

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BRAZIL

**PROGRAM TO STRENGTHEN THE CARE MODEL IN THE PARAÍBA HEALTH
NETWORK**

(BR-L1518)

LOAN PROPOSAL

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LINKS
REQUIRED
1. Multiyear execution plan
2. Monitoring and evaluation plan
3. Procurement plan
OPTIONAL
1. Project economic analysis
2. Safeguard Policy Filter and Safeguard Screening Form
3. State health care plan
4. Health care profile study
5. Program Operating Regulations

ABBREVIATIONS

CEFOR	Centro Formador de Pessoal para a Saúde [Training Center for Health Care Personnel]
DATASUS	Departamento de Informática do SUS [Information Technology Department of the Unified Health System]
IBGE	Instituto Brasileiro de Geografia e Estatística [Brazilian Institute for Geography and Statistics]
ICB	International competitive bidding
LACEN	Laboratório Central do Estado [State Central Laboratory]
NCB	National competitive bidding
PMU	Program management unit
R\$	Brazilian reais
SES	Secretaria de Estado da Saúde [State Health Department]
SIAF	Integrated Financial Management System
SIH	Sistema de Informações Hospitalares [Hospital Information System]
SIM	Sistema de Informações de Mortalidade [Mortality Information System]
SPH	Social Protection and Health Division
SUS	Sistema Único de Saúde [Unified Health System]
TCE/PB	Tribunal de Contas do Estado da Paraíba [State of Paraíba Audit Office]
WHO	World Health Organization

PROJECT SUMMARY

BRAZIL PROGRAM TO STRENGTHEN THE CARE MODEL IN THE PARAÍBA HEALTH NETWORK (BR-L1518)

Financial Terms and Conditions				
Borrower: State of Paraíba			Flexible Financing Facility^(a)	
			Amortization period:	25 years
Guarantor: Federative Republic of Brazil			Disbursement period:	5 years
Executing agency: State of Paraíba, through the State Health Department			Grace period:	5.5 years ^(b)
			Interest rate:	LIBOR-based
Source	Amount (US\$)	%	Credit fee:	(c)
IDB (Ordinary Capital):	45,197,310	80	Inspection and supervision fee:	(c)
Local:	11,436,559	20	Weighted average life:	15.25 years
Total:	56,633,869	100	Currency of approval:	U.S. dollars from the Bank's Ordinary Capital
Program at a Glance				
Program objective/description: The general objective of this program is to help improve the health of the population of the state of Paraíba by consolidating its health care networks and strengthening its health care management capacity.				
Special contractual conditions precedent to the first disbursement of the loan: (i) creation of a program management unit and appointment of its general coordinator; and (ii) approval of the program Operating Regulations under the terms previously agreed upon with the Bank (paragraph 3.4).				
Special contractual conditions for execution: In order to begin the works under Component 2, the following will be prepared and submitted, to the Bank's satisfaction: (i) a health and safety plan; (ii) a waste management plan for the construction phase of the works; and (iii) evidence showing that a mechanism to address complaints and claims has been established (paragraph 2.3).				
Exceptions to Bank policies: None.				
Strategic Alignment				
Challenges:^(d)	SI <input checked="" type="checkbox"/>	PI <input type="checkbox"/>	EI <input type="checkbox"/>	
Crosscutting topics:^(e)	GD <input checked="" type="checkbox"/>	CC <input checked="" type="checkbox"/>	IC <input checked="" type="checkbox"/>	

- (a) Under the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency and interest rate conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.
- (b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.
- (c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with applicable policies.
- (d) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).
- (e) GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, and rationale

1. The status of health care in Paraíba

- 1.1 The state of Paraíba reflects some of the typical characteristics of Northeast Brazil: recent social progress and above-average economic growth for Brazil, coupled with historical inequalities and some of the country's poorest social indicators. Between 2010 and 2015, the state's GDP grew by 16.5%, above Brazil's 5.8% GDP growth during the same period.¹ In addition, extreme poverty in Paraíba was reduced from 25% in 2000 to 13.4% in 2010.² However, almost 46% of its 4 million inhabitants currently live in poverty.³ Paraíba has Brazil's sixth-highest Gini coefficient, 0.563⁴ and is ranked 21st out of the country's 27 states based on the Human Development Index.⁵ Moreover, it has a high economic concentration, with only 5 of its 223 municípios accounting for 60% of the state's GDP. Paraíba's health indicators directly reflect its high rates of poverty and inequality and imbalances among regions.
- 1.2 **Changes in the morbidity and mortality profile.** Paraíba, like the rest of Brazil, is facing a rapid demographic and epidemiological transition, with a significant increase in the over-65 population.⁶ This translates into new, evolving health care demands. Its morbidity and mortality profile shows a sustained increase in the prevalence of chronic noncommunicable diseases. These diseases account for more than half of the deaths,⁷ followed by external causes and infectious diseases. Cardiovascular diseases are the leading cause of death, with 30% of the cases, followed by neoplasia (14.6%) and respiratory diseases (12%).⁸ There has also been an increase in external causes—mainly as a result of traffic accidents and violence—which account for 12% of the cases. Worldwide, chronic noncommunicable diseases generate significant, growing costs for health care services, since patients need ongoing longitudinal care. Studies show that low- and middle-income countries are more exposed to and most impacted by chronic noncommunicable diseases. This is because their populations face more risk

¹ Secretaria de Planejamento, Orçamento e Gestão [Planning, Budgeting, and Management Department], Paraíba, 2017.

² United Nations Development Programme, Instituto de Pesquisa Econômica Aplicada [Institute for Applied Economic Research], and Fundação João Pinheiro [João Pinheiro Foundation], 2013.

³ Instituto Brasileiro de Geografia e Estatística [Brazilian Institute for Geography and Statistics] (IBGE), 2016.

⁴ IBGE, 2017.

⁵ United Nations Development Programme. The state is also extremely vulnerable to the effects of climate change. The Brazil Panel on Climate Change projects that by 2040, Paraíba will experience a rainfall decrease between 10% and 20% and a temperature increase between 0.5°C and 1°C. By 2070, the rainfall decrease will be between 25% and 35%, while the temperature increase will be between 1.5°C and 2.5°C.

⁶ The over-65 population segment increased from 9% in 1991 to 12% in 2010, while the segment under 15 decreased from 37.7% to 25.3% during the same period. IBGE, 1991 and 2010 population censuses.

⁷ In all, 35% of Paraíba's population has at least one chronic noncommunicable disease. National Health Survey, 2014.

⁸ Departamento de Informática do SUS [Information Technology Department of the Unified Health System] (DATASUS), 2017.

factors, such as unhealthy diets, alcohol and tobacco use,⁹ and poor air and water quality. These populations also have limited access to adequate health care services and have scarce financial resources to contend with a long-term illness.¹⁰

- 1.3 **Maternal and child health.** Despite a substantial decrease in the past 15 years, the infant mortality rate remains high in Paraíba, at 13.3 per 1,000 live births. This rate in particular is driven by early neonatal deaths (0-6 days), which account for almost 80% of the indicator. Neonatal mortality (mainly early in life) is related to preventable causes such as low birth weight, pregnancy risk, and the newborn's health. These are directly associated with adequate prenatal and labor care. The maternal mortality rate has been rising since 2010, when it was 47.46 per 100,000 live births, to 62.7 per 100,000 live births in 2017. This is almost twice Brazil's Millennium Development Goal target of 35 deaths per 100,000 live births by 2015. In Paraíba, nearly 80% of maternal deaths are directly attributable to obstetrical causes. These are related to obstetric complications during pregnancy, delivery, or the postpartum period as a result of errors in procedures, incorrect treatment, omissions, or other related factors.
- 1.4 **The Unified Health System care model.** The Sistema Único de Saúde [Unified Health System] (SUS) was established under the 1998 Constitution of Brazil. It embodies a government policy calling for universal, free, and comprehensive access to health promotion, disease prevention, and recovery services, which are organized into regional, hierarchical health care networks,¹¹ with supplementary participation from the private sector. To impact health outcomes, health care networks need to have clinical protocols defining the proper procedures for a condition, the levels responsible for care, and the steps throughout the service delivery chain. These protocols define areas of care, that is, ongoing care paths for health promotion, disease prevention, treatment, and rehabilitation among patients, based on the services available in the network. Although the SUS is highly decentralized, each level of government has different, complementary responsibilities in its execution: (i) the federal government plans, supervises, and provides cofinancing for the services; (ii) the states organize their own health care networks based on their demographic and epidemiological profiles, provide cofinancing to municípios, and are supplementary providers of medium- and high-complexity services; and (iii) the municípios are exclusively responsible for providing primary health care and, depending on their size, offer medium- and high-complexity services in their territory.

