TC Document

I. Basic Information for TC

▪ Country/Region:	COLOMBIA
▪ TC Name:	Support for the design of the Digital Transformation Program for effective access to health care in Colombia
▪ TC Number:	CO-T1768
▪ Team Leader/Members:	Gonzalez Acero, Carolina (SCL/HNP) Team Leader; Ortiz Hoyos, Jose Luis (SCL/HNP) Alternate Team Leader; Tejerina, Luis R. (SCL/SPH) Alternate Team Leader; Centeno Lappas, Monica Clara Angelica (LEG/SGO); Bautista Martinez , Olga Lucia (CAN/CCO); Crausaz Sarzosa, Ernesto Patricio (VPC/FMP); Forero Sanchez Juan David (SCL/SPH); Casco, Mario A. (TTD/TTR); Escudero, Carolina (VPC/FMP); Barliza Cotes Michelle Alejandra (SCL/SPH); Rojas Acuna, Monica (CAN/CCO); Lim Chae Hyun (SCL/HNP); Leon Moncada Santiago (SCL/SPH)
▪ Taxonomy:	Operational Support
▪ Operation Supported by the TC:	CO-L1298.
▪ Date of TC Abstract authorization:	15 Apr 2025.
▪ Beneficiary:	Ministry of Health and Social Protection (MSPS); Administrator of the Resources of the Social Security Health System (ADRES)
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	Korea Poverty Reduction Fund(KPR); OC SDP Window 2 - Social Development(W2E)
▪ IDB Funding Requested:	Korea Poverty Reduction Fund (KPR): US$450,000.00 OC SDP Window 2 - Social Development (W2E): US$200,000.00 Total: US$650,000.00
▪ Local counterpart funding, if any:	US$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	September, 2025
▪ Types of consultants:	Individuals; Firms
▪ Prepared by Unit:	SCL/HNP-Health, Nutrition and Population Division
▪ Unit of Disbursement Responsibility:	CAN/CCO-Country Office Colombia
▪ TC included in Country Strategy (y/n):	YES
▪ TC included in CPD (y/n):	YES
▪ Alignment to the Institutional Strategy 2024-2030:	Gender equality; Institutional capacity, rule of law, and citizen security; Public sector policy and management; Social protection and human capital development; Productive development and innovation through the private sector

II. Description of the Associated Loan

2.1 **This Technical Cooperation (TC) aims to support the Ministry of Health and Social Protection in the design and implementation of the Digital Transformation Program for Effective Access to Health in Colombia (CO-L1298**

2.2 The CO-L1298 Operation seeks to contribute to effective, equitable, resilient, and efficient access to the health system through the digital transformation of the system.

Its specific objectives include: (i) improving effective access to health services in prioritized territories; (ii) strengthening the integrated public health surveillance system; and (iii) strengthening the governance and efficiency of the health system. The program is designed to strengthen access to health services through strategic interventions in three priority lines of care and in prioritized territories.

2.3 The program focuses on establishing the technical and methodological foundations for the use of digital tools in the health sector, allowing that, based on the verifiable results of implemented solutions, it becomes possible to demonstrate their outcomes and plan their expansion to new territories, population groups, and lines of care to improve health services. Interoperability standards, telemedicine service delivery protocols, and digital solutions for primary health care, for example, are easily scalable with minor adjustments once the interventions are properly designed on a smaller scale. This project will help increase effective access to health services, improving health conditions in prioritized territories through: (i) greater accessibility and efficiency of health services in remote areas; (ii) increased coverage of the public health event surveillance system; and (iii) improved efficiency in the management of the health system.

III. Objectives and Justification of the TC

3.1 The Objectives of this TC are: (i) to support the Ministry of Health and Social Protection (MSPS) for the design and implementation of the digital transformation program for the Health System and to (ii) provide technical assistance for the development and deployment of digital mechanism to optimize the workflow for medical-claims auditing processes carried out by the Administrator of the Resources of the Social Security Health System (ADRES). This TC aims to continue the technical support that the IDB has provided to the MSPS for its Digital Transformation Master Plan for the health sector, as well as to support the necessary studies for key investments in the sector.

