Result Area 3). The list of indicators to track results accomplishment under each Result Area, jointly with their goals, operational definition and the verification protocols will be defined in the OM. See the list of indicators for each Result Area in Table 1.2 below.

[26] Resolution S.G. No. 175, 7 April 2016.

Table 1.2 - List of indicators to track results

Result Area	Indicators				
	Year 1	Year 2	Year 3	Year 4	Year 5
1- Stewardship and governance and- PPHCMNs performance monitoring					
	Results Management Agreement signed with LHC	Results Management Agreement signed with LHC	Results Management Agreement signed with LHC	Results Management Agreement signed with LHC	Results Management Agreement signed with LHC
	PPHCMNs planning process at LHC level (number, organization, determination of needs and process planning to develop the PPHCMNs)	Progress of the planned processes	Progress of the planned processes	Progress of the planned processes	Progress of the planned processes
	Numbers of new PPHCMNs to be developed	Numbers of new PPHCMNs developed	Numbers of new PPHCMNs developed	Numbers of new PPHCMNs developed	Numbers of new PPHCMNs developed
		Health progress reports on ICS and accountability reports to the community	Health progress reports on ICS and accountability reports to the community	Health progress reports on ICS and accountability reports to the community	Health progress reports on ICS and accountability reports to the community
2- Health Promotion	Letter of intention of adherence to the strategy of healthy municipalities	Health situation room established	Health situation room report & Intersectoral Working Table established	Health situation room report & Intersectoral Working Table functioning	Health situation room report & Intersectoral Working Table functioning
	Municipal resolution of adherence to the healthy municipalities' strategy	Regulation of Tobacco use in public areas	Local plan of Healthy school	Local plan of physical activity promotion launched	Local plan of Road safety

Result Area	Indicators				
	Year 1	Year 2	Year 3	Year 4	Year 5
	Memorandum of commitment to implement the Strategy of Healthy Municipalities				
3 -Health outcomes	Baseline value collection for Maternal and child Indicators	Maternal and child Indicators	Maternal and child Indicators	Maternal and child Indicators	Maternal and child Indicators
	Baseline value collection for Hypertension Indicators	Hypertension Indicators	Hypertension Indicators	Hypertension Indicators	Hypertension Indicators
	Baseline value collection for Diabetes indicators	Diabetes indicators	Diabetes indicators	Diabetes indicators	Diabetes indicators
	Baseline value collection for HIV- STD -TB indicators	HIV- STD -TB indicators	HIV- STD -TB indicators	HIV- STD -TB indicators	HIV- STD -TB indicators
	Baseline value collection for Cancer screening and /or prevention indicators	Cancer screening and /or prevention indicators	Cancer screening and /or prevention indicators	Cancer screening and /or prevention indicators	Cancer screening and /or prevention indicators

15. Indicators will be measured three times a year. The financial reward attached to each indicator will be proportional to the progress made towards achieving the indicator's target, following the procedure defined in the OM. The targets for indicators related to Result Areas will be included in the RMA to be signed between the MSPBS, the LHC and will be agreed upon by the Bank. This initial four-month period may be modified if necessary, in a manner satisfactory to the Bank, as defined in the OM.

16. The legal mechanisms for the coordination of activities and the transfer of resources between MSPBS and LHCs were laid out by Law 1032 and have been in place for several years (Law 1032). The MSPBS currently uses the mechanism to transfer resources using a set of indicators which will be replaced by the set of indicators supported the Project.

17. Results will be monitored by the PIU and the GDHNS using supervision protocols and information systems, in particular the SIG, and will be verified by the General Directorate of Planning (GDoPE) of the MSPBS.

18. **Verification mechanisms.** The mechanisms for the verification of results for the disbursement of capitation payments were identified and preliminarily assessed during Project preparation. There are mechanisms for verification within MSPBS that do not require an external third-party verification. Furthermore, the use of existing MSPBS mechanisms and structures will also strengthen capacity within MSPBS and help ensure continuity after Project completion. Specifically, the following instruments and mechanisms will be used:

    a) **Stewardship, governance and PPHCMNs performance monitoring.** The results to be verified are related to the existence of: (i) PFA between the MSPBS and the LHCs; (ii) RMA between the MSPBS and the LHCs; (iii) progress reports about RMA; (iv) detailed works plans of the existing micro health networks; (v) progress reports of their implementation; and (vi) the formal establishment of new PPHCMNs. The supporting document to be verified will be the duly signed copies of the PFAs and RMAs. The verification will be carried out by the GDoPE and will be revised by the Bank team.
    b) **Health promotion activities.** The results linked to this area refers to population interventions that involves the issuance of regulations that will be crystalized in municipal ordinances or municipal government resolution. These norms are publicly available and will be used for verification. The GDoPE and the Bank team will ensure that the such norms have been issued.
    c) **Health outcomes.** These will be reported through the SIG by the FHCCs. The system allows monitoring and verification of results by each level of the health system and has been already successfully used by an IADB project in the department of Alto Parana. To date, this system has been implemented in ten additional departments. The MSPBS is working on the implementation of the SIG in the eight remaining departments, expected to be completed prior to Project effectiveness/implementation. In addition, the new modules of the SIG to track health outcomes other than maternal and child health conditions are under development and expected to be ready by Project effectiveness. If necessary, information from the HIS and other administrative data will also contribute to the measurement of Project progress, as stated in the Results Framework. A grant from the WB (TFSCB – Paraguay) will also be assisting the roll out of the SIG.

19. Financial resources available to LHCs will serve as incentives to decide how to use these funds to better meet the targets. These arrangements are important for the Project to operate as a quasi-insurance scheme and represent a break from the traditional supply-driven model of health care provision to another one focused on results.

20. The implementation of the RBF scheme involves the following phases: (i) planning; (ii) execution; (iii) monitoring & evaluation; (iv) verification; (v) payment; and (vi) accountability.

21. At the beginning of the Project, a PFA will be signed between the MSPBS and the LHC. Under the planning phase, and prior agreement with the MSPBS's political authorities, the GDoPE will define the health goals for the sector based on the current epidemiological situation and the current capacities of the system to achieve them. The GDHNS will then communicate the goals to all actors of the public health network at the regional, local and provider level. The goals will be included in the RMA to be signed between the MSPBS and the LHC. In turn, the LHC will agree with the municipalities and the FHCC on the work programs to achieve the results committed.

22. Under the execution phase, the municipalities and FHCC will implement their work program under the supervision of the LHCs and will report progress on the activities and results agreed through the SIG in the case of FHCCs and through management reports in the case of municipalities.

23. For M&E purposes, the LHCs, RHNs and GDHNS will simultaneously and in real time receive monitoring and progress information through the SIG. Every four months, the LHCs will prepare progress reports based on the SIG for Result Area 3 and based on the municipalities management report for Result Area 2, including all the information required according to the verification protocols defined in the OM and will send them to the GDHNS for evaluation. The GDNHS will assess the level of performance and remit all the information to the GDoPE for results verification.

24. Under the payment phase, based on the analysis of the information received, the GDoPE will submit a report including the level of result accomplishment to the GDOD. The GDOD will check the compliance from the LHC and the MSPBS regarding the Use of Funds received under the Project. In case there is no Use of Funds report overdue, the GDOD will calculate the capitation payment to the different actors and inform the PIU to process the capitation payment through the DGAF.

25. The MSPBS is currently implementing a pilot of this intervention with their own resources in five districts. The implementation of the pilot and its results will inform and allow a finetuning of the implementation arrangements for Component 2. These arrangements will be reflected in the final version of the OM, which will be a condition for project's effectiveness, reducing the level of uncertainty during implementation.