⁹ Global Status Report on Noncommunicable Diseases. World Health Organization (WHO), 2014; The Emerging Global Health Crisis: Noncommunicable Diseases in Low and Middle-Income Countries. Council on Foreign Relations, 2014.

¹⁰ Kankeu, H., et al. The financial burden from non-communicable diseases in low- and middle-income countries: a literature review. Health Research Policy and Systems, 2013.

¹¹ Ministry of Health, 2010, Decree 4279.

- 1.5 **Structure of the SUS in Paraíba.** The state of Paraíba has a high level of coverage for primary health care at 95%—one of the country’s highest. Also, almost 88% of the state’s population relies exclusively on public health care services. The primary health care network, for which municípios are responsible, has 1,600 basic health units. It is structured using a Family Health Strategy¹² model that includes multidisciplinary teams organized by territory with a reference population.¹³ However, despite the high coverage rate, in Paraíba primary health care faces significant quality and efficiency challenges. An example illustrating these challenges is the late detection rate of syphilis during pregnancy. Only 21% of the cases are identified during the first trimester, despite high compliance with the seven prenatal checkups recommended by the Ministry of Health (66% of pregnant women underwent these checkups in 2016). This demonstrates that there are quality issues. In addition, studies using data envelopment analysis showed that only 9% of the state’s municípios are fully efficient¹⁴ in using primary health care resources and that there are significant margins to improve their management. To address its epidemiological profile, Paraíba has prioritized service implementation in the following lines of care: maternal and child, oncology, cardiovascular and cerebrovascular diseases, and trauma.
- 1.6 **Disparate medium- and high-complexity offerings.** Paraíba has its own network of 33 hospitals, which supplements municipal services in terms of beds, physician offices, testing, and specialized treatments.¹⁵ However, the public health service network is unevenly distributed in its territory, which creates significant care gaps in some regions, particularly in western Paraíba (macroregion III). For instance, 76% of medium- and high-complexity care is concentrated in the state’s three largest municípios.¹⁶ In addition, municípios with fewer than 20,000 inhabitants (which account for 65% of the population) do not offer these services, and therefore rely heavily on larger municípios. In theory, the structure of health care networks and adoption of service delivery agreements between municípios, as well as between municípios and the State, should help overcome the unequal distribution of services and ensure timely access for residents of small municípios. Nevertheless, these agreements are fragile and contain weak monitoring, management, and incentive mechanisms, resulting in systemic noncompliance with these regional pacts.

¹² Evidence shows that the Family Health Strategy is the most efficient for primary health care in Brazil. Macinko, J., et al., 2006. Evaluation of the impact of the Family Health Program on infant mortality in Brazil, 1990-2002; and Macinko, J., et al., 2007. Going to scale with community-based primary care: An analysis of the family health program and infant mortality in Brazil, 1999-2004.

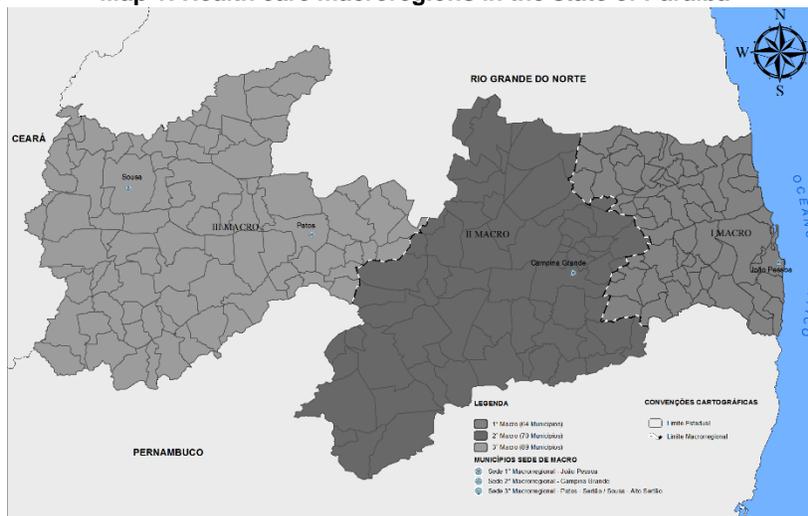
¹³ Every Family Health Strategy is responsible for a maximum of 4,000 persons, and the recommended average is 3,000.

¹⁴ Silva et al. *Avaliação da eficiência na atenção básica à saúde no Estado da Paraíba: Uma análise via modelo de regressão beta inflacionado*. *Ciência e Natura*, Santa Maria. Volume 40, 2018. Based on the methodology applied, criteria were created to define ranges of scores from 0 to 1, to measure the efficiency of municípios, with 0 being not at all efficient and 1 being fully efficient.

¹⁵ The state of Paraíba, following rules from the Ministry of Health, is divided for health care purposes into 16 regions and 3 macroregions (João Pessoa, Campina Grande, and Patos). Each macroregion covers between 800,000 and 1.7 million inhabitants and is structured around the major metropolitan areas.

¹⁶ Sistema de Informações sobre Orçamentos Públicos em Saúde [Information System on Public Health Budgets], 2018. The concentration of services can also be verified through the mortality rate by município. Nearly 35% of the deaths that occurred in 2016 were in João Pessoa, Campina Grande, and Santa Rita.

Map 1: Health care macroregions in the state of Paraíba



- 1.7 **Maternal and child health care network.** The State has its own network of four maternity hospitals and two general hospitals with obstetrics services, which operate as regional referral services, particularly for high-risk deliveries. This network has inadequate infrastructure and does not meet current health regulations. In recent years, Paraíba has attempted to address this situation by following the national strategy of the Cegonha [Stork] Network,¹⁷ aimed at ensuring comprehensive care for pregnancy, delivery, and the postpartum period. This strategy includes action plans based on regional diagnostic assessments, intended to close care gaps through the consolidation of the maternal and child health network throughout the state. Regional diagnostic assessments indicate that there are deficits in services offered for delivery and neonatal intensive care in maternity hospitals and regional referral hospitals. Another significant component of the maternal and child health care network is the Laboratório Central do Estado [State Central Laboratory] (LACEN), the main maternal/child surveillance reference laboratory—which is responsible for 80% of high-complexity neonatal tests in Paraíba.
- 1.8 **The emergency and urgent care network.** Lastly, to treat acute illnesses, Paraíba's emergency and urgent care network is made up of 10 emergency care units that cover 90% of its territory, as well as 6 emergency hospitals. In addition, mobile urgent care services have been expanded in recent years, and there are currently 106 decentralized stations. This network is mainly poised to treat cardiovascular and cerebrovascular diseases, as well as trauma. The network's urgent care departments provide care to a large number of acute patients who—taking into account Paraíba's morbidity-mortality profile—should receive preventive care through a health system that targets chronic noncommunicable diseases. The emergency and urgent care network has a new control center aimed at reducing imbalances in service offerings and access for patients.

¹⁷ Resolution 1489 of 24 June 2011, Ministry of Health.