3.2 The Colombian health system has made progress in coverage and financial protection. In 2023, Colombia recorded health coverage of 98.5% of the population and one of the lowest out-of-pocket expenses in the region (13.7%). However, barriers to effective access to health services persist, especially in rural areas and vulnerable populations.

3.3 First, the concentration of healthcare provision, infrastructure deficits, and geographic barriers affect effective access to health services. For example, 26% of the total population and 28% of the rural population lack access to healthcare providers within a 30-minute drive, and 6.9% of the indigenous population did not seek medical attention due to the distances they must travel, compared to 1.2% of the rest of the population.

3.4 Second, governance and information management issues affect the efficiency and sustainability of the sector. There are different actors involved in the process of collecting, analyzing, and monitoring information. Weaknesses in coordination stem from the lack of specific regulations that allow interoperability and information flow. For example, healthcare providers bill payers (public and private) for services rendered, but health and financial information for the services provided is not integrated. This delays payments and increases debt with hospitals, limits investments in infrastructure, personnel, and technology to improve access and quality.

3.5 Third, the Administrator of the Resources of the Social Security Health System (ADRES) manages the different sources of financing of the Colombian health system (USD $22 billion annually), which represents more than 412,000 annual transactions. The entity needs to strengthen the auditing of claims for health services to detect fraud and irregularities, promoting efficiency, transparency and sustainability of the resources managed. Despite the investments in technological infrastructure and human talent made by ADRES, there are opportunities to strengthen its capabilities, especially in the workflow for medical-claims auditing processes.

3.6 The Government has prioritized expanding access to quality services by proposing investments in strengthening particularly in remote areas. To address access gaps, the strategy includes: (i) strengthening Primary Health Care (PHC), prioritizing rural and dispersed areas; (ii) forming comprehensive and integrated health networks; (iii) improving coverage and relevance of human resources; (iv) developing the unified information system; and (v) expanding digital health.

3.7 Improving access, outcomes, and coordination among system actors can be enhanced with investments in digital health. Currently, the Bank continues designing an investment loan program (CO-L1298) that will support the Government's health service expansion strategy through investments in digital tools that complement service provision and contribute to equity and quality in access. Investments will focus on: (i) strengthening institutional capacity at the central level for digital project management through enterprise architecture and data governance, standards will be defined, and a clinical information interoperability platform will be implemented; (ii) promoting effective access by strengthening PHC and non-communicable disease management, through the development of digital services for primary care and tools such as telemedicine; and (iii) strengthen the data governance of the health sector and the deployment of SIIFA through technical assistance for the operation of the architecture model, infrastructure, security, support and strengthening the technical capacities of health sector stakeholders for the operation of SIIFA.

3.8 Within the framework of CO-T1672 started in 2022, Korea provided technical support to the Colombian Government for developing and updating interoperability guidelines, the development of pilot interconnection projects between health providers, and knowledge exchanges for the design and implementation of health digital transformation plans. In particular, as a result of the 2024 visit by SNUBH (Seoul National University Bundang Hospital), KHIS (Korea Health Information Service), NHIS (National Health Insurance Service), and HIRA (Health Insurance Review and Assessment Service), a set of key policy recommendations were generated to advance the digital transformation of the health sector, focusing on the following strategic axes: (i) new digital developments aimed at addressing inefficiencies in the billing, auditing, and payment processes of medical claims for ADRES; (ii) strengthening health data governance; (iii) integrating health and financial information; and (iv) continuing efforts to implement a National Electronic Health Record System. The activities of this technical cooperation could contribute to the development of some of these recommendations.

3.9 The Comprehensive Financial and Assistance Information System (SIIFA) which was established through Law 1966 of 2019 and Decree 228 of 2025, aimed to optimize the reporting and monitoring of sector transactions, enhance transparency in resource management, and simplify the decision-making process. The deployment of SIIFA will be carried out through the development and implementation of four modules: (i) contract registration; (ii) Electronic Sales Invoicing and Individual Service Provision

Registry (FEV-RIPS); (iii) invoice auditing and monitoring; and (iv) payment tracking. This technical cooperation will support the creation of a governance framework, an adoption plan by payers and healthcare service providers, and technical assistance to the MSPS for the development of the four modules. Additionally, it will include the design of a model to facilitate the ADRES's registration and transmission of information, ensuring the traceability of transactions in the SIIFA.

