

Final report: Technical proposal for the development and application of an instrument to standardize the indicators of the Supranational TB Laboratories / National TB Reference Laboratories (SNL / NRL) and the National TB Programs (NTP), the systematic monitoring of the quality of TB information, as well as the link with other programs and the results of the indicators.

Program "Strengthening TB Laboratory Diagnosis in the Region of the Americas"

ORAS-CONHU, Principal Recipient (PR)

Secretaría Ejecutiva del Consejo de Ministros de Salud de Centroamérica y República Dominicana (SE-COMISCA), Sub-Recipient (SR),

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Introduction

The objective of the Program “Strengthening of the Tuberculosis Laboratory Diagnosis in the Region of the Americas” is to contribute to improving the diagnosis of TB in the laboratory networks of the Americas, through the strengthening of installed capacity, consolidation of the activities of monitoring of commitment, development of management capacities, promoting the adoption of international recommendations for the diagnosis of TB and contributing to the strengthening of information systems.

In this context and as part of the objectives of strengthening the SNL / NRL, the project proposes to strengthen information systems with tools to analyze and achieve a better visualization at the regional, national and subnational levels, with centralized and standardized information through monitoring and evaluation of indicators. This proposal addresses the standardization of the SNL / NRL and NPT indicators of the countries participating in the grant.

Antecedentes

ORAS-CONHU was the principal recipient of the regional grant from the Global Fund for the technical-managerial strengthening of the networks of tuberculosis laboratories in the region, in which 20 countries of the Americas participated between 2017 and 2019; The Executive Secretariat of the Council of Ministers of Health of Central America and the Dominican Republic (SE-COMISCA for its acronym in Spanish) and the Pan American Health Organization / World Health Organization (PAHO / WHO) also participated.

ORAS-CONHU as Principal Recipient, SE-COMISCA and PAHO / WHO as Sub Recipients are implementing a new regional grant from the Global Fund to continue strengthening the laboratory diagnosis of TB, between November 1, 2020 and October 31 2023. 17 countries of the Americas (Bolivia, Colombia, Ecuador, El Salvador, Guyana, Haiti, Nicaragua, Paraguay, Dominican Republic, Argentina, Honduras, Peru, Suriname, Venezuela, Chile, Mexico, Guatemala) participate in this grant. 15 countries were part of the project executed between 2017 and 2019 and Haiti and Suriname joined the new grant.

General Objective

Developing and applying an instrument for the standardization of the SNL / NRL and NTP indicators, and the systematic monitoring of the quality of information on TB.

Objetivos y específicos

- ✓ Carrying out a review of the Monitoring and Evaluation (M&E) processes of the NTP and SNL / NRL that allow the capture of sub-national information from the grant countries in order to generate the TB laboratory indicators and NTP in the different information flows.
- ✓ Developing an instrument to assess the quality of the information of the NTP and the SNL / NRL in the grant countries; validate the instrument, apply it and prepare a report of the evaluation of the quality of the information.
- ✓ Developing a standardized instrument that includes the indicators generated in the different information flows, taking into account the data generated in the countries. Validate and adjust this instrument according to recommendations made.

- ✓ Manage the instrument implementation and prepare a report on its application in each of the Grant countries.
- ✓ Prepare the M&E Guide document that contains the standardized indicators, indicator sheets and information analysis plan.

Proposed methodology for consulting

The methodology and detailed work plan of the activities to be carried out during the consultancy were carried out:

Work Plan with activities and products

ACTIVIDADES	Mes 1	Mes 2	Mes 3	Productos a entregar
Realizar una revisión de los procesos de Monitoreo y Evaluación (M&E) del PNT y LSN/LRN que permiten la captura de la información subnacional de los países de la subvención con el fin de generar los indicadores de laboratorio de TB y del PNT en los diferentes flujos de información.				Producto 1 Plan de trabajo, con desarrollo detallado de la metodología
Desarrollar un instrumento que permita evaluar la calidad de la información del PNT y los LSN/LRN en los países de la subvención; validarlo, aplicarlo y elaborar un informe de la evaluación de la calidad de la información.				Producto 1 Instrumento validado y/o ajustado para evaluar la calidad de la información del PNT y los LSN/LRN en los países de la subvención. Producto 2 Informe de la aplicación del instrumento para evaluar la calidad de la información del PNT y los LSN/LRN.
Desarrollar un instrumento estandarizado que consiste en la inclusión de los indicadores generados en los diferentes flujos de información teniendo en cuenta la data generada en los países. Validar y ajustar este instrumento según recomendaciones realizadas. Gestionar su implementación y elaborar un informe de la aplicación del instrumento de indicadores en cada uno de los países de la Subvención.				Producto 1 Instrumento desarrollado, validado y aplicado para la estandarización de indicadores de los LSN/LRN y de los PNT en los países de la subvención.
Gestionar su implementación y elaborar un informe de la aplicación del instrumento de indicadores en cada uno de los países de la Subvención.				Producto 2 Informe de la aplicación del instrumento que aporte una retroalimentación a los países sobre sus estructuras de datos para el cálculo de los indicadores definidos y el ajuste en sus sistemas de información.
Elaborar el documento Guía de M&E que contenga la estandarización de los indicadores, las fichas de los indicadores y el plan de análisis.				Producto 3 1- Un documento guía de Monitoreo y Evaluación que contenga la estandarización de los indicadores de los LSN/LRN y de los PNT, el plan de análisis, las fichas de los indicadores, el fortalecimiento de capacidades en análisis y toma de decisiones en los diferentes niveles. (En español y en Inglés) 2- Informe que contenga los resultados de la estandarización de los sistemas de información para generar los indicadores a partir de las recomendaciones entregadas. (En español y en Inglés)

Subsequently, the information from the 17 countries was managed, requesting the documents that are part of the Monitoring and Evaluation component in order to develop, validate and standardize the indicators of the SNL / NRL and the NTP of each country.

The following information was requested from SNL / NRL and the NTP in each country:

- ✓ Monitoring and Evaluation Plan.
- ✓ Indicator files: Definition of the indicator, source of information, indicator calculation formula, information capture method.
- ✓ Dictionary, glossary of data or variables defined in the information system with their respective description.
- ✓ Formats or instruments for collecting information from the Information System.
- ✓ Country documents that include the results of the calculated indicators and the proposed goals.

- ✓ Information available in consolidated reports or nominal records for the calculation of the indicators and the analysis of the information.
- ✓ Instruments used to monitor the quality of the.
- ✓ Current Strategic Plan.

Each country was accompanied to send the requested information through video calls, telephone calls and email, as shown in the following table:

Result of the management for sending the information for each country.

PAIS	Correo enviado	Respuesta al correo	Video conferencias/llamadas o correos	Documentos enviados
México	Ok	Ok	OK	Ok
Colombia	Ok	Ok	OK	Ok
Perú	Ok	Ok	OK	Ok
Chile	Ok	Ok	OK	Ok
Honduras	Ok	Ok	OK	Ok
Ecuador	Ok	Ok	Ok	Ok
Paraguay	Ok	Ok		Ok
Guatemala	Ok	Ok	OK	Ok
Bolivia	Ok	Ok	OK	Ok
El Salvador	Ok	No		
Guyana	Ok	Ok	OK	Ok
Argentina	Ok	Ok	OK	Ok
Venezuela	Ok	Ok		Ok
Republica Dominicana	Ok	Ok	Ok	Ok
Nicaragua	Ok	Ok		
Haiti	Ok	No		
Surinam	Ok	Ok		Ok

As a result of the management, 14 countries sent the requested information. The following table shows the information sent for each country:

Documents sent by each country

Guatemala

- Cultivo.pdf
- id.pdf
- Plan Estrategico- RDL Versión final.pdf
- Plan_UCREVE.Versión final.pdf
- PSD.PDF
- VARIABLES BASE MICOBACTERIOLOGIA 120421.pdf
- Xpert.pdf
- Inf_Documentos_de_consultoria_ (1).zip
- 2-wo-Manual_de_M&E_PLAN ESTRATEGICO 2019-2023_ajustado 5-10-2020 .pdf
- 07- Plan Estratégico Nacional Multisectorial de Tuberculosis_Guatemala_2019-2023.pdf
- Base Año 2021.xlsx
- hoja suelta format.xlsx
- Tablero de mando.xlsx

Honduras

- FORMULARIOS DE TUBERCULOSIS 2021 (3).zip
- 5- Plan Estratégico TB-2016_2020 (2).pdf
- 5- Plan Estratégico TB-2016_2020 (3).pdf
- Diccionario de datos Ficha de Laboratorio TB 5-6-21.xlsx
- Informe sesiones virtuales de monitoreo del rGLC Honduras noviembre 20...
- Informe sesiones virtuales de monitoreo del rGLC Honduras noviembre 20...
- Informe Anual de Programático y Epidemiológico de TB 2020_10_3_2021.d...
- PLAN DE M&E PFM (Mayo 2016) (1).doc
- TB-1 Solicitud analisis muestras biologicas TB1.pdf
- TB-2 Consolido Mensual de Laboratorio TB2.pdf
- TB-15 Libro de Laboratorio.pdf
- TB-3 Ficha Notificacion Ingreso Casos TB-3.pdf
- TB-4 Tarjeta de Control de Tuberculosis TB-4.pdf
- TB-5 Ficha de Investigacion de Contacto con Pacientes TBC (TB-5).pdf
- TB-6 Ficha Pacientes que Abandonan Tratamiento TB-6.pdf
- TB-7 Ficha Notificacion por Mortalidad Tuberculosis TB-7.pdf
- TB-8 Ficha de Egresos de Pacientes con TB.pdf
- TB-9 Planilla Diaria Mensual Casos Nuevos TB -9.pdf
- TB-10 Ficha Informe Trimestral.pdf
- TB-11 Informe trimestral COHOTE TB-11.pdf
- TB-12 Ficha de Informe Trimestral 2.pdf
- TB-13 Libro Seguimiento de Casos TB 13.pdf
- TB-14 Libro de Sintomatismo de Respiratorio.pdf
- HONDURAS, BASE DE DATOS ESTANDARIZADA DE TUBERCULOSIS FORMA...
- HONDURAS, FORMATO ESTANDARIZADO INDICADORES DE LABORATORI...
- HONDURAS, KARDEX Y CONSUMO MENSUAL DE CARTUCHOS XPERT.xlsx

Bolivia

- Guia_Practica_M&E_TB.pdf
- INSTRUMENTOS DE RECOLECCION DE INFORMACION DEL LRNTB.xlsx

Venezuela

- CUADRO DE INDICADORES 2020.xlsx
- MANUAL NORMAS RAC 1ER NIVEL TUBERCULOSIS NOVIEMBRE 2016 VF (...)
- NORMA OFICIAL PROGRAMA SALUD RESPIRATORIA 2016 NOV VF.pdf
- NORMATIZACION_Coordinador_Laboratorio REN-12.pdf
- PNT y de los LSN o LRN de TB. INFORMACION VENEZUELA.docx

Argentina

- 000000027bcnt-normas-tecnicas-2013-tuberculosis.pdf
- 000001434cne-2019-03-28_plan-estrategico-control-tuberculosis.pdf
- 000001443cne-2019-04-04_guia-tb.pdf
- AVANCE DE LA NOTIFICACION DE CASOS DE TUBERCULOSIS, 2021-04-07.p...
- boletin-epidemiologico-TB-2018 N1.pdf
- boletin-epidemiologico-TB-2019 N2.pdf
- boletin-epidemiologico-TB-2020 N3.pdf
- boletin-epidemiologico-TB-2021 N4.pdf
- Diccionario SNVS2 SISA TB.xlsx
- IndClavesTBArentina2019-20_abril2021.pdf
- Instrucciones para la notificación de Tuberculosis a través del SNVS20c.pdf
- Nuevos_indicadores_PROCESOS.html
- Nuevos_indicadores_RESULTADOS.html
- PanelBoletinTBARG.html
- TBPediatricyAdolescenteAbril_06_2021.html