2. An incomplete organizational model for health care

- 1.9 Although the mandate of the Secretaria de Estado da Saúde [State Health Department] (SES) is to be a strategic health care administrator and to provide medium- and high-complexity services, it currently has little control over the service network. This is partly because the State lacks information systems for regional planning, with mechanisms that promote equitable service offerings by the municípios. Moreover, municípios in Paraíba do have full health care management¹⁸—that is, they receive financing directly from the federal government and the State. Municípios also manage services in their territory, even state hospitals, without having to coordinate care with the SES. Municípios contribute 28% of the financial resources for health care¹⁹ but have decision-making authority for 64% of total spending, often without taking into account regional epidemiological realities. Paraíba uses the main SUS mechanism to coordinate supply and demand for medium- and high-complexity services, which is known as integrated, consensus-based programming.²⁰ However, the SES faces difficulties controlling the supply of services and hospital beds based on each region's changing epidemiological needs, since it lacks the information and monitoring systems to administer resources more efficiently.
- 1.10 **Significant care gaps:** Large regions of Paraíba lack medium- and high-complexity services partly due to the factors mentioned above. For example, there are no high-complexity oncology public services in 89 municípios in western Paraíba, and therefore patients need to travel between 180 and 500 kilometers to receive care.²¹ This is reflected in the overcrowding and delays in scheduling elective surgeries and specialized treatments in referral hospitals, most of which are located in the state's capital. For instance, in 2014, 70% of patients diagnosed with prostate cancer had to wait more than 60 days to begin treatment.²² These regional inequalities are also evident in the differences in health care spending by region: while in João Pessoa (macroregion I), annual per capita spending in 2013 was R\$695, in Patos (macroregion III), it was R\$485.
- 1.11 **Low implementation level for lines of care:** Ongoing, comprehensive care of patients with chronic noncommunicable diseases at the three levels of complexity (basic, medium, and high) is essential to prevent declining health. Therefore, it is necessary to have standard clinical practices that include the patient's medical record and proactive communication between referring and counter-referring medical professionals. A similar situation exists with pregnancy care, for a more limited period. However, in practice there is little continuity of care in Paraíba. There is also major fragmentation at the territorial level, partly due to the lack of

¹⁸ According to Basic Operational Regulation 96. In practice, most municípios have limited capacity to offer all the planned complex procedures and meet the demand from patients referred by neighboring municípios.

¹⁹ Constitutional Amendment 29 calls for municípios to allocate at least 15% of the resources they collect to funding health care services.

²⁰ Based on this mechanism, established under Ministry Regulation 1097/2006, municípios agree to provide specific services and the Ministry of Health guarantees the corresponding funding. The State is expected to coordinate and supervise integrated, consensus-based programming.

²¹ Information System on Public Health Budgets.

²² Registro Hospitalar de Câncer [Hospital Cancer Registry].

- clear guidelines²³ and of systematic efforts to implement them. For instance, a study found that 63% of primary health care teams do not maintain records to track patients referred to other levels of care.²⁴ This results in inefficiencies, such as duplicating diagnostic and care services and failing to provide support to patients. Despite efforts to provide training on implementing lines of care and to support primary health care professionals through the Centro Formador de Pessoal para a Saúde [Training Center for Health Care Personnel] (CEFOR), there is little adherence, including to clinical protocols and predefined care flows.
- 1.12 **Litigation in the system:** Paraíba, like other states, is constantly subjected to lawsuits through the judicial branch to compel it to provide medical care included on the National List of Health Care Actions and Services (and not available to patients) or not on this list, particularly high-cost medications. There is also recurring litigation regarding medications and treatments that the Agência Nacional de Vigilância Sanitária [Health Regulatory Agency] did not approve. This situation is compounded by: (i) limited judicial branch knowledge about how the health care system operates; (ii) limited technical dialogue between the judiciary and the State; and (iii) lack of information systems to quickly resolve lawsuits and identify inconsistencies. Litigation has a major impact on the health care budget. In 2017, the SES spent almost US\$15 million²⁵ on medications as a result of lawsuits, which is 78% of the state's budget for pharmaceuticals.
- 1.13 **Limited information systems:** The SES lacks an integrated information system to identify deficits, monitor epidemiological indicators in real time, and make management decisions for resource allocation, which contributes to the lack of control over the public health network. Since there is no unified control center, it is impossible to organize appointment scheduling flows, reduce waiting lines and no-shows (people missing scheduled appointments), and prioritize the services offered in unserved regions. In addition, the 33 hospitals lack information systems and only a few use electronic patient records.
- 1.14 **Shortcomings in infrastructure and quality:** Many facilities in the state's hospital network have highly deteriorated infrastructure and spaces that are inadequate for providing clinical services in accordance with regulations. Moreover, much of the medical equipment has exceeded its useful life or relies on outdated technology and needs to be replaced. There are almost 90 small municipal public hospitals, which have fewer than 50 beds and low treatment success. Paraíba has one of Brazil's highest averages in terms of length of hospital stays.²⁶ As a result, the hospital network needs to be reorganized and streamlined to reduce inefficiencies and increase service regionalization.

²³ For example, a study in Campina Grande município (the state's second largest) showed that various clinical practices coexist within the same territory. Sampaio, J., et al. *O NASF Como Dispositivo da Gestão: Limites e Possibilidades*. *Revista Brasileira de Ciências da Saúde*, Volume 16, Number 3, 2012.

²⁴ Lacerda, A., et al. *Avaliação do sistema de referência e contrarreferência do estado da Paraíba segundo os profissionais da Atenção Básica no contexto do 1º ciclo de Avaliação Externa do PMAQ-AB*. *Saúde em Debate*, 2014.

²⁵ For example, cancer treatment medications account for 44% of these resources. Núcleo de Assistência Farmacêutica [Pharmacy Care Center] of the SES.

²⁶ DATASUS, 2018.

3. Recent progress and the health care network model's consolidation needs

- 1.15 Paraíba, like the other Brazilian states, faces major financial constraints due to increasing public expenditures and decreasing tax revenues. The SES currently allocates resources for health care funding mandated by law.²⁷ Given a context of growing demand driven by epidemiological transition, it has limited ability to expand these resources. Therefore, it is essential to implement measures to enhance spending efficiency, ensuring that quality health care services will be provided to the population in a timely manner.
- 1.16 In this context, the Government of Paraíba decided to extensively reorganize its SUS, seeking to transform it from a reactive system focused on treating acute illnesses into a preventive, longitudinal health care support system, particularly for chronic diseases. This strategy, defined in the 2016-2019 State Health Care Plan, is based on expanding priority health care networks; increasing regulation of services and hospital beds to ensure timely and equitable access; and expanding and strengthening specialized care. Therefore, new two-party (State-município) agreement strategies are gradually being implemented. These include the creation of macroregional governance committees²⁸ for health care networks, the permanent qualification of Comissões Intergestores Regionais [Regional Intergovernmental Committees],²⁹ and the use of technologies to monitor medium- and high-complexity service agreements. Three regulatory committees for consultations with specialists and hospital beds are in the early stages of implementation for macroregions I, II, and III. A central regulatory committee is also being implemented to address the imbalances of services offered and access for patients among macroregions; monitor fulfillment of two-party agreements; and use financial incentives, such as payments for fulfilling integrated, consensus-based programming, to ensure timely care is provided to the entire population. The proposed operation will help consolidate these reforms by implementing a centralized health care information and management system at the SES, expanding the use of electronic records, and integrating the clinical and administrative data network for the 33 state units.³⁰
- 1.17 With respect to priority networks, for maternal and child care, the government continues to expand the Cegonha Network by providing technical support to regional referral services so they can follow clinical protocols. Therefore, in 2011 the SES established a pediatric cardiology and perinatology network focused on the early detection of congenital heart disease, which helps address infant mortality, particularly among newborns. This has been a successful strategy for the

²⁷ Constitutional Amendment 29/2000 calls on states to spend a minimum of 12% of specific taxes and fees collected on health care. Paraíba spent 13% in 2016.

²⁸ These committees are the unified governance entities for the entire macroregional network and are comprised of state and municipal managers, as well as health care service providers. Each committee must prepare an integrated regional care plan.

²⁹ Regional Intergovernmental Committees are deliberative bodies comprised of representatives of the State and of all the municipal health care departments for a certain territory (health care region) with capacity to provide health care services at various levels of care.

³⁰ Although this program will not directly finance new municipal services, building the management capacity of the SES is expected to help improve the implementation and monitoring of existing agreements between the State and the municípios.

State, coordinating a network of 21 maternity referral hospitals and using telemedicine for rapid diagnosis and decentralization of some services.³¹ For chronic noncommunicable diseases, Paraíba is designing a state network in coordination with the municípios to ensure timely detection of illnesses and ongoing patient care. Given that cardiovascular diseases are the leading cause of death, the State is restructuring all emergency and primary health care services to quickly diagnose cerebrovascular accidents and heart attacks, to ensure that initial care is provided in a timely manner. This is essential to increase the likelihood of survival and decrease health consequences. To continue with care once the patient is stabilized, the State plans to have two referral hospital services located in strategic regions (macroregions I and III), ensuring that the entire territory has timely access through this network. In 2017, the State implemented a referral service in macroregion I (Don José María Pires Metropolitan Hospital). However, the network is still incomplete because the service for macroregion III is not yet operating. Coupled with these initiatives, the State has been consolidating an oncology network focused on treating the most common types of cancer: breast, cervical, prostate, and head and neck. The network currently has four oncology public services, located in João Pessoa and Campina Grande (macroregions I and II), which are referral sites for the entire territory. However, it has no services in Patos (macroregion III).