3.10 The HIRA of South Korea ensures efficient and transparent health service auditing through an advanced integrated information system that detects and prevents fraud in medical claims. By analyzing aggregated data in real time, HIRA safeguards public health resources while setting a global standard for effective auditing. This operation provides a valuable opportunity for collaboration between ADRES and HIRA, as ADRES continues to enhance its own auditing mechanisms, particularly with the anticipated implementation of SIIFA. Sharing experiences and exploring innovative approaches with HIRA can support the development of a robust and well-established auditing system for ADRES. Preliminarily, the NHIS has also been identified as a potential partner for the development of the proposed interventions. With extensive experience in utilizing healthcare information system in provision of various health policies, NHIS can provide valuable insights into integrating different healthcare systems, strengthening digital governance, and thus contributing to the development of a robust and unified health information system in Colombia.

3.11 **Strategic Alignment.** This TC is aligned with the IDB Group's Institutional Strategy – Transformation for Greater Scale and Impact (CA-631), with the objectives of: (i) reducing poverty and inequality by developing digital tools that improve the efficiency of health spending and facilitating access to health services, especially in remote or hard-to-reach areas. Additionally, the TC is aligned with the operational focus areas of: (i) social protection and human capital development, and (ii) institutional capacity, rule of law, and citizen security. Furthermore, the TC is consistent with Action Line 2 – Strengthening Fiscal and Financial Sustainability of the Health Sector Framework Document (GN-2735-12), by strengthening the institutional and financial management of the health system, promoting better allocation of health spending through institutional and regulatory factors that enhance system efficiency and reduce the growth of health expenditures. In addition, the TC is aligned with the strategic areas of the IDB Group's Country Strategy with Colombia (2024–2027) (GN-3238-3), by supporting investments to: (i) increase social and territorial inclusion; (ii) promote greater growth and productivity; and (iii) strengthen fiscal execution and public management. The TC is also aligned with the strategic objectives of increasing access to and quality of education and health services and improving the government's strategic management capacity. Finally, the TC is aligned with Priority Area 5, Inclusive Social Development, of the OC SDP Window 2 – Social Development (W2E) fund, established under the "Strategic Development Program Financed with Ordinary Capital (OC SDP)" (GN-2819-14), as it seeks to support policies aimed at equitable access to health services. Also, the TC its aligned with the Korea Fund for Poverty Reduction and Social Development (KPR) due its focus on improving social healthcare services for the most vulnerable and economically disadvantaged population in Colombia.

3.12 Additionally, the actions of this Technical Cooperation (TC) will contribute to the objectives set forth in the 2022-2026 National Development Plan project: "Colombia, Global Potential for Life," which establishes the guarantee of rights as the foundation of human dignity and conditions for well-being as one of the catalysts of the

transformative axis for human security and social justice. This catalyst includes the development of a preventive and predictive health model based on primary health care and institutional strengthening to achieve greater control and monitoring of the system's resources, aiming at the cleanup of health accounts. Through the activities of this technical cooperation, contributions will be made toward the fulfillment of these strategic objectives.

IV. Description of activities/components and budget

4.1 **Component I: Design and implementation of the digital transformation program for the Health System (US$280.000).** This component will support: (i) the definition of a governance framework and design of common data models between the information systems of the MSPS and ADRES to facilitate interoperability; (ii) the development of technical, regulatory, and operational diagnosis that allows for a rigorous characterization of service delivery for telehealth and teleexpertise, as well as providing technical assistance for the integration of digital health tools that strengthen primary care, improve problem-solving capacity, optimize referrals, and contribute to equity in effective access to health services for population groups and territories prioritized by the MSPS; and (iii) the design of proposals for the development and integration of a Unified and Interoperable Health System, required for modeling and designing the digital transformation program for the sector, incorporating technical assistance and expertise from the National Health Insurance Service (NHIS) by sharing best practices from Korea's experience particularly in areas such as interoperability, emerging technologies and artificial intelligence potentially adaptable to Colombia.