The information sent by each country was the input for the construction of the instruments to evaluate the quality of the information.

A review and analysis of the documents was carried out for the development of two instruments.

The data quality instrument was developed for the laboratory and TB Program indicators, taking into account the indicators, their numerators, denominators and the analysis of the quality of the data from the NTP and the SNL / NRL for TB.

Data quality verification instrument for each of the laboratory and TB program indicators.

1- Navigation menu on the instrument.

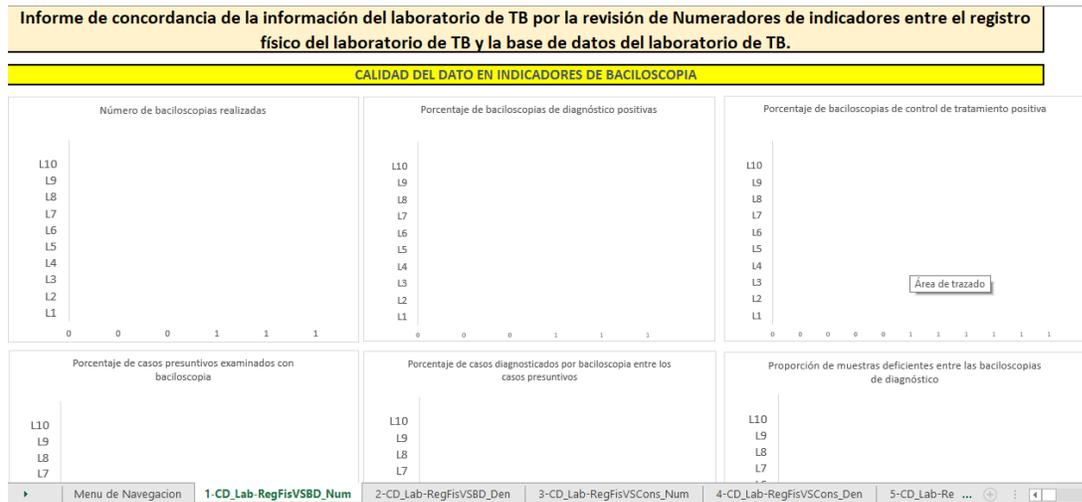
Ingreso de Datos	Informes de la calidad de la información de los Numeradores de indicadores
Laboratorio 1	Registro físico y la Base de Datos
Laboratorio 2	Registro físico y el informe consolidado
Laboratorio 3	Base de datos y el informe consolidado
Laboratorio 4	
Laboratorio 5	Informes de la calidad de la información de los denominadores de indicadores
Laboratorio 6	Registro físico y la Base de Datos
Laboratorio 7	Registro físico y el informe consolidado
Laboratorio 8	Base de datos y el informe consolidado
Laboratorio 9	
Laboratorio 10	
	Análisis del recalcado de indicadores
	Reporte Semaforzado
	Reporte Gestión de Seguimiento y Monitoreo

The instrument consists of a section for data entry, automated reports on the quality of the data in the numerators and denominators of the indicators, analysis of the recalculated indicators in the technical assistance, rating report on the quality of the data and the report on the follow-up and monitoring processes of the TB Program and the SNL / NRL.

2- Data entry and instructions integrated to the instrument.

To enter the data into the instruments, the verification of the indicators must be carried out in the primary sources of the data, in this way, the instrument allows to record the verified data in the treatment cards, medical records, paper records, versus what registered in databases or consolidated reports.

4- Report on the quality of the data taking into account the indicator, its numerator and denominator.



Two instruments make it possible to generate the analysis of data quality, taking into account the indicators in their denominators and denominators, from the review in the technical assistance by the TB program and the SNL / NRL.

5- Data quality rating report.

Seleccione el laboratorio a ser analizado							
INDICADORES	NUMERADORES			DENOMINADORES			INDICADOR
	FIS-BD	FIS-CON	BD-CON	FIS-BD	FIS-CON	BD-CON	
BACILOSCOPIA							
Número de baciloscopías realizadas							
Porcentaje de baciloscopías de diagnóstico positivas							
Porcentaje de baciloscopías de control de tratamiento positiva							
Porcentaje de casos presuntivos examinados con baciloscopia							
Porcentaje de casos diagnosticados por baciloscopia entre los casos presuntivos							
Proporción de muestras deficientes entre las baciloscopías de diagnóstico							
Carga de trabajo							
Porcentaje de baciloscopías de diagnóstico positivas de bajo grado (positiva de + y BAAR contables)							
Tiempo de respuesta del laboratorio en el informe del resultado de la baciloscopia							

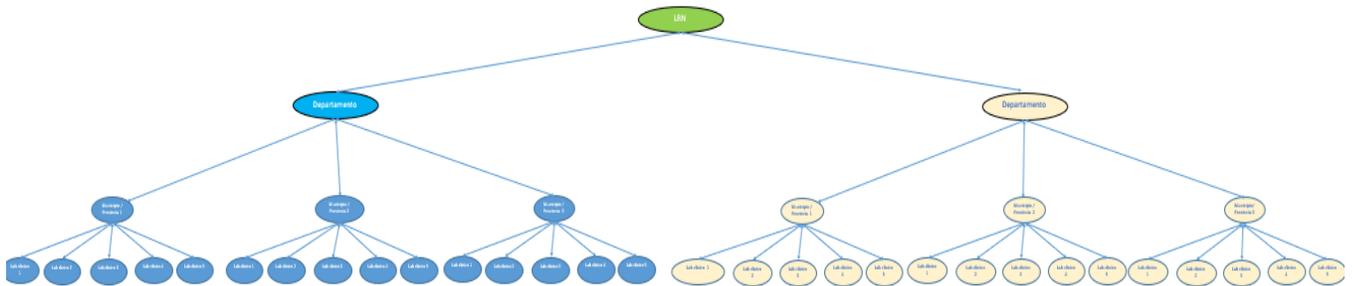
The instrument generates a rating report by indicator, the source of the data verification, the numerator and denominator of the TB program and the SNL/NRL, allowing to obtain the status of the data in all the indicators proposed for the data quality check.

The instrument facilitates the management to identify the gaps in data quality in the different steps of the information flow.

Meetings to validate the instrument were held with the SNL and the TB programs of Mexico and Argentina. The instrument was adjusted according to the feedback.

Two meetings of socialization and validation of the instrument were held with the SNL / NRL and the TB programs of the 17 countries of the grant, in order for them to implement the instrument in the technical assistance visits they carry out to the laboratories and research programs. Tuberculosis at all levels of the data flow for each country.

Scheme of application of the data quality instrument in the NTP and the SNL / NRL of Tuberculosis in the countries.



For the development of a unified structure of indicators at the regional level, a review of the indicators of the “Global tuberculosis report 2020” was carried out, creating a structure in Excel, which facilitates the analysis of the information in a data viewer.

Results

- 1- Development of the consulting methodology.
- 2- Instrument developed, validated and applied for the standardization of indicators of the SLN / NRL and the NTP in the countries of the grant.
- 3- Validated and / or adjusted instrument to evaluate the quality of the information of the NTP and the SLN / NRL in the grant countries.
- 4- Monitoring and Evaluation guide document that contains the standardization of the SLN / NRL and NTP indicators, the