- 1.18 To reduce inequalities among regions, it is essential to expand these networks and have the State play a more active role in coordinating services and closing care gaps. This includes organizing care hierarchically and with clearly defined referral and counter-referral flows in each macroregion. Key actions that this program will finance and that will help strengthen health care networks are redesigning and implementing clinical protocols and training health care professionals through CEFOR. To improve the capacity of medium- and high-complexity health care units that provide maternal and child care, as well as care for the most common chronic diseases (cerebrovascular accidents, heart attacks, and cancer), the program will support State initiatives as follows: renovating and expanding five high-risk maternity hospitals, Patos Regional Hospital (macroregion III), and LACEN; and equipping referral units such as Don José María Pires Metropolitan Hospital and Itaporanga Hospital.
- 1.19 This program's value-added is provided through its combination of: (i) improvements in key service offerings in the most underserved regions, based on the epidemiological profile described earlier; (ii) enhancements to the service network based on primary health care through increased clinical capacities and ongoing team training on protocols for lines of care, to reduce the number of avoidable hospitalizations and complications; and (iii) expansion of the State's strategic management capacity, particularly through information systems, to use resources more efficiently. There are plans to help expand the network model by promoting comprehensive care, improving the treatment success of primary health care, reorganizing services, closing regional service gaps, and strengthening the strategic role of the SES.

³¹ During a six-year period, 197,000 children received treatment and 510 surgical procedures were performed. The incidence of heart disease among children is 11 per 1,000 live births.

- 1.20 **Lessons learned and related operations.** This program will become part of the Bank's health care portfolio in Brazil, which includes five programs in execution (loans 3051/OC-BR, 3262/OC-BR, 3703/OC-BR, 3400/OC-BR, and 3678/OC-BR) that have provided valuable lessons. This program has been prepared simultaneously with operation BR-L1429 (loan 4641/OC-BR) for the Município of São Paulo. Based on loan 3051/OC-BR (Strengthening of Health Management in the State of São Paulo), this program addresses the importance of organizing services into hierarchical regional networks, to ensure the continuity of care for patients (Components 1 and 2). From loan 3703/OC-BR (Program for the Expansion and Improvement of Specialized Health Care in the State of Ceará II), this program incorporates the need to have advanced, flexible health care management models to respond to each region's complexities and changing epidemiological demands (Component 1). Lastly, from loan 3400/OC-BR (Program for Strengthening Social Inclusion and Healthcare Networks – PROREDES Fortaleza), this program takes into account the critical role of technologies such as electronic records to follow up on patient progress and streamline the use of diagnostic tests and treatments, contributing to efficient expenditures (Component 1).
- 1.21 The program will contribute to the innovation agenda by financing new health care technologies. This includes using management information systems, developing an application to monitor management agreements between the State and municípios, and promoting the use of health care technologies, particularly telemedicine.
- 1.22 **Strategic alignment.** The operation is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and is strategically aligned with the social inclusion and equality development challenge, inasmuch as it will improve the quality of health care services. This will be verified through the impact indicators of reductions in the maternal mortality rate due to direct (obstetric) causes and the rate of hospitalizations due to primary-care-sensitive conditions. The program is also aligned with the following crosscutting areas: (i) gender equality and diversity, by strengthening maternal and child care services, particularly neonatal, and using differentiated protocols for patients with chronic noncommunicable diseases (paragraph 1.22); (ii) climate change and environmental sustainability, by including energy efficiency and water saving measures in building renovation projects and purchasing energy efficient equipment. Approximately 3.09% of program resources will be invested in climate change mitigation activities, in accordance with the [Multilateral Development Banks' joint methodology on estimating climate finance](#). These resources contribute to the IDB Group's goal of increasing financing for climate change projects to 30% of all operations approved by the end of 2020; and (iii) institutional capacity and rule of law, by increasing the State Health Department's governance of the health care system and improving the quality of health care services. In addition, the program will contribute to the Corporate Results Framework 2016-2019 (document GN-2727-6) by increasing the number of beneficiaries receiving health services. The program is also consistent with the IDB country strategy with Brazil 2016-2018 (document GN-2850), which sets the strategic objective of expanding and improving the primary health care network and includes an indicator on the reduction in hospitalizations for conditions treatable through

primary care.³² It is included in the Update of Annex III of the 2018 Operational Program Report (document GN-2915-2). The operation is also consistent with the Health and Nutrition Sector Framework Document (document GN-2735-7) by promoting consolidation of integrated primary health care networks and improving the planning and use of management tools. In addition, it is consistent with the Gender and Diversity Sector Framework Document (document GN-2800-8) through its line of action on improving the wellbeing of women and children by expanding access to quality public services. Lastly, this program aligns with the Strategy on Social Policy for Equity and Productivity (document GN-2588-4) by addressing its fifth strategic area, the double burden of disease.

- 1.23 With respect to the gender area mentioned above, the program is consistent with the Operational Policy on Gender Equality in Development (Operational Policy OP-761) by contributing to gender equality and nondiscrimination in benefits through the strengthening of the maternal and child health care network. This will be achieved by renovating five maternity referral hospitals and improving support for women with high-risk pregnancies through the expansion of lines of care, as well as by renovating LACEN. In addition, services that treat patients with chronic noncommunicable diseases will expand the use of protocols differentiated by gender, taking into account biological differences and gender roles, which determine varying uses of health care services and differing self-care strategies. These behaviors determine both the incidence of chronic noncommunicable diseases and their health consequences.³³

B. Objectives, components, and cost

- 1.24 The general objective of this program is to help improve the health of the population of the state of Paraíba by consolidating its health care networks and strengthening its health care management capacity. The program's main beneficiaries will be some 3.4 million people who rely on the Unified Health System (SUS) for their health care. They will benefit from enhanced health care networks through the implementation of management systems and additional lines of care, as well as from improvements in the state health care units.
- 1.25 **Component 1: Strengthening the management of the SUS and improving service quality (IDB: US\$14.3 million; local counterpart: US\$9.2 million).** The objective of this component is to help improve the capacity of the State Health Department (SES) in its strategic, influential, and managerial role in operating Paraíba's health care networks efficiently. Financing will be provided for: (i) developing or procuring a strategic database and information management system for managerial decision-making; (ii) providing technology infrastructure to the 33 state hospitals; (iii) implementing electronic patient records in

³² The program is consistent with the reducing regional socioeconomic inequalities implementation approach specified in paragraph 3.7 of the country strategy with Brazil 2016-2018 (document GN-2850).

³³ WHO, 2009. Global health risks: Mortality and burden of disease attributable to selected major risks; Schramm, J., et al.; Gender inequalities in non-communicable disease mortality in Brazil. Stevens, A., et al. *Ciência & Saúde Coletiva*, 2012, Vol.17(10), p. 2627. Barker, Gary; Christine Ricardo; and Marcos Nascimento. 2007. Engaging men and boys in changing gender-based inequity in health: Evidence from programme interventions. WHO, Geneva, 2007; Pathania, V. S. Women and the smoking epidemic: Turning the tide. 2011. Bulletin of the World Health Organization 89:162-162. DeVon, H. A., et al. Symptoms Across the Continuum of Acute Coronary Syndromes: Differences Between Women and Men. 2008. American Journal of Critical Care.

state-managed units and clinical histories in at least four emergency care units; (iv) redesigning and implementing clinical protocols for prevalent chronic conditions; (v) developing innovative tools for two-party (State-município) regional coordination and promotion of efficiency in health care spending, such as a system to monitor intergovernmental agreements for offering medium- and high-complexity services, a monitoring application, and the qualification of Regional Intergovernmental Committees; (vi) executing an education campaign to promote disease prevention and self-care; (vii) implementing a strategy to reduce litigation in health care through consulting assignments and training, particularly for the State Attorney General's Office; (viii) reforming and improving maternal and child health care processes in LACEN; and (ix) renovating and expanding CEFOR to train approximately 7,500 primary health care professionals.