4.2 In addition, this component will support the following activities: (iv) the creation of use case diagrams, sequences, and workflow models for the development and integration of the SIIFA's four modules including extraction, transformation, and loading (ETL) processes; (v) the design and implementation of dashboards for descriptive and predictive analytics of the information reported through SIIFA, (vi) the diagnosis and updating of the SIIFA deployment architecture and (vii) the deployment of a change management strategy for national and territorial entities responsible for uploading and monitoring SIIFA; in particular, this strategy will promote the participation of women, taking into account the gender gaps that exist in STEM disciplines.

4.3 **Component II: Development and deployment of digital mechanisms to optimize the workflow for medical-claims auditing processes carried out by ADRES (US$370.000).** This component will support the design of a digital strategy intervention for ADRES's medical claims auditing process, based on lessons learned from auditing practices and management processes used by HIRA. A management strategy will also be deployed to facilitate the adoption of automation mechanisms by ADRES personnel. This strategy will include a training program, developed in collaboration with HIRA, aimed at the timely detection of fraud, irregularities, and waste in the recognition of medical claims for services and health technologies under strategic monitoring (e.g., high-cost technologies, low therapeutic value technologies, and technologies subject to centralized negotiations, among others).

4.4 The design and implementation of ADRES's claims audit automation strategy will require the development of the following activities: (i) prepare a diagnostic of the current workflows at ADRES (manual processes, duplications, alerts); (ii) carry out co-creation workshops with HIRA experts in fraud mechanisms, health waste, up-coding, and unbundling; (iii) design a digital workflow model integrating HL7 FHIR and

SNOMED CT; (iv) create guidelines for continuous data-based monitoring; (v) select priority modules to be included; (vi) develop prototype tools with a modular approach using emerging technologies; (vii) integrate workflows with existing tools; and (viii) implement a pilot test for the recognition of medical claims for strategically monitored services and technologies, which will be incorporated into ADRES's information systems.

4.5 **Expected results:** As a result of the activities under this technical cooperation, a set of strategies is expected to be developed to strengthen the health sector's capacity to implement initiatives aimed at improving effective access to health services and promoting efficiency and transparency in the use of health sector resources.

4.6 **Indicative budget:** The total budget for this Technical Cooperation (TC) is US$650,000 and will be financed by Korea Fund for Poverty Reduction and Social Development (KPR) by US$450,000 and the OC SDP Window 2 – Social Development (W2E) by US$200,000, with no local counterpart funding. The operation's resources will finance individual and firm consultancy services and will be disbursed and executed over a 36-month period. The project budget is as follows:

Indicative Budget (US$)

Activity/Component	IDB/KPR	IDB/W2E	Total Funding
Component I: Design and implementation of the digital transformation program for the Health System.	$160,000	$120,000	$280,000
Component II: Development and deployment of digital mechanisms to optimize the workflow for medical-claims auditing processes carried out by ADRES	$290,000	$80,000	$370,000
Total	**$450,000**	**$200,000**	**$650,000**

4.7 **Monitoring.** The execution, supervision, and annual reporting of the Technical Cooperation (TC) will be the responsibility of the specialist from the Health, Nutrition and Population Division (SCL/HNP) at CAN/CCO. The Division will cover any additional supervision costs, if applicable, including local supervision or monitoring meetings, using annually allocated transactional budget resources. The Project's UDR (Responsible Unit) is located at CAN/CCO.

4.8 The monitoring mechanisms include continuous supervision of the contracted consultants, review of their outputs and payments, bi-monthly monitoring meetings with the beneficiary, as well as the preparation of annual reports on the progress and performance of the TC's execution.