Financial Management

26. **Implementing Entity.** As noted earlier, the overall project financial coordination and administration will be carried out by the DGAF of the MSPBS through a PIU which will be responsible for the FM matters. This entails among others: managing the project's DA, coordinating supervision missions, overseeing budget formulation and execution, transferring funds assuring adequate and timely financing of eligible expenditures, preparing project's accounting records, issuing financial reports required by the Bank, and coordinating the Project's external audit. Although the PIU does not have experience in implementing Bank-financed projects, it currently supports the implementation of a project financed by the IADB.[27] The organizational charts of the DGAF and the PIU as well as the Terms of Reference (ToRs) of FM staff appointed by the PIU were submitted to the FM Specialist; reviewed and found reliable.

27. Planning and budgeting arrangements. DGAF is responsible for the preparation of the MSPBS's annual budget, which is submitted to the Ministry of Finance (MoF) and then to Congress for approval. *Direccion de Presupuesto* of DGAF in coordination with the PIU will be responsible for planning and execution of budget resources assigned to the Project. The national integrated budget and accounting system (SIAF) will be applied. A separate line item in MSPBS's annual budget will be created and maintained throughout the entire project implementation so budget resources from different sources and Project expenditures can be tracked. SIAF is a reliable tool to support the Project's budget accounting requirements.[28] In relation to Component 2, planning arrangements will be implemented by the PIU to prepare and submit required forecasts of the

[27] *Programa de Desarrollo Infantil Temprano: Contrato de Préstamo* BID N.º 2667/OC-PR, US$27 millones.
[28] According to Public Expenditure and Financial Accountability (PEFA) assessment issued in 2016.

capitation payments to the Bank. Capitation payments will be included and executed under an existing MSPBS budgetary program.[29] The OM will clearly define the planning mechanisms, functions and responsibilities of the involved departments of the MSPBS.

28. **Accounting system and financial reporting.** Accounting Directorate of DGAF in coordination with the PIU will use the Government budget system (SIAF-SICO) to record project transactions in local currency. Besides, the PIU will be responsible for Project accounting and will produce annual financial statements following international financial reporting standards. Project transactions will be recorded according to a chart of accounts that reflects disbursement categories, project components and sources of funding. Project accounts will be maintained in a bi-monetary accounting system[30] that allows the recording of transactions in dollars and in local currency, following the disbursements categories and Project components; and it will produce the financial statements.

29. **Internal Control and Internal Auditing.** In terms of internal controls, some of the MSBPS line departments will be involved in the monitoring of Component 2. Outputs and results will be evidenced by the Decentralization Directorate and will be monitored by the GDHNS using the SIG. As stated in the PAD, the SIG is already used by the MSBPS and will allow to track and measure the expected outputs. The validation of outputs will be carried out by the GDoPE. In sum, the OM will clearly include all the specific units responsible for carrying out, managing and monitoring each of Component 2 variations with specific monitoring systems to be used for each, following detailed norms and regulations. Thus, it is concluded that after the OM completion there will be adequate control over and stewardship of Component 2 activities including verification of outputs and capitation payments. Furthermore, *Direccion General de Auditoria Interna* (DGAI) carries out the internal audit function within the MSPBS. A risk-based model to perform the audits is used by the auditors. During Project preparation, the DGAI pointed out the lack of well-trained human resources to develop the annual audit plan. The team will follow-up the dialogue with DGAI trying to strengthen the audit function with the purpose to support the internal control framework mainly focused on Component 2.

30. **Financial reporting.** The PIU will use during project implementation an accounting system to prepare the semi-annual project IFR and the annual audited project financial statements. These will be prepared on a cash basis using the standard formats agreed with the PIU which will be included in the OM. After loan effectiveness, the following financial reports will be presented by the PIU to the Bank:

Table 1.3 – Financial Reporting

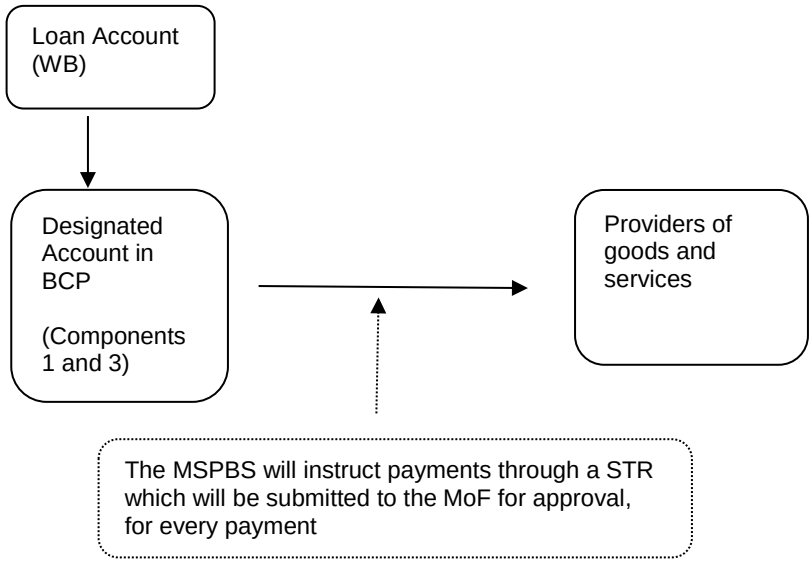
Report	Due date
Semi-annual unaudited project IFRs reflecting the sources and uses of funds for each semester and cumulative uses by category, including beginning and ending cash balances.	Within 45 days after the end of each calendar semester
Annual audit report on project financial statements and eligibility of expenditures	Within six months after the end of each calendar year of loan disbursements (or other period agreed with the Bank)
Special opinions on Statement of Expenses and DA	

[29] *Fondo de Equidad, partida 834: Transferencias al Sector Público y a Organismos Regionales.*
[30] The accounting system was used by the *Servicio Nacional de Saneamiento Ambiental (SENASA)* that also reports to the MSPBS. That system was developed in the frame of the PY Water & Sanitation Sector Modernization (P095235, Loan 7710-PY).

31. **Flow of Funds and Disbursement Arrangements.**[31] The following disbursement methods may be used under the loan: (i) advance (as primary method); (ii) reimbursement; and (iii) direct payment. Loan proceeds will be disbursed as advances into two segregated DAs in US dollars to be opened at the Central Bank of Paraguay (BCP) through the MoF. Funds deposited into the DAs will follow the Bank's disbursement operating policies and procedures that will be described in the Disbursement and Financial Information Letter. Withdrawals from the DA will be solely made for payments of eligible expenditures incurred. The Project's flow of funds will comprise the following:

    a) Flow of funds for Component 1 and 3: (i) the Bank will transfer funds into a loan account opened at the BCP; (ii) the MSBPS will instruct payments through a Request for Transfer (STR) which will be submitted to the MoF for approval; and (iii) after a STR is approved, funds from BCP will be transferred electronically to suppliers, vendors and consultant's account as expenses are incurred through mainstreaming budget execution processes. The ceiling for advances to this DA will be fixed (US$10 million). The following chart reflects the project's flow of funds under the DA used for Component 1 and 3:

Chart 1.1 – Flow of Funds – Components 1 and 3

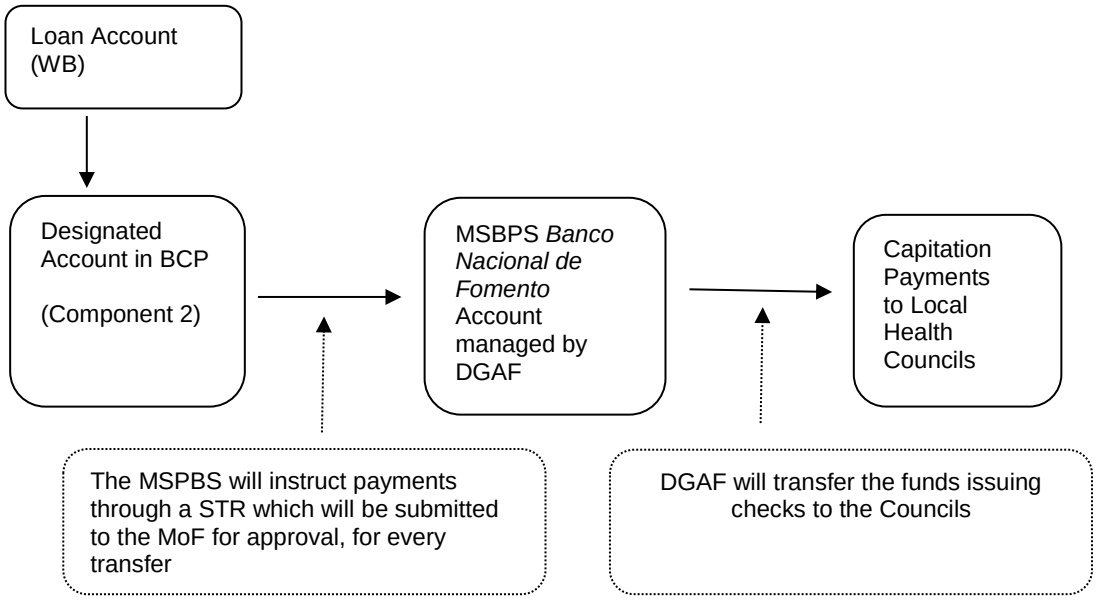


    b) Disbursements for Component 2 will be report-based: A separate DA will be opened and maintained to exclusively manage loan resources under Component 2 to finance the capitation payment scheme (category #3). The ceiling for advances to DA 2 will be variable according to the expenditure forecast for two semesters to be provided in the semi-annual IFRs. Each IFR will cover one calendar semester and will be submitted to the Bank within 45 days after the end of each calendar semester. IFR-based Disbursements will be reviewed and approved by the Task Team. Capitation payments will be linked to a health insurance premium for purchasing coverage of a health services package previously defined. Loan resources will be transferred based on population receiving health care services and outcomes related to the three Result Areas described in the PAD. Outputs linked to results areas are expected to be achieved by the LHCs at subnational level. LHC are entitled to receive funds from the

[31] Disbursements arrangements will be described in the Disbursement and Financial Information Letter.

MSPBS to provide health services as per the legal framework provided by the Law 1032. An initial portion of the capitation payment will be defined for each result area. Control mechanisms will be described in the OM and should be in place before starting transfers to the LHC to ensure accountability and transparency in the use of resources linked to expected outputs and results. Documentation of capitation payments will be submitted to the Bank as part of the IFR and will include the confirmation of production and delivery of final outputs as well as their associated unit costs, and any other information deemed necessary to meet project disbursement requirements. Unit costs could be adjusted periodically according to an agreed methodology acceptable to the Bank. The following chart reflects the Project's flow of funds to be used for Component 2: (i) the Bank will transfer funds into a Loan account opened at the BCP; (ii) the MSBPS will instruct payments through a STR which will be submitted to the MoF for approval; (iii) after a STR is approved funds from BCP will be transferred electronically to the *Banco Nacional de Fomento* account managed by the DGAF; and (iv) *Dirección Financiera* of DGAF will transfer the funds to the LHCs issuing checks.

Chart 2 – Flow of Funds – Component 2



32. Loan proceeds would be disbursed against the following expenditure categories:

Table 1.4: Disbursements per Expenditure Category

Category	Amount of the Loan Allocated (expressed in US$)	Percentage of Expenditures to be financed (inclusive of Taxes)
(1) Civil Works	55,732,500	100%
(2) Goods	28,246,000	100%
(3) Capitation Payments under Part 2 of the Project	15,000,000	100%
(4) Non-consulting services, and consulting services under Part 1	6,770,000	100%

Category	Amount of the Loan Allocated (expressed in US$)	Percentage of Expenditures to be financed (inclusive of Taxes)
(5) Non-consulting services, consulting services and Operating costs under Part 3	4,964,000	100%
(6) Training	4,000,000	100%
(7) Front-end Fee	287,500	Amount payable pursuant to Section 2.03 of this Agreement in accordance with Section 2.07 (b) of the General Conditions
(8) Interest Rate Cap or Interest Rate Collar premium		Amount due pursuant to Section 4.05 (c) of the General Conditions
TOTAL AMOUNT	**115,000,000**	

33. **External Audit Arrangements.** Annual Project financial statements will be prepared in accordance with accounting standards acceptable to the Bank and will be audited based on ToRs acceptable to the Bank. The audit will be conducted following International Standards on Auditing issued by The International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC). In addition, the external audit will be conducted by a private audit firm acceptable to the Bank. The audit report should be submitted to the Bank within six months of each calendar year. Annual audits will cover all expenditures reported in the project's annual financial statements. The Bank also requires that the Borrower disclose the audited financial statements in a manner acceptable to the Bank and following the Bank's formal receipt of these statements from the MSBPS, the Bank will also make them available to the public in accordance with the WB Policy on Access to Information. The cost of the financial statement audit will be financed from the Loan.

Procurement

34. Procurement for the supply of goods, works, non-consulting services and consulting services will be conducted according to the WB's Procurement Regulations for IPF Borrowers, issued in July 2016, and revised in November 2017 and August 2018. The WB's Standard Procurement Documents will govern the procurement of WB-financed Open International Competitive Procurement. For procurement involving National Open Competitive Procurement, the Borrower will use Standard Procurement Documents acceptable to the WB that will be included in the OM. In these cases, local procedures will be accordingly adapted to comply with the principles and requirements for national procurement procedures established in the Bank's Procurement Regulations.

35. A procurement capacity assessment of the PIU was carried out on January 23rd, 2019. The Unit depends on the DGAF of the MSPBS and was created opportunely to manage an IADB financed project. The DGAF'S Director usufructs substantial powers delegated by the Minister (launching of processes, awarding and contracting) which allows the Unit to operate under an agile and autonomous institutional environment. The PIU's structure consists of two senior experienced procurement specialists appointed by the new authorities of the Ministry, who have been working on procurement for more than fifteen years, including WB's operations. The assessment concludes that the procurement capacity on contract administration should be strengthened. Capacity building on Bank's new Procurement Framework is also recommended.

36. The PIU has worked with close support from the Bank to develop a PPSD, identifying suitable procurement arrangements oriented to deliver value for money while efficiently achieving the PDOs. The PPSD has identified that there are no high risk and/or high value contracts and has focused the analysis on the main activities included under Components 1 and 3, excluding Component 2 which will not have any procurement. Based on the analysis, Component 1 will finance civil works contracts for the construction of new FHCCs based on a predesigned prototype, and rehabilitation of the existing ones. At this point, it is envisaged that the bidding will be carried out in packages structured by the four predefined locations but focusing in maximizing efficiency. These processes will be implemented through request for bids with national or international approach, which will be defined on the basis of the estimated amount of the activity and the current thresholds that were reviewed and found fully applicable for the project. Considering that the construction of new infrastructure will be based on a predesigned prototype, it would be necessary to implement a mixed type of contract, which will include unit prices for the specific's aspects of each location (e.g. foundations) and lump-sum for the rest of the contract. Following these civil works, the component will also finance goods to support the improved delivery of primary health care services for the population covered by the MSPBS, such as medical and IT equipments and furnitures. Considering the type of goods to be provided and the fact that the delivery will be subject to the completion of the works, it has been assessed that an appropiate procurement approach would include the application of framework agreements. Also, the component will finance consultant services for institutional strengthening activities for the MSPBS staff including training activities. Finally, Component 3 will include the procurement of minor goods and the selection of consultant and non-consultant services to support the Project implementation and external audit services. Based on the results of the PPSD, the details for the procurement arrangements for these and the rest of the activities expected to be carried out during the first 18 months are detailed in the Procurement Plan. Any changes in the procurement strategy will be properly assessed and reflected in the document.