- 1.26 **Component 2: Consolidating health care networks (IDB: US\$28 million; local counterpart: US\$2.2 million).** This component will expand the offerings and quality of medium- and high-complexity services,³⁴ particularly in the areas of maternal and child care, oncology, and chronic disease care. Financing will be provided for: (i) renovating and expanding five high-risk maternity hospitals³⁵ and implementing a strengthening program for prenatal, delivery, and postpartum-period care; (ii) renovating, refurbishing, and procuring equipment for oncology services at Patos Regional Hospital (macroregion III); and (iii) procuring equipment for neurology and cardiology services at Don José María Pires Metropolitan Hospital (macroregion I) and Itaporanga Hospital (macroregion II).³⁶
- 1.27 **Component 3: Monitoring, evaluation, and administration (IDB US\$2.8 million).** This component will support the SES in executing the program through a program management unit (PMU), with effective management of planned activities and monitoring of results. This will also include financing an impact evaluation and a financial audit.

C. Key results indicators

- 1.28 **Expected impacts.** The impact indicators in the Results Matrix are primarily related to reducing premature deaths due to chronic noncommunicable diseases as well as maternal and child mortality, which are the main health challenges in Paraíba. Significant indicators include the maternal mortality rate from direct (obstetric) causes, the premature mortality rate from cerebrovascular accidents, and the premature mortality rate from diabetes. The program is expected to have a positive impact on all of these by strengthening health care networks, expanding high-complexity service capacity, and improving strategic management by the SES.

³⁴ Preliminary architectural designs and technical specifications for these works are available [here](#).

³⁵ These are: Cajazeiras Regional Hospital, Guarabira Health Care Complex, Edson Ramalho Hospital, Frei Damião Maternity Hospital, and Peregrino Filho Maternity Hospital. In 2017, these facilities provided care for a total of 12,700 deliveries, accounting for 30% of recorded childbirths.

³⁶ The renovations of the five maternity hospitals, as well as LACEN and CEFOR (Component 1), will include the following energy efficiency and water saving measures: rainfall collection and recovery of water from air conditioner condensation; use of air conditioning equipment labeled energy efficient; and use of energy-saving lightbulbs and solar water heaters.

- 1.29 **Expected outcomes.** In terms of outcomes, multiple indicators connected to the vertical logic and program-financed activities were selected. Some of these are: (i) hospitalization rate due to cerebrovascular accidents; (ii) percentage of normal deliveries that occurred in the state’s SUS network; and (iii) pregnant women diagnosed with syphilis and prescribed treatment. In addition, to contribute to the Corporate Results Framework, the indicator “beneficiaries receiving health services” of high complexity was included.
- 1.30 **Economic analysis.** The strategies promoted under this operation are based on evidence about the effectiveness of the care model with health care networks. Based on evidence specific to Brazil, the economic analysis ([optional link 1](#)) quantifies the incremental benefits resulting from program investments. These include: (i) productivity gains through a decrease in the morbidity and mortality associated with increased coverage, quality, and management of health care network services; (ii) savings in hospital expenditures from fewer hospitalizations due to primary-care-sensitive conditions; and (iii) earnings due to the implementation of lines of care. This analysis quantifies the disability-adjusted life-years that can be saved with the implementation of investments within a network context and reviews increases in effective coverage and the time it takes for results to materialize. In a baseline scenario with effective coverage, using conservative assumptions in terms of the effectiveness of interventions, a 5-year horizon, and a 3% discount rate,³⁷ the benefit-cost ratio is 1.57. Likewise, a sensitivity analysis with a 10-year horizon showed that the benefit-cost ratio was above 1, even under the least-favorable scenarios. Under the most realistic scenario, that is, medium coverage with a steady roll-out, the program’s net present value is US\$10,071,538 and the internal rate of return is 13.9%, using a 3% discount rate.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 The program is a specific investment loan for a total amount of US\$56,633,869 and will be financed with a loan of up to US\$45,197,310 from the Bank’s Ordinary Capital and a local counterpart contribution of US\$11,436,559, as shown in Table II-1. The disbursement period will be five years.

Table II-1. Summary of program costs (US\$)

Components	IDB	Local	Total	%
Component 1. Strengthening the management of the SUS and improving service quality	14,370,254	9,212,220	23,582,474	42
Component 2. Consolidating health care networks	27,988,344	2,224,339	30,212,683	53
Component 3. Monitoring, evaluation, and administration	2,838,712	0	2,838,712	5
Total	45,197,310	11,436,559	56,633,869	100

³⁷ As detailed on page 12 of [optional link 1](#), the World Health Organization recommends a 3% discount rate for health care projects.

Table II-2. Disbursement schedule (US\$)

Source	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
IDB	3,370,124	18,521,671	11,549,343	10,647,251	1,108,921	45,197,310
Local	1,082,513	3,180,150	1,947,249	1,717,985	3,508,662	11,436,559
Total	4,452,637	21,701,821	13,496,592	12,365,236	4,617,583	56,633,869
%	8%	38%	24%	22%	8%	100%

2.2 **Financial analysis.** Based on the financial evaluation prepared by the National Treasury Department, the state of Paraíba has been classified as Category “B” due to its low debt, adequate level of current expenditures, and financial obligations (December 2017). To grant its final approval for the signing of the applicable loan contract, Brazil’s federal government will analyze Paraíba’s fiscal position once again.

B. Environmental and social risks

2.3 According to the Environment and Safeguards Compliance Policy (Operational Policy OP-703), given that minimal or no related environmental and social impacts are expected, this has been classified as a Category “C” operation. Component 2 will finance small works inside state health care units that are already operating. Potential socioenvironmental impacts are limited to the works phase and are considered to be of a limited size, localized, temporary, short-term, reversible, and can be mitigated through mitigation programs pursuant to current Brazilian legislation. All the renovations and expansions will take place in urban areas, on isolated and unoccupied lands that have no ecological, historical, or cultural significance. However, the program is expected to generate positive social impacts as a result of enhancing the offerings and quality of medium- and high-complexity health care services, particularly in regions that are currently unserved. In addition, pursuant to the Disaster Risk Management Policy (Operational Policy OP-704), this has been classified as a type 1 (low risk) operation. As special contractual conditions for execution, in order to begin the works under Component 2, the following will be prepared and submitted, to the Bank’s satisfaction: (i) a health and safety plan; (ii) a waste management plan for the construction phase of the works; and (iii) evidence showing that a mechanism to address complaints and claims has been established. These are considered essential conditions to ensure that the Bank’s Operational Policies regarding social, environmental, and occupational health issues are followed during the construction and operation of works.

C. Fiduciary risks

2.4 Following a workshop using the Institutional Capacity Assessment Platform, the risk was classified as medium. A medium risk of potential program execution delays was also identified, because SES staff lacks knowledge of and experience with the Bank’s financial management and procurement policies. This may impact the achievement of the program’s physical and financial targets. To mitigate this risk, there are plans to: (i) create a PMU that works full time on the program; (ii) create a special bidding committee to provide support for the preparation and operation of procurement processes according to Bank and/or country policies, as applicable; (iii) designate procurement staff to address program demand;

(iv) develop or procure a physical and financial management system for the program; and (v) provide training from the IDB for all the staff involved in program execution.