V. Executing agency and execution structure

5.1 The MSPS (as the head of the health sector) has requested that the IDB, through its Country Office in Colombia, be responsible for the execution of this Technical Cooperation (Annex I), both due to the technical support that the Social Digital teams and the Health, Nutrition and Population Division can offer the institution, and because of the regulatory, financial, and administrative flexibility the Bank provides. In this way, the IDB's contribution to the execution process will complement the efforts made by MSPS and ADRES in its digital transformation process. This request is in accordance

with the provisions of paragraph (c) of Annex II of document OP-619-4. Accordingly, Annex I includes the formal request and the no-objection letter from the Presidential Agency for International Cooperation (APC). This request is based on legislative and procedural constraints, where compliance with internal requirements could delay the execution of TC. At the same time, logistical arrangements for execution will depend on direct coordination between the Bank, MSPS and ADRES

5.2 **Procurement.** The activities will be executed under this operation have been included in the Procurement Plan (Annex IV) and will be contracted in accordance with the Bank's applicable policies and regulations as follows: (a) contracting of individual consultants, as established in the Complementary Workforce policy (AM-650) and (b) Procurement of services provided by consulting firms in accordance with the Institutional Procurement Policy (GN-2303-33) and its Guidelines.

5.3 **Direct Contracting.** The direct contracting arrangements outlined under Component II (¶4.3) will be governed by the provisions of paragraph 3.4 of document GN-2303-33. The HIRA, a key government agency in South Korea, plays a central role in the financing and regulation of the national health system. HIRA is responsible for reviewing medical claims submitted by healthcare providers under the NHI scheme to ensure that services are appropriate, necessary, and accurately billed. By evaluating the cost-effectiveness and quality of healthcare services, HIRA contributes to controlling healthcare expenditures and promoting the efficient use of public funds. It also participates in setting service fees and monitoring provider performance, thereby supporting evidence-based policymaking and resource allocation. HIRA's robust technical capacities are well-aligned to support Colombia's MSPS and the ADRES in establishing a systematized electronic medical record system. HIRA also has a long experience in implementing a medical claim auditing process and developing a training program focused on the detection of fraud. Its expertise offers valuable guidance for strengthening digital health capabilities and audit tools, ultimately contributing to quality improvements and cost containment in the Colombian health system. These contracts form part of the second technical exchange between HIRA and ADRES. Under these contracts, HIRA will: (i) support the design of a digital strategy for ADRES's medical claims auditing process, drawing on lessons learned from South Korea's auditing and management practices; and (ii) design and implement a training program aimed at the timely detection of fraud, irregularities, and inefficiencies in the recognition of claims for healthcare services and technologies under strategic monitoring.

5.4 Under the Bank's execution, TC financial management follows internal financial procedures and will not include the contracting of external auditing services. No conditions precedent to disbursement are established and the project does not foresee any reimbursement of expenses.

5.5 **Intellectual Property**. The knowledge products generated within the framework of this Technical Cooperation (TC) will be owned by the Bank and may be made available to the public under a Creative Commons license. However, at the request of the beneficiary, the intellectual property of such products may also be assigned or licensed in their favor.

VI. Major issues

6.1 Regarding Component I and II, the risk identified is the difficulty of carrying out effective inter-institutional coordination between the MSPS and ADRES. For this, it will

seek coordination mechanisms to achieve the agreements required during the execution of the project.

6.2 **Other Risks.** There is a risk of delays in the execution of the TC due to potential institutional changes following the national elections in Colombia, scheduled for the second quarter of 2026. As a mitigation measure, the Project team will work closely with the technical teams at ADRES and the MSPS to ensure that critical procurements are completed prior to the change in government. Additionally, once the elections have taken place, the team will engage with the new stakeholders and technical teams to present the progress achieved and outline the next steps of the TC, thereby ensuring continuity of implementation.

VII. Exceptions to Bank policy

7.1 This TC does not foresee any exceptions to the Bank's policy.

VIII. Environmental and Social Aspects

8.1 This Technical Cooperation is not intended to finance pre-feasibility or feasibility studies of specific investment projects or environmental and social studies associated with them; therefore, this TC does not have applicable requirements of the Bank's Environmental and Social Policy Framework (ESPF).

Required Annexes:

Request from the Client_35800.pdf

Results Matrix_86702.pdf

Terms of Reference_13372.pdf

Procurement Plan_32730.pdf