37. In addition to the prior review supervision to be carried out from Bank offices, and subject to the formal confirmation of the PIU assessed, at this point it is recommended to: (i) strengthen the PIU with experienced procurement professionals in order to reinforce its contract administration capability; (ii) capacity building on Bank's Procurement Framework through workshops to be delivered by the Bank's procurement team; and (iii) annual supervision missions in the field to carry out the post review of procurement actions.

Implementation Support Plan

Strategy and Approach for Implementation Support

38. **Support Strategy.** The strategy for implementation support is based on the nature of the Project and its risk profile as well as lessons learned from other Bank-financed health Projects, as mentioned in Section F. Lessons learned and reflected in the Project design and Section V on Key risks. The implementation support plan focuses primarily on providing support to the MSPBS for the implementation of the risk mitigation measures mentioned.

39. **Operational support**. Implementation support will include reviewing annual action plans and annual performance agreements with LHC, designing and supervising monitoring and evaluation systems, tracking progress of the Project's indicators, monitoring progress regarding the implementation of Project components, ensuring conformity with the OM, reviewing RBF mechanisms to transfer funds to LHC and MSPBS, and monitoring Project execution according to annual action plans and interim unaudited financial reports.

40. A senior health specialist and an Operations Officer, together with a health economist, will provide day-to-day support in all operational aspects, as well as coordination with the Borrower and among Bank team members.

41. **Technical**. The Project will procure medical equipment. Thus, the Project's supervision will need the support of a medical equipment specialist who would provide support reviewing the technical specifications. Additional support will be needed from an IT specialist (already involved in the preparation stage) for various activities related to Information Systems and IT, especially implementation of the SIG and the interoperability strategy with current MSPBS current other systems. A training specialist will support the design and development of the training plan, joint with PAHO specialists. Others health specialist, like a nutritionist and an epidemiologist will provide support to review action plans design supporting the PIU and the GDHNS.

42. **Procurement.** Implementation support will include: (i) training of staff in the PIU and Administrative Directorate of MSPBS as well as detailed guidance on the Bank's Procurement Guidelines as needed; (ii) reviewing procurement documents and providing timely feedback to UPI; (iii) monitoring procurement progress against a detailed Procurement Plan; and (iv) undertaking procurement post reviews. A procurement specialist will provide timely support.

43. **Financial Management**. Supervision support will be needed to review the Project's FM system, including but not limited to, accounting, reporting, and internal controls, as well as compliance with financial covenants. Implementation support will be needed to review interim unaudited financial reports, and annual financial audit. The financial audit will provide independent opinion on the use of funds. A FM Specialist will provide timely support. FM on-site supervision will be carried out semiannually during the first year of implementation, and once a year thereafter if supervision results are satisfactory.

44. **Environmental and Social Safeguards.** Implementation support will include supervision of actions agreed in the Environmental Management Plan and the review, provision of no objections to and monitoring of the implementation of annual IPPs, together with related intermediate indicators in the Project's Results Framework. The Bank will also provide guidance and recommendations to the MSPBS as required. Inputs from an environmental and social specialist will be required as well as field visits.

45. **Evaluation activities and analytical support.** The Project will include various process evaluation activities. Support for these activities will thus be provided by an expert in Monitoring & Evaluation.

46. **Bank team members,** including operational, FM, and procurement, environmental, and social consultants will ensure timely, efficient, and effective implementation support to the Borrower. Formal supervision and field visits will be carried out semiannually. Detailed inputs from the Bank team are outlined in the table below.

Implementation Support Plan and Resource Requirements

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months	Support the MSPBS to develop action plan with Regional and Local Health Councils to implement ICS and to adjust the M&E framework in line with the Project incentive structure	Operations, Technical (nutritionist, epidemiologist), IT, M&E Fiduciary, social and environmental	Supervision budget based on norm	--
	Support the MSPBS to implement health personnel Training Plan	Operations, Technical, IT, M&E	Supervision budget based on norm	
	Support the MSPBS to implement SIG expansion Plan	IT, Operations, Technical	Supervision budget based on norm	
	Support the MSPBS to implement procurement plan	Fiduciary, Operations, Technical	Supervision budget based on norm	
12-48 months	Keep Project implementation on track	Operations, Technical, IT, M&E Fiduciary, Social and Environmental	Supervision budget based on norm	--
Closing	Capacity building toward sustainability	Operations, Technical, IT, M&E Fiduciary, Social and Environmental	Supervision budget based on norm	--

Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
CO-TTL	20 SW		Based in CO
CO-TTL	20 SW		Based in CO
Sector Specialist	25 SW		Based in CO
Health Economist	25 SW		Based in HQ

Procurement specialist	6 SW	Based in CO
FM specialist	6 SW	Based in CO
Social Specialist	2 SW	Based in CO
Environmental Specialist	2 SW	Based in CO
Consultants	10-20 SW	Based in CO/HQ

ANNEX 2: Economic and Financial Analysis

1. **Rationale for Public Sector Provision.** The rationale for strengthening the public health sector in Paraguay is valid as the public sector provides health services to more than 70 percent of the country's population. While the formally employed population in Paraguay has access to contributory health insurance scheme through the IPS, 71 percent of the population works in the informal sector and only 13 percent of all health visits are received in IPS facilities.[32] Similarly, while there does exist a private sector, its capacity is small (accounting for only 15 percent of health care visits) (EPH, 2016). In the meantime, 66 percent of health care needs are met by the public sector. The public sector is also the main provider among the poor and vulnerable population. According to analysis of EPH (2016) data, 73.3 percent of all health care visits made by the population in the bottom quintile of income was in the public sector, compared to 55.4 percent of the middle quintile and 23.6 percent of the bottom quintile. Thus, the main argument in favor of public sector strengthening in Paraguay is that the private sector does not have the adequate capacity to meet the health needs of the population. Second, private sector facilities are concentrated in urban and more populated locations and mainly cater to the wealthy populations with capacity to pay. The uninsured, poor and rural populations are more likely to utilize the public sector than their counterparts, therefore, there are redistributive implications of strengthening the public sector. Third, communicable illnesses such as TB, HIV/AIDS, and STIs (which is one of the focus of this Project) generate negative externalities which needs to be mitigated. Private provision of services for these conditions could lead to under-provision which is an additional rationale for investments in the public sector.

2. **Fiscal impact of the Project.** Given the annual budget of the MSPBS in Paraguay was US$654.5 million in 2017, Project funding represents only a small share of the MSPBS's budget. Table 2.1 below shows the projected spending for MSPBS during the Project implementation fiscal years (2020 – 2025) and the share of MSPBS budget that the Project funding represents. Estimates of MSPBS budget for 2020-2025 period was obtained by projecting actual spending data for the years 2003 to 2017 (BOOST database). Analysis shows that during the six years of project implementation, project funding represents only 0.45 percent to 4.40 percent of MSPBS's budget. Over the duration of the project, MSPBS is projected to spend US$4,948.9 million. Project funding of US$115 million represents only 2.3 percent of MSPBS spending during this period. Given this small share that the Project will contribute to overall MSPBS's budget, it is unlikely that Project funds will crowd out government spending in the health sector.

[32] DGEEC and own analysis of EPH (2016).