D. Other risks and key issues

- 2.5 A medium public management and governance risk was identified, in connection with a potential change in teams and lack of continuity in execution as a result of the elections in late 2018. To mitigate this risk, a continuity plan will be prepared, including records of activities conducted and processes in execution. A medium risk that the SES may consider the program to be a low priority, since it lacks an internal team that is devoted exclusively to this operation, was also identified. To address this risk, there are plans to create a PMU and contract consultants to provide support for program implementation. In addition, a medium risk of potential program execution delays was also identified, due to coordination issues between the SES and the Infrastructure and Works Department—which is responsible for renovating and redesigning the state health care units. To mitigate this risk, both entities will sign a cooperation agreement.
- 2.6 **Sustainability.** Program-financed activities are aimed at strengthening existing health care services that rely on current fiscal resources (federal, state, and municipal) for their future operation and continuity. The strengthening of the health care networks, as well as the expansion of lines of care, are expected to improve the treatment capacity of primary health care services and reduce the exacerbation of signs and symptoms and avoidable hospitalizations. This will make health care spending more efficient and contribute to the system's sustainability.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Borrower and executing agency.** The borrower will be the State of Paraíba, and the guarantor for the borrower's loan-related financial obligations will be the Federative Republic of Brazil. The State of Paraíba will execute the operation through the State Health Department (SES), which will create a PMU.
- 3.2 **Execution, administration, and coordination mechanisms.** Based on the institutional analysis, it was determined that the SES will establish a PMU with a team working full time on the program in order to facilitate its execution. The PMU will report directly to the SES directors' office. Its responsibilities will include: (i) program planning and administrative and fiduciary management; (ii) direct coordination with technical units (basic care, medium- and high-complexity care, epidemiological surveillance, etc.) to ensure alignment with SES policies; and (iii) monitoring and evaluation of program results. The PMU will have the following basic staff: a general coordinator, a technical specialist, an administrative and financial specialist, a procurement specialist, and a monitoring and evaluation specialist.
- 3.3 The program Operating Regulations ([optional link 5](#)) will detail execution arrangements for each component, including clearly defined responsibilities and process flows, as well as other relevant operational elements. Any amendments to this document during execution will require the Bank's prior written no objection.

- 3.4 **The special contractual conditions precedent to the first loan disbursement will be: (i) creation of a PMU and appointment of its general coordinator; and (ii) approval of the program Operating Regulations under the terms previously agreed upon with the Bank.** These conditions are essential to ensure that the executing agency will be properly prepared to begin program execution, by appointing a coordinator to lead the execution team and having a complete operating instrument that describes financial flows, procurement processes, program supervision and monitoring, etc.
- 3.5 **Procurement.** Procurement financed with loan proceeds will be conducted in accordance with the Policies for the Procurement of Goods and Works financed by the Inter-American Development Bank (document GN-2349-9) and the Policies for the Selection and Contracting of Consultants financed by the Inter-American Development Bank (document GN-2350-9). Pursuant to the executing agency's institutional capacity assessment, procurement processes that are financed in whole or in part by the Bank will be subject to ex post review, except in cases in which ex ante supervision is warranted and for direct contracting included in the procurement plan.³⁸ When procurement takes place through the country system, supervision will also be performed through this system.
- 3.6 **Disbursements.** Disbursements will be in the form of fund advances, based on actual program liquidity needs for a maximum period of six months. These will be deposited into a special bank account in the name of the program, to be used exclusively for loan proceeds, pursuant to the provisions of the Financial Management Guidelines for IDB-financed Projects (document OP-273-6).
- 3.7 **Audits.** The program financial statements will be audited annually by the Tribunal de Contas do Estado da Paraíba [State of Paraíba Audit Office] (TCE/PB) or, if not available, by an independent external audit firm acceptable to the Bank, which will be retained by the executing agency. The audited financial statements will be submitted to the Bank within 120 days following the close of each fiscal year of the entity, in accordance with the procedures and terms of reference previously agreed upon with the Bank.
- B. Summary of arrangements for monitoring results**
- 3.8 The monitoring and evaluation plan describes the main arrangements to support program targets. The executing agency will be responsible for periodic monitoring of financed activities, in order to continuously review program execution and the fulfillment of output targets within the planned deadlines and costs. The executing agency will submit to the Bank, within 60 days following the end of each six-month period, the required monitoring reports. The Bank will conduct administrative missions or inspection visits, pursuant to the supervision plan. The Bank will also use the program monitoring report to oversee costs and attainment of physical targets and outcomes, as a mechanism for evaluating program performance.

³⁸ During program execution, the procurement plan will be reviewed and updated at least once every 12 months.

- 3.9 The synthetic control method will be used to measure the impacts attributable to the program. Using this method, the State of Paraíba can be compared to a control unit or counterfactual based on a weighted average for the remaining Brazilian states. The plan includes developing a synthetic control for the various impact indicators in the Results Matrix. The data for the evaluation are from several DATASUS systems and are collected in a routine, standardized manner for all states. The data to develop the models originate from the IBGE. The baseline will be determined during the second year of execution, and the final report will be prepared during the fifth year. The program may also include a midterm implementation review. This will be prepared if the Bank requires it from the borrower and will be submitted up to 90 days after 50% of the loan proceeds are disbursed or 2.5 years after the start of program execution. The program budget includes resources allocated exclusively to finance this review.

Development Effectiveness Matrix		
Summary		
I. Corporate and Country Priorities		
1. IDB Development Objectives	Yes	
Development Challenges & Cross-cutting Themes	-Social Inclusion and Equality -Gender Equality and Diversity -Climate Change and Environmental Sustainability -Institutional Capacity and the Rule of Law	
Country Development Results Indicators	-Maternal mortality ratio (number of maternal deaths per 100,000 live births) -Beneficiaries receiving health services (#)*	
2. Country Development Objectives	Yes	
Country Strategy Results Matrix	GN-2850	Expansion and improvement of the primary health care network
Country Program Results Matrix	GN-2915-2	The intervention is included in the 2018 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		
3. Evidence-based Assessment & Solution	Evaluable	
3.1 Program Diagnosis	9.0	
3.2 Proposed Interventions or Solutions	3.0	
3.3 Results Matrix Quality	4.0	
3.3 Results Matrix Quality	2.0	
4. Ex ante Economic Analysis	9.0	
4.1 Program has an ERR/NPV, or key outcomes identified for CEA	3.0	
4.2 Identified and Quantified Benefits and Costs	3.0	
4.3 Reasonable Assumptions	1.0	
4.4 Sensitivity Analysis	2.0	
4.5 Consistency with results matrix	0.0	
5. Monitoring and Evaluation	9.3	
5.1 Monitoring Mechanisms	2.5	
5.2 Evaluation Plan	6.8	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	Medium	
Identified risks have been rated for magnitude and likelihood	Yes	
Mitigation measures have been identified for major risks	Yes	
Mitigation measures have indicators for tracking their implementation	Yes	
Environmental & social risk classification	C	
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: Budget, Treasury, External Control, Internal Audit. Procurement: Information System, Price Comparison, Contracting Individual Consultant, National Public Bidding.
Non-Fiduciary	Yes	Strategic Planning National System, Monitoring and Evaluation National System, Statistics National System.
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project		

Note: (*) Indicates contribution to the corresponding CRF's Country Development Results Indicator.

The objective of the program is to contribute to improving the health conditions of the population of Paraiba. To achieve these objectives, the program supports the strengthening of the management of the health system (SUS) and the quality of services, the consolidation of the Health Care Networks (RAS), and the monitoring, evaluation and administration of the program. The project presents a cost-benefit analysis that supports the economic viability of the proposed activities, with a benefit / cost ratio of 1.57. The vertical logic presented in the POD is consistent with the indicators presented in the results matrix, and includes indicators for the main outputs, outcomes and impacts. Indicators meet SMART criteria and include baseline and target values as well as the sources and means of verification that will be used to measure them. The final impact indicators are cause specific maternal mortality rate, the rate of premature mortality from cerebrovascular disease, the rate of premature mortality from diabetes mellitus, the coronary disease mortality rate and ambulatory case sensitive hospitalizations, disaggregated by gender. The executing agency will be in charge of the monitoring and evaluation of the program. The indicators of the results matrix will be reported using administrative data sources including the Mortality Information System (SIM), the Hospital Information System (SIH), DATASUS and SINAN. The project includes an impact evaluation that will use a synthetic control methodology, comparing the evolution of final outcome indicators in the State of Paraiba with a synthetic control built with other Brazilian States, using DATASUS data.

RESULTS MATRIX

Program objective:	To help improve the health of the population of the state of Paraíba by consolidating its health care networks and strengthening its health care management capacity.
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EXPECTED IMPACTS

Indicator	Unit of measure	Baseline	Baseline year	Final target (2023)	Means of verification	Comments
IMPACT 1						
Final impact indicators						
Maternal mortality rate from direct (obstetric) causes	per 100,000 live births	48.14	2016	39.16	Numerator: Sistema de Informações de Mortalidade [Mortality Information System] (SIM) / Denominator: Sistema de Informações sobre Nascidos Vivos [Live Births Information System]	Calculation: Maternal mortality rate = (Number of maternal deaths from direct obstetric causes in a certain location and period / Number of live births in a certain location and period) * 100,000
Premature mortality rate from cerebrovascular accidents - Women	per 100,000 inhabitants	49.98	2016	43.00	SIM and Instituto Brasileiro de Geografia e Estatística [Brazilian Institute for Geography and Statistics] (IBGE)	Calculation: Mortality rate from cerebrovascular accidents = (Number of deaths from cerebrovascular accidents (I64) among females ages 30-69 in a certain location and period / Female population ages 30-69 in the same location and period) * 100,000 Gender monitoring, pro-gender
Premature mortality rate from cerebrovascular accidents - Men	per 100,000 inhabitants	89.60	2016	79.00	SIM and IBGE	Calculation: Mortality rate from cerebrovascular accidents = (Number of deaths from cerebrovascular accidents (I64) among males ages 30-69 in a certain location and period / Male population ages 30-69 in the same location and period) * 100,000 Gender monitoring, pro-gender

Indicator	Unit of measure	Baseline	Baseline year	Final target (2023)	Means of verification	Comments
Premature mortality rate from diabetes - Women	per 100,000 inhabitants	33.74	2016	30.00	SIM and IBGE	Calculation: Mortality rate from diabetes = (Number of deaths from diabetes (E10-E14) among males ages 30-69 in a certain location and period / Male population ages 30-69 in the same location and period) * 100,000 Gender monitoring, pro-gender
Premature mortality rate from diabetes - Men	per 100,000 inhabitants	40.06	2016	35.00	SIM and IBGE	Calculation: Mortality rate from diabetes = (Number of deaths from diabetes (E10-E14) among males ages 30-69 in a certain location and period / Male population ages 30-69 in the same location and period) * 100,000 Gender monitoring, pro-gender
Mortality rate from coronary heart disease - Women	per 100,000 inhabitants	60.44	2016	52.00	SIM and IBGE	Calculation: Mortality rate from ischemic heart disease = (Number of deaths from ischemic heart disease (I20-I25) among females in a certain location and period / Female population in the same location and period) * 100,000 Gender monitoring, pro-gender
Mortality rate from coronary heart disease - Men	per 100,000 inhabitants	78.57	2016	68.00	SIM and IBGE	Calculation: Mortality rate from ischemic heart disease = (Number of deaths from ischemic heart disease (I20-I25) among males in a certain location and period / Male population in the same location and period) * 100,000 Gender monitoring, pro-gender
Hospitalization rate for basic-care-sensitive conditions - Women	per 10,000 inhabitants	92.20	2017	81.00	Sistema de Informações Hospitalares [Hospital Information System] (SIH) and IBGE	Calculation: (Number of hospitalizations for basic-care-sensitive conditions among females in a certain location and period / Female population in the same location and period) * 10,000 Gender monitoring, pro-gender
Hospitalization rate for basic-care-sensitive conditions - Men	per 10,000 inhabitants	86.50	2017	76.00	SIH and IBGE	Calculation: (Number of hospitalizations for basic-care-sensitive conditions among males in a certain location and period / Male population in the same location and period) * 10,000 Gender monitoring, pro-gender

EXPECTED OUTCOMES

Indicators	Unit of measure	Baseline	Baseline year	Final target	Means of verification	Comments
OUTCOME 1						
Final outcome indicators						
Hospitalization rate for diabetes and its complications	per 10,000 inhabitants	7.55	2017	6.70	SIH and IBGE	Calculation: (Number of hospitalizations for diabetes in a certain location and period / Population in the same location and period) * 10,000
Hospitalization rate for cerebrovascular accidents	per 10,000 inhabitants	4.17	2017	3.70	SIH and IBGE	Calculation: (Number of hospitalizations for cerebrovascular accidents in a certain location and period / Population in the same location and period) * 10,000
Percentage of uncomplicated deliveries in the state's SUS network	%	63.00	2017	70.00	SIH	Calculation: (Number of uncomplicated deliveries (ICD-10 O80) in a certain location and period / Total deliveries in a certain location and period) * 100
Midterm outcome indicators						
Beneficiaries receiving health services	Persons	1,620,000	2017	3,400,000	Departamento de Informática do SUS [Information Technology Department of the Unified Health System] (DATASUS)	Number of SUS beneficiaries in the João Pessoa, Campina Grande, and Patos microregions. The increased coverage will be due to expansions in lines of care and high-complexity services to the entire SUS-beneficiary population in the state of Paraíba.
Coverage of cytology-based screening tests for cervical cancer (population recommended by the Ministry of Health)	%	0.41	2016	0.75	Sistemas de Informações Ambulatoriais do SUS [Ambulatory Care Information System of SUS] / DATASUS	Formula: Total tests / 1/3 of the population ages 25-64 (Population estimate. IBGE, 2015)
Pregnant women diagnosed with syphilis, with correct treatment prescribed	%	83	2017	90	Sistema de Informação de Agravos de Notificação [Disease Notification Information System]	In 2017, of 550 pregnant women diagnosed with syphilis, 460 received the correct prescription

OUTPUTS

Outputs	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Final target	Means of verification	Comments
Component 1: Strengthening the management of the SUS and improving service quality											
Strategic database and information management system implemented	System	0	2018	0	1	1	1	0	3	SES monitoring system	
State health care technology network operating	Technology network	0	2018	0	1	1	1	0	3	SES monitoring system	
Electronic records in 33 state units operating	Electronic records	0	2018	0	1	0	0	0	1	SES monitoring system	
Clinical protocols for common chronic conditions prepared	Protocols	0	2018	1	1	1	0	0	3	SIH / SUS / IBGE - Population estimates	Protocols for the four main chronic conditions will be introduced and implemented jointly and gradually: year 1, macroregion I; year 2, macroregion II; and year 3, macroregion III.
New regional management tools prepared	Integrated Regional Plan	0	2018	0	3	3	3	3	3	Semiannual progress report	
Training Center for Health Care Personnel (CEFOR) renovated	Center	0	2018	0	1	0	0	0	1	Semiannual progress report, year 2	

Outputs	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Final target	Means of verification	Comments
Professionals trained	Professionals	0	2018	0	3,895	6,931	6,931	6,931	24,688	Semiannual progress report	
State Central Laboratory (LACEN) renovated and certified in the maternal and child line of care	Laboratory	0	2018	0	1	0	0	0	1	Semiannual progress report, year 1	
Communication campaign modules implemented	Modules	0	2018	1	1	1	1	0	4	Clippings report and proof of media dissemination, submitted each year-end	
Component 2: Consolidating health care networks											
High-risk maternity hospitals renovated and equipped	Maternity hospitals	0	2018	0	0	5	0	0	5	Semiannual progress report	
Patos Regional Hospital renovated and equipped	Hospitals	0	2018	0	0	1	0	0	1	Semiannual progress report	
Don José María Pires Metropolitan Hospital and Itaporanga Hospital equipped	Hospitals	0	2018	2	0	0	0	0	2		

Outputs	Unit of measure	Baseline	Baseline year	Year 1	Year 2	Year 3	Year 4	Year 5	Final target	Means of verification	Comments
Component 3: Monitoring, evaluation, and administration											
Impact assessment implemented	Assessment	0	2019	0	0	0	0	1	1	Semiannual progress report	
Technical studies implemented	Studies	0	2018	0	1	1	1	1	4		

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country	Brazil
Project number:	BR-L1518
Name:	Program to Strengthen the Care Model in the Paraíba Health Network
Executing agency:	State of Paraíba, through the State Health Department (SES)
Fiduciary team:	Leíse Estevanato and David Salazar (FMP/CBR)

I. EXECUTIVE SUMMARY

- 1.1 The program's institutional assessment for fiduciary management was based on: (i) the country's current fiduciary context; (ii) the results of the evaluation of the main fiduciary risks; (iii) an institutional capacity analysis; (iv) working sessions involving the project teams of the IDB and the State Health Department; and (v) prior Social Protection and Health Division (SPH) experience with other health care programs in Brazil.
- 1.2 Brazil has robust country fiduciary systems that allow for good management of administrative, financial, control, and procurement processes and that comply with the principles of transparency, economy, and efficiency. The executing agency's systems regarding its planning, organizational, execution, and control capacities present a medium development level, which in turn poses a medium risk.