Table 2.1 – Fiscal Impact of the Project

	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015	Year 2016	Year 2017
Panel A: Trends in MSPBS Spending							
MSPBS Spending (millions of US$, actual)	378.4	487.4	473.2	573.0	617.1	656.1	654.5
	Year 2020	**Year 2021**	**Year 2022**	**Year 2023**	**Year 2024**	**Year 2025**	**Total**
Panel B: Projected MSPBS Spending							
MSPBS Spending	730.26	768.08	805.91	843.73	881.56	919.38	4948.93
Project funding	28.51	33.76	25.52	17.42	5.66	4.12	115.00
Percentage of MSPBS budget	**3.90%**	**4.40%**	**3.17%**	**2.06%**	**0.64%**	**0.45%**	**2.32%**
Panel C: Breakdown of project expenditures							
Physical Infrastructure (capital): Component 1.i	8.66	16.31	14.55	9.58	1.20	0.00	50.29
Equipment (capital): Component 1.ii	11.81	9.43	4.73	2.14	0.22	0.00	28.32
Recurring (non-capital): Component 2	2.50	2.50	2.50	2.50	2.50	2.50	15.00
One time (non-capital): Components 1.iii, 1.iv, 3, 4	5.55	5.53	3.75	3.21	1.74	1.62	21.39
Panel D: Annual costs to sustain the project							
Physical infrastructure: 5% of cummulative expenditure	0.43	1.25	1.98	2.45	2.51	2.51	11.14
Equipment: 20% of cummulative expenditure	3.26	6.17	8.09	8.33	8.33	18.38	52.55
Recurring: Annual amount	2.50	2.50	2.50	2.50	2.50	2.50	15.00
Total costs (millions of US$)	6.19	9.92	12.56	13.28	13.34	23.40	78.69
MPSBS budget share to sustain the project	**0.85%**	**1.29%**	**1.56%**	**1.57%**	**1.51%**	**2.54%**	**1.59%**

Note: MSPBS spending data are available for 2003 to 2017 from which spending for future years are extrapolated. Analysis assumes that physical capital lasts 20 years, so it depreciates linearly at 5 percent per year and that equipment lasts 5 years for a depreciation rate of 20 percent. Capital maintenance costs are paid over cumulative capital expenditures over the project cycle. Analysis assumes that spending under Component 2 will be rolled-out gradually and the full cost of operating all lines of care is US$9 million. The disbursement schedule across the project years are tentative and subject to change.

3. **Fiscal Sustainability of the Project**. To compute fiscal sustainability, the analysis separates spending under the three components of the Project into four categories of spending: (i) physical infrastructure (capital); (ii) equipment (capital); (iii) recurring expenditures (non-capital); and (iv) one-time expenditures. The analysis assumes that physical capital lasts 20 years and equipment lasts five years, thus the rates of depreciation (using linear depreciation) are 5 percent per year and 20 percent per year respectively. Since infrastructure and equipment investments will be rolled out over time, maintenance costs increase over time. For the capitation payments for Lines of Care, per MSPBS cost estimates, it is assumed that the total costs will be US$2.5 million per year. The total over the course of the Project is US$15 million. It is further assumed that once fully operational, this component will cost US$2.5 million per year. Using these parameter values, the fiscal costs of sustaining the project range from 0.85 percent to 2.54 percent of MSPBS's budget during the project years. The average cost of sustaining the project in the five years after project completion is estimated to be 2.54 percent of MSPBS expenditures in those years (see Table 2.1). Therefore, the cost to sustain the project is small, and most of these costs will be allocated to capitation payments.

Costs and Benefits Considered in the Analysis

4. For the cost-benefit analysis of the Project, only two sources of benefits that are expected to be generated from the Project are considered. First, it is the savings in the DALYs measure from the Lines of Care (LoC) that will be implemented under Component 2 of the Project. DALYs are a measure of disease burden, expressed as the number of years lost due to ill-health, disability and premature death, and thus have the advantage of capturing the effects of both morbidity and mortality. It is important to capture both morbidity and mortality,

as both impose economic losses to society. In fact, for conditions such as diabetes and hypertension, losses arising from sickness and disability can often exceed losses arising from death. Thus, capturing the effects of morbidity through DALYs allows the inclusion of not only the direct benefits (loss of life) of the Project, but also the indirect benefits (loss of potential income due to missed labor market opportunities). The DALYs are then monetized using annual GDP per capita to estimate Project benefits. The second source of benefits is the direct cost savings arising from the centralized procurement of pharmaceuticals (Component 1). These are estimated as dollars amounts directly using MSPBS spending data. Table 2.2 below shows DALY estimates from the LoC conditions in Paraguay in 2017, the latest year for which data are available. Data was obtained from the Global Burden of Diseases Study published by the Institute of Health Metrics Evaluation (IHME). Total DALYs from all causes in Paraguay was 1.6 million. Taking Paraguay's life expectancy of 73.1 years in 2016, this is equivalent to 22,101 lives lost. Since only 74 percent of the population relies on MSPBS services (based on EPH, 2016 data), the analysis that DALYs are evenly distributed among MSPBS and non-MSPBS users, and that the Project will only lead to reduction in DALYs among MSPBS users. The total DALYs for MSPBS users is 1.1 million, equivalent to 15,471 lives.

Table 2.2 – Baseline estimates for Economic and Financial Analysis

	All Population		MSPBS users (74% of population)
	Percentage of DALYs	Number of DALYs	Number of DALYs
Total DALYs in 2017		**1,616,043.7**	**1,131,230.6**
DALYs from target lines of care			
Maternal disorders	0.42%	6,755.7	4,999.2
Neonatal disorders	3.83%	61,828.4	45,753.0
Tuberculosis	0.50%	8,025.2	5,938.6
HIV/AIDS	2.70%	43,612.2	32,273.0
Sexually transmitted diseases (excluding HIV)	1.63%	26,263.2	19,434.8
Hypertensive heart disease	0.73%	11,808.6	8,738.3
Diabetes	5.03%	81,322.5	60,178.7
Cervical cancers	0.96%	15,461.8	11,441.8
Uterine cancers	0.12%	1,970.2	1,458.0
Total DALYs from LoCs in 2017	**15.91%**	**257,047.9**	**190,215.4**

Source: Global Burden of Diseases, Institute of Health Metrics and Evaluation (2017)

5. Table 2.2 also shows the DALYs from the conditions in the ICS. These account for 257,000 DALYs in the whole population and 190,000 in the population of MSPBS users, implies 3,515 y 2,601 "equivalent lives saved"[33] respectively. The cost-benefit analysis takes these to be the baseline measures. Estimates of pharmaceutical

[33] "Equivalent lives saved" is an estimate of the number of lives that would correspond to those DALYs. It is computed by dividing the number of DALYs by the life expectancy at birth in the country in question.

spending by the MSPBS comes from the BOOST Public Expenditure database. MSPBS spent US$154.1M on medicines and pharmaceutical products in 2016. We take this to be the baseline estimate for spending.

6. The benefits included in the cost-benefit analysis do not include all possible sources of benefits of the Project, and thus should be considered a lower bound of the true value. The Project also intervenes to construct new FHCCs which will have widespread effect in the treatment of all conditions, and not only the conditions included in the LoC. Similarly, the Project will lead to capacity building of MSPBS medical and administrative staff which is expected to further improve efficiency of the sector. Below are some key sources of benefits that are not considered in the cost-benefit analysis:

    a) Many comorbidities exist for health conditions such as hypertension and diabetes that are included in the Lines of Care. As an example, hypertension and diabetes are highly correlated with cardiovascular and renal diseases, and as such, greater control of hypertension and diabetes is also likely to lower the incidence of both, and especially costly dialysis treatments.
    b) Other diseases included in the Lines of Care such as HIV/AIDS and TB are infectious diseases where the public provision is necessary due to inherent negative externalities these conditions impose. Better treatment of these conditions is likely to lower population incidence, which is not captured in the DALY measures.
    c) Out-of-pocket expenditures in health care and social care expenditures by households is likely to reduce as a result of the Project, especially for the conditions included in the LoC. These benefits are not taken into account.
    d) Strengthening of the centralized procurement and administration of medicines and pharmaceutical products is not only going to lead to cost savings but will also have economic impacts due to better management of stock (reduction in overstocking and improving availability to the population). It is also expected to lead to improved logistics and decreased waste (in the form of expired medicines) which will reduce costs further. Finally, the IPS is also going to benefit from centralized procurement and experience a cost reduction, which is not considered in the economic analysis.
    e) As we discuss more below, the estimation of economic benefits assumes that DALYs from the selected illnesses are likely to remain at the current level for the next 15 years (the period of analysis). However, DALYs, especially those due to Non-Communicable and Chronic Conditions have been increasing over the past decades. The analysis was done *ceteris paribus*, assuming DALYs will stay and the current level which also understates the economic benefits.
    f) Similarly, it is assumed that expenditures on pharmaceuticals will remain the same over the analysis period. However, in practice, expenditures have been increasing (in both nominal and real terms) over the last two decades. Using projected pharmaceutical expenditures for future years will increase the economic benefits.
    g) Finally, GDP per capita and life expectancy, which are used to monetize the DALYs are also assumed to be stationary at the current level. Adjusting these will again increase the benefits.

7. The Project will invest funds over the next six fiscal years 2020-2025. There are two further issues to consider in estimation of the economic/monetary value of the benefits arising from the Project. First, benefits may not start accruing immediately, there is often a lag between program implementation and results. Second, benefits are likely to accrue even years after Project completion. For this analysis, we consider the benefits over a 15-year period (2020-2034) so benefits are accrued for nine more years after Project completion. Benefits outside of this period are not considered because of the increasing uncertainty about the

counterfactual scenario. It is possible that the Government may implement other projects or take other actions to reach the same outcomes in the absence of this Project.

8. Similarly, to estimate the benefits of the Project, one must assume reasonable estimates of the benefits that may be generated from the Project, which in this case is reduction of DALYs and cost savings from centralized procurement of pharmaceuticals. Since reasonable estimates of these measures are unavailable, the analysis is done conservatively, and results are shown for a range of scenarios relating to Project effectiveness. The analysis considers three scenarios – low effectiveness, medium effectiveness and high effectiveness. In the low effectiveness scenario, it is assumed that DALYs from the LoC will be reduced by 3 percent and pharmaceutical spending by 4 percent. This corresponds to a reduction of 4,755 DALYs (equal to 65 "equivalent lives saved") and US$6.2 million in pharmaceutical spending (Table 2.3 below). Under the medium effectiveness scenario, these benefits are escalated to 4 percent for DALYs reduction and 6 percent for pharmaceutical spending. Under the high effectiveness scenario, the benefits are assumed to be 5 percent DALY reduction and 8 percent pharmaceutical spending reduction. These correspond to 104 and 130 "equivalent lives saved" under the medium and high effectiveness scenarios respectively, which is a very conservative estimate.

9. Table 2.3 also shows the year in which benefits will start accruing. Since the LoC will be implemented gradually beginning on 2020, the analysis assumes that benefits will start accruing only in year 2022. In this year, it is assumed that benefits from LoC related to maternal and child health, hypertension and diabetes will be recorded. Benefits from other ICS will start accruing only from 2025, the last year of the Project. Finally, it is assumed that benefits from centralized procurement of pharmaceutical products will start accruing in 2023.

Table 2.3 – Projected changes in DALYs and Pharmaceutical Spending

	Low Effectiveness	Medium Effectiveness	High Effectiveness	Benefit start year
Percentage reduction in DALYs	**3%**	**4%**	**5%**	
DALYs from target lines of care	4755.4	7608.6	9510.8	
Maternal disorders	125.0	200.0	250.0	2022
Neonatal disorders	1143.8	1830.1	2287.7	2022
Tuberculosis	148.5	237.5	296.9	2025
HIV/AIDS	806.8	1290.9	1613.7	2025
Sexually transmitted diseases (excluding HIV)	485.9	777.4	971.7	2025
Hypertensive heart disease	218.5	349.5	436.9	2022
Diabetes	1504.5	2407.1	3008.9	2022
Cervical cancers	286.0	457.7	572.1	2025
Uterine cancers	36.4	58.3	72.9	2025
Percentage reduction in pharmceutical spending	**4%**	**6%**	**8%**	
Reduction in pharmaceutical spending (millions of US$)	6.176	9.264	12.352	2023

10. For the discount factor, the analysis considers the time-value or the opportunity cost of the funds (TVM). This is to capture the idea that if it were not for this Project, the funds could be invested elsewhere to generate positive returns. The analysis also considers inflation in the economy, which is currently at 3 percent. To ensure non-sensitivity of results to the choice of discount factors, the analysis shows calculations for two values of TVM – 6 percent and 9 percent. Combining this with the inflation rate, the net discount factors used are 9 percent and 12 percent.

11. Table 2.4 below shows the current economic value of the Project under each scenario. In current value terms, the economic benefits calculated under the very restrictive conditions as described above is US$321M under low effectiveness, US$506M under medium effectiveness and US$642M under high effectiveness. These far exceed the expected Project cost of US$115M.

Table 2.4 – Current Value of Costs and Benefits of the Project

Year	Project costs (millions of US$)	Project benefits		
		Low effectiveness	Medium effectiveness	High effective-ness
2020	28.51	0.0	0.0	0.0
2021	33.76	0.0	0.0	0.0
2022	25.52	13.1	20.9	26.1
2023	17.42	19.2	30.2	38.5
2024	5.66	19.2	30.2	38.5
2025	4.12	26.9	42.5	53.9
2026	0.00	26.9	42.5	53.9
2027	0.00	26.9	42.5	53.9
2028	0.00	26.9	42.5	53.9
2029	0.00	26.9	42.5	53.9
2030	0.00	26.9	42.5	53.9
2031	0.00	26.9	42.5	53.9
2032	0.00	26.9	42.5	53.9
2033	0.00	26.9	42.5	53.9
2034	0.00	26.9	42.5	53.9
Total	**115.00**	**320.9**	**506.0**	**641.7**

12. The NPV of the Project depends on the discount factor used and the effectiveness level of the Project. Tables 2.5 and 2.6 below shows estimation of the present value of costs and benefits, NPV of benefits and the IRR under each scenario and discount rate. Results show that under the conservative estimate of medium effectiveness and 9 percent discount factor, the NPV of the Project is US$141.5M, which corresponds to an IRR of 20 percent. Under the low effectiveness scenario, the NPV is US$55.8M and the IRR is 9 percent. Finally, under the high effectiveness scenario, the NPV increases to US$204M and the IRR to 27 percent.

13. The IRRs are high even with a 12 percent discount factor (Table 2.6). The NPVs are US$31.9M, US$100.4M and US$150.7M under the low, medium and high effectiveness scenarios respectively. These correspond to IRRs of 6 percent, 17 percent and 24 percent. Overall, the economic analysis of the Project shows that there are high returns to the investment. Even under very strict assumptions and not accounting for all economic benefits of the Project, the NPV is positive and the IRR is significantly high.

Table 2.5 – Net Present Value and Internal Rate of Return Under 9% discount rate

Year	Present Value of Project costs (millions of US$)	Present Value of Project benefits			Net present value		
		Low effectiveness	Medium effectiveness	High effective-ness	Low effective-ness	Medium effective-ness	High effective-ness
2020	26.16	0.00	0.00	0.00	-26.16	-26.16	-26.16
2021	28.42	0.00	0.00	0.00	-28.42	-28.42	-28.42
2022	19.71	10.08	16.13	20.17	-9.62	-3.57	0.46
2023	12.34	13.63	21.36	27.25	1.29	9.02	14.91
2024	3.68	12.50	19.60	25.00	8.82	15.92	21.33
2025	2.46	16.06	25.33	32.12	13.60	22.87	29.66
2026	0.00	14.73	23.24	29.47	14.73	23.24	29.47
2027	0.00	13.52	21.32	27.03	13.52	21.32	27.03
2028	0.00	12.40	19.56	24.80	12.40	19.56	24.80
2029	0.00	11.38	17.94	22.75	11.38	17.94	22.75
2030	0.00	10.44	16.46	20.88	10.44	16.46	20.88
2031	0.00	9.58	15.10	19.15	9.58	15.10	19.15
2032	0.00	8.79	13.85	17.57	8.79	13.85	17.57
2033	0.00	8.06	12.71	16.12	8.06	12.71	16.12
2034	0.00	7.39	11.66	14.79	7.39	11.66	14.79
Total	**92.76**	**148.55**	**234.27**	**297.10**	**55.79**	**141.51**	**204.34**
Internal Rate of Return					**9%**	**20%**	**27%**

Table 2.6 – Net Present Value and Internal Rate of Return Under 12% discount rate

Year	Present Value Project costs (millions of US$)	Present Value of Project benefits			Net present value		
		Low effectiveness	Medium effectiveness	High effective-ness	Low effective-ness	Medium effective-ness	High effective-ness
2020	25.46	0.00	0.00	0.00	-25.46	-25.46	-25.46
2021	26.92	0.00	0.00	0.00	-26.92	-26.92	-26.92
2022	18.17	9.30	14.87	18.59	-8.87	-3.29	0.42
2023	11.07	12.22	19.17	24.45	1.15	8.09	13.38
2024	3.21	10.91	17.11	21.83	7.70	13.90	18.62
2025	2.09	13.65	21.52	27.29	11.56	19.43	25.20
2026	0.00	12.18	19.21	24.37	12.18	19.21	24.37
2027	0.00	10.88	17.16	21.76	10.88	17.16	21.76
2028	0.00	9.71	15.32	19.42	9.71	15.32	19.42
2029	0.00	8.67	13.68	17.34	8.67	13.68	17.34
2030	0.00	7.74	12.21	15.49	7.74	12.21	15.49
2031	0.00	6.91	10.90	13.83	6.91	10.90	13.83
2032	0.00	6.17	9.73	12.34	6.17	9.73	12.34
2033	0.00	5.51	8.69	11.02	5.51	8.69	11.02
2034	0.00	4.92	7.76	9.84	4.92	7.76	9.84
Total	**86.91**	**118.78**	**187.33**	**237.57**	**31.87**	**100.42**	**150.66**
Internal Rate of Return					**6%**	**17%**	**24%**

ANNEX 3: Detailed Project Design and Analysis for Component 2

COUNTRY: Paraguay
Paraguay Public Health Sector Strengthening

A. Global Project Rationale

1. It is well known that increasing public health expenditure is not enough to make progress towards UHC.[34] National governments also need to ensure these resources are used efficiently and fairly to scale-up the supply of quality health services for everyone. This requires strengthening health systems in areas such as human resources, access to medicines, health infrastructure and information systems. The design of the Project builds on these lessons.

B. Rationale to Strengthen Infrastructure, Equipment, and the Capacity of Human Resources under Component 1

2. The Project will finance the construction of 152 new FHCCs and the rehabilitation of 114 existing FHCCs and 10 district hospitals. This basic infrastructure is absolutely necessary to increase the supply of services. The DGOP developed an analytical tool to identify the size and location of the new facilities at the district level. This tool takes into account the following dimensions: (i) the size of the population covered by the MSPBS; (ii) the existence of primary health facilities to serve the population; (iii) the condition of the existing FHCCs; (iv) the prevalence/incidence of the prioritized health conditions; (v) the presence of other cooperating agencies supporting the financing of new infrastructure; and (vi) the existence of land that belongs to the MSPBS or other state entities as long as an Usufruct Agreement exists between the MSPBS and said entities.

3. Essential medical equipment for FHCCs and select medical equipment for district hospitals will be financed by the Project to ensure the immediate availability and use of new and rehabilitated health infrastructure.

4. Adequate training of human resources (medical staff, nurses and support staff) of FHCCs and District Hospitals will be provided under Component 1. This includes the training of staff in the new strategy of care and the maintenance of the new infrastructure and equipment. The Component will also support activities to build greater managerial capacity at the central level of the MSPBS as well as the regional and local levels. A special focus under the Project is on the procurement of medicines and medical supplies to ensure the right functioning of the health system supply side. The establishment of efficient mechanisms for the procurement and distribution of medicines and medical supplies is key in that regard.

5. Capacity building includes: (i) the design of a new organizational structure for the centralized procurement agency and the scope of its work; (ii) a revision and update of the current list of essential medicines with a focus on cost-effective medicines; (iii) the implementation of a standardized nomenclature for medicines; (iv) assistance for the design and the implementation of advanced procurement plans; (v) the design and implementation of information systems for the real-time management of stocks; (vi) the review and optimization of logistic processes; and (vii) the design and implementation of mechanisms for the quality

[34] WB Group, Background Paper of the Second Annual UHC Financing Forum Greater Efficiency for Better Health and Financial Protection, April 2017.

control of medicines. The above activities will be supported through the financing of consulting and non-consulting services.

C. Rationale for the Development of the Priority Integrated Care Settings (ICSs)

6. The ten conditions chosen are under the six lines of care and account for over 37.6 percent of all deaths in Paraguay and over 25.4 percent of the DALYs (See Table 3.1). Overall, the epidemiological transition in Paraguay has been slow compared to the neighbors. MCH conditions and Communicable Diseases continue to account for 16.8 percent of DALYs (compared to in 12.4 percent Argentina and 7.8 percent in Chile), and Accidents and Injuries account for 13.1 percent (compared to 11.7 percent in Argentina and 10.7 percent in Chile). The remaining 70 percent is accounted by NCDs. Therefore, compared to other countries, Paraguay faces a double burden of diseases. On the one hand, a concentrated effort is required to reduce the burden of MCH and Communicable Diseases front and on the other hand, the health system needs to start preparing itself for the increasing burden of NCDs.

Table 3.1: Burden of Diseases in Paraguay, 2017

Conditions	Percentage of DALYs	Percentage of Deaths
Directly related to chosen ICS		
Maternal disorders	0.4%	0.3%
Neonatal disorders	3.8%	1.5%
Hypertensive heart disease	0.7%	2.0%
Diabetes mellitus	5.0%	6.7%
HIV/AIDS	2.7%	2.3%
STIs	1.6%	0.9%
Tuberculosis	0.5%	0.7%
Breast cancer	0.9%	1.5%
Cervical cancer	1.0%	1.5%
Uterine cancer	0.1%	0.2%
Closely related to chosen ICS		
Ischemic heart disease	5.9%	15.1%
Chronic kidney disease	2.6%	4.9%
Total	**25.4%**	**37.6%**

Source: Institute for Health Metrics Evaluation

7. The rationale for investing in these conditions also comes from their relative cost-effectiveness in averting DALYs. Across a range of studies from different countries, the cost per DALY averted through safe motherhood initiatives (a package combining antenatal and postpartum care with trained birth attendants) is in the range of US$150 to US$1,000 (Horton and Levin, 2015).[35] Similarly, complete vaccinations in children (against TB, diphtheria, tetanus, pertussis, measles and polio) are among the most cost-effective health interventions, costing less than US$100 per DALY averted. The case for investment in the prevention and management of communicable diseases – TB, HIV/AIDS, and STIs – is even stronger given the social costs they impose on the population in addition to the individual. For conditions such as hypertension and diabetes, early detection and control is important because left untreated, these conditions tend to develop into more complicated and

[35] See DCP3: *http://dcp-3.org/sites/default/files/chapters/DCP3 percent20RMNCH percent20Ch17.pdf*

costly-to-treat heart conditions and kidney diseases respectively. In Mexico, for example, researchers estimated that if the current trend in hypertension was to remain unchecked, the health budget would need to increase by 5-7 percent annually (Arredondo et al., 2015).

8. The rationale for the ICSs and Component 2 overall is therefore to shift the focus of the health system to certain quality services to promote prevention, early and timely primary care in a holistic manner. It aims to reorient USFs to provide services as mandated by national guidelines, while assuring adequate follow-up care through referrals to higher levels of care as needed.

9. Most of the population suffering from these conditions also use MSPBS facilities as their main health providers. Table 3.2 below shows the number of estimated population suffering from the conditions in the ICS and the number that relies solely on MSPBS facilities for their care health care needs.

Table 3.2: Prevalence of LOC conditions in Paraguay, 2017

Conditions	Estimated persons in the target areas	Estimated persons who only receive care from MSPBS
Maternal disorders (age 15-44)	1,665,349	1,232,277
Neonatal disorders (age 0-4)	704,377	521,205
Hypertensive heart disease	3,173,842	2,348,489
Diabetes mellitus	684,139	506,230
HIV/AIDS	19,875	14,707
Tuberculosis	2,616	1,936
Cervical cancer	1,066	789

Source: MSPBS

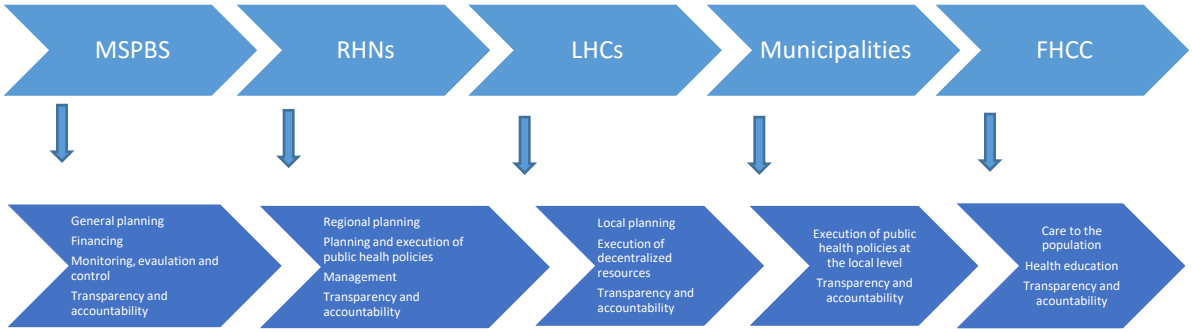
D. Design of the Results Based Financing model

10. The MSPBS currently utilizes a mechanism for transfer of resources to the LHCs with the objective to strengthen the allocative efficiency of the system. Under Law 1032, a small proportion of the resources are transferred to LHCs for their efficient functioning. Nevertheless, current mechanisms do not assign funds based on results, neither are funds earmarked for specific activities. As such, most LHCs continue to utilize funds in a discretionary manner.

11. Linking the transfer of funds to clear health and sanitary outcomes for the specific ICSs, will help increase the efficiency of the resources, meanwhile ensuring health impact. Similarly, the current level of resources allocated to the LHCs for the FHCCs and health promotion activities (infrastructure, medical equipment and supplies) are insufficient to affect change in health outcomes. The funds transferred under the RBF scheme will contribute to achieving the goals set by the MSPBS while providing a tool to improve the overall governance of the public health system. Importantly, improvements in quantity and quality of spending at the local level also has the potential of reducing Out-of-pocket expenditures, which remain high and affect the poorest populations.

12. To achieve this, the Project design seeks to create accountability across all institutional actors. Further below MSPBS, there is the need to involve the LHCs, Municipalities, and finally the FHCCs. In turn, the responsibility

for providing quality care for each condition in the ICSs depends on all these actors. The graphic below describes each level of the institutional structure and their responsibilities.



13. Component 2 “Improvements in the access to quality health services through priority Integrated Care Sets” will finance capitation payments for the provision of ICS under an RBF scheme. The objective of this component is to expand population access to quality health care services for the following health ICS: (i) maternal and child health; (ii) highly prevalent NCDs (i.e. hypertension and diabetes) and cancers prevalent among women (i.e. cervical-uterine and breast cancer); and (iii) infectious diseases (i.e. TB, STDs such as syphilis and HIV).

14. The financial transfer of the capitation payment will closely follow this hierarchal structure of the health system to ensure that resources reach the right beneficiary FHCC and that they are used effectively. The program envisions transferring funds from the MSPBS to the LHCs, in line with the decentralization policy created by Law 1032. Under the Project, incremental transfers financed by the Project will be made based on the progress made in outcomes involving two different health functions: (i) regulation; and (ii) service delivery. In terms of regulation, the Project will promote results linked to: Stewardship, governance and PPHCMNs performance monitoring (Result Area 1). Under the second function, the Project will promote: Health Promotion (Result Area 2) and Health outcomes (Result Area 3).

15. The capitation payment will function as a quasi-health insurance premium. This capita value has been calculated to cover the incremental cost of providing PHC coverage for the selected ICS considering the size of the population under exclusive MSPBS coverage and gaps in service provision. Through the strategic purchasing of health results, the MSPBS will promote the development of public PPHCMNs to provide access to quality health services through the primary health care network and particularly through the FHCCs, and the implementation of population interventions for health promotion by municipalities.

16. Since the capitation payments will operate as health insurance premiums, the capitation payments are not specifically intended to reimburse for services provided, rather they are intended to pay for the readiness of the health system to provide services when the contingent event (the demand of a health service) occurs. Through the SIG and HIS systems, the MSPBS will be able to measure progress about Project Results and milestone compliance which will be the basis for triggering the capitation payments.

17. **The Project will support incentives that encourage each level of the health care system to take steps to improve coverage, quality, and results in the selected ICSs**. Based on the number of population assigned to each FHCC, the Project will make capitation payments to the LHC conditional on the accomplishment of results related to the four areas mentioned before. The initial share of the capitation payment allocated to each area is described in the following table and will be defined in the OM. This distribution could be modified during Project implementation prior agreement with the Bank.

Table 3.3: Capita Payment distribution between Result Areas

Result Areas	Capitation Payment Share (%)
1- Stewardship, governance and PPHCMNs performance monitoring	26
2 - Health Promotion	29
3 - Health Outcomes	45

18. The Project will transfer a share of the capitation payment to the LHC conditional on the accomplishment of results linked to the strengthening of the stewardship and governance over the intermediate actors of the public service delivery network needed to produce the Results defined by the central level according to the MSPBS's priorities and the monitoring and evaluation of the PPHCMN (Result Area 1). The remaining share of the capitation payment will be transferred to the LHC subject to the achievement of key milestones related to: (i) the implementation of health promotion activities based on the Healthy Municipalities Strategy (Result Area 2); and (ii) health outcomes for the ICS (Result Area 3). The LHCs in turn will use these funds to reward the Municipalities and the FHCC for their results in these two areas.

19. Financial resources available to LHCs will serve as incentives to better meet the targets. These arrangements are important for the Project to operate as a quasi-insurance scheme and represent a break from the traditional supply-driven model of health care provision to another one focused on results.

20. In practice this type of RBF program can already be implemented through the transfer mechanism described above using current resources and the institutional framework provided by Law 1032. To do this, it is necessary to define health goals and the possible progress to be made over time. The project funds will help accelerate the process, meanwhile ensuring that resources are enough to help close capacity gaps rapidly.