II. THE EXECUTING AGENCY'S FIDUCIARY CONTEXT

- 2.1 The borrower will be the State of Paraíba, acting through the State Health Department, which will establish a support structure by creating a program management unit (PMU).
- 2.2 The SES has established technical staff, but these are insufficient for program execution. In addition, this department lacks experience managing programs financed by international organizations and trained staff with knowledge of the Bank's procurement and financial management policies. Therefore, it needs support from the PMU.
- 2.3 The executing agency has an internal control structure and is audited by the Office of the Comptroller General, the central agency of the executive branch's internal control system. External control is under the responsibility of the State of Paraíba Audit Office (TCE/PB), an entity that audits all of the State's agencies. The Bank considers the TCE/PB eligible to conduct audits of the State's programs.

III. INSTITUTIONAL CAPACITY ASSESSMENT, FIDUCIARY RISK EVALUATION, AND MITIGATION ACTIONS

- 3.1 The institutional capacity assessment and its validation with SES staff and the main actors involved showed that the executing agency has a medium level of institutional capacity. However, it lacks experience executing Bank operations.
- 3.2 A medium risk of potential program execution delays was also identified, because SES staff lacks knowledge of and experience with the Bank's financial management and procurement policies. This may impact the achievement of the program's physical and financial targets. To mitigate this risk, there are plans to: (i) create a PMU that works full time on the program; (ii) create a special bidding committee to provide support for the preparation and operation of procurement processes according to Bank policies and/or country policies, as applicable; (iii) designate procurement staff to address program demands; (iv) develop or procure a physical and financial management system for the program; and (v) provide training from the IDB for all the staff involved in program execution.

IV. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 4.1 The fiduciary agreements regarding procurement establish the provisions that apply to the execution of all of the program's planned procurements.

A. Procurement execution

- 4.2 **Procurement of works, goods, and nonconsulting services.** Contracts will be subject to international competitive bidding (ICB) and executed using the standard bidding documents issued by the Bank. Bidding processes subject to national competitive bidding (NCB) will be executed using national bidding documents agreed upon with the Bank.
- 4.3 **Selection and contracting of consultants.** Contracts will be executed using the standard request for proposals issued by the Bank. Selection and contracting will be carried out in accordance with the Policies for the Selection and Contracting of Consultants financed by the Inter-American Development Bank (document GN-2350-9).
- 4.4 **Use of the country procurement system.** The country procurement (sub)system approved by the Bank, *Pregão Eletrônico*, will be used to procure off-the-shelf goods for up to US\$5 million. Any system or subsystem approved subsequently will be applicable to the operation. The procurement plan and its updates will indicate which contracts will be executed through approved country systems.

Table 1. Threshold amounts for international bidding and shortlist of international consultants

Method	ICB works	ICB goods and nonconsulting services	Shortlist of international consultants
Threshold	US\$25 million	US\$5 million	US\$1 million

Table 2. Main procurement processes

Procurement activity	Procurement method	Estimated date	Estimated amount (US\$ million)
Works			
Refurbishment of Frei Damião Maternity Hospital	NCB	June 2019	5.4
Goods and nonconsulting services			
Hospital and medical equipment for five maternity hospitals	ICB	June 2019	6.9
Equipment for Don José María Pires Metropolitan Hospital (macroregion I)	ICB	June 2019	6.6
Consulting services			
Specialized technical services for technology platform	Quality- and cost-based selection	June 2019	5.0

B. Procurement supervision

- 4.5 Procurement processes will be supervised on an ex post basis except in cases in which ex ante supervision is warranted. When procurement takes place through the country system, supervision will also be performed through this system.
- 4.6 The supervision method will be determined for each selection process. Ex post reviews will be performed in accordance with the program supervision plan. Ex post review reports will include at least one physical inspection visit, selected from procurement processes subject to ex post review.

Table 3. Threshold amounts for ex post review

Works	Goods	Consulting services
NCB and shopping	NCB and <i>Pregão Eletrônico</i>	Under US\$1 million

C. Records and files

- 4.7 The PMU will be responsible for maintaining the necessary supporting documentation for program supervision and auditing.

V. FINANCIAL MANAGEMENT

A. Programming and budget

- 5.1 The SES, through the PMU, will be responsible for coordinating the entire planning process for the execution of activities as envisaged in the program execution plan and the annual work plans. Municipal entities use the following planning tools: the multiyear plan; the Budget Procedures Act, which directs government budgets; and the Annual Budget Act. The budget for the program will be included in the Annual Budget Act.

- 5.2 The executing agency, through the PMU, will ensure that the budget resources for the program—from the Bank and from the local contribution—are duly included in the annual budgets to enable execution to keep pace with operational programming. These budget funds will be recorded in the Integrated Financial Management System (SIAF) during the year of execution as an external source. The Annual Budget Act will include the funds necessary for execution for both the external loan and the local counterpart contribution.

B. Accounting and information systems

- 5.3 In the state of Paraíba, public entities work with the SIAF for financial and accounting execution of the State's operations. The system also enables them to follow international accounting standards. The Integrated Budgeting and Planning System is used to prepare and update the department's planning tools. However, the State does not have an accounting and financial information system that is automated and integrated with its general accounting system. Therefore, a financial management module will have to be developed and integrated into the SIAF. Otherwise, a system with the capacity to prepare program disbursement requests and financial statements, as well as the basic reports requested by the Bank, will need to be obtained.

C. Disbursements and cash flow

- 5.4 The program will use the country cash management system. Expenditures will be subject to a budgetary and financial execution process and will be duly recorded in the SIAF.
- 5.5 IDB funds will be administered through a bank account used exclusively for the program that allows the independent identification of loan resources as well as the preparation of bank reconciliations. This includes deposits and payments.
- 5.6 Disbursements will be made in U.S. dollars in the form of advances. These advances will be based on projected financial resources needed for a period previously agreed upon with the Bank, of no more than 180 days. For future advances, it will be necessary to render accounts for at least 80% of total cumulative balances pending justification.
- 5.7 For the rendering of accounts for loan proceeds and local counterpart resources, the executing agency will use: (i) the exchange rate in effect on the date on which the advances were converted from the operation's currency to the local currency, for IDB resources; and (ii) the exchange rate in effect on the payment date for expense reimbursements and recognition of expenditures charged to the local contribution. Expenditures considered ineligible by the Bank will be repaid from the local contribution or from other sources, as determined by the borrower and approved by the Bank, depending on the nature of the ineligibility.
- 5.8 Ex post review of supporting documentation for expenditures will be conducted by the TCE/PB during the audit process and/or an external consultant contracted by the IDB.

D. Internal control and internal audit

5.9 The Office of the Comptroller General—the central agency of the executive branch’s internal control system—conducts internal control of the State. It is responsible for internal control; public auditing; efforts to prevent, eliminate, and fight corruption; and internal affairs activities to increase transparency within the administration. It will supervise program activities.

E. External control and audited financial statements

5.10 External control is under the responsibility of the TCE/PB, an entity that audits all of the State’s agencies.

5.11 External audits of the program will be conducted by the TCE/PB, which is eligible to prepare external audits of Bank loans, or by an independent external audit firm acceptable to the Bank.

5.12 Annual audited financial statements pursuant to the terms of reference agreed upon with the Bank will be prepared by the TCE/PB or, if not available, by an independent external audit firm, and submitted no later than 120 days after the close of the fiscal year. The final statement will be submitted within 120 days following the date of the last disbursement.

F. Financial supervision plan

5.13 This plan may be amended during program execution to reflect the levels of risk or in the event that additional controls are deemed necessary.

Table 4. Supervision plan

Nature and scope	Frequency	Responsible party	
		Bank	Executing agency
Ex post review of disbursements and procurements	Annual	Fiduciary team	PMU - external auditor - TCE/PB
Annual audit	Annual	Fiduciary team	PMU - external auditor - TCE/PB
Review of disbursement requests	Periodic	Fiduciary team	
Supervision visit	Annual	Fiduciary specialist	
Portfolio review	Annual	Fiduciary team	PMU

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/19

Brazil. Loan ___/OC-BR to the State of Paraíba. Program to Strengthen the Care Model in the Paraíba Health Network.

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the State of Paraíba, as Borrower, and with the Federative Republic of Brazil, as Guarantor, for the purpose of granting the former a financing aimed at cooperating in the execution of the Program to Strengthen the Care Model in the Paraíba Health Network. Such financing will be in the amount of up to US\$45,197,310 from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on _____ 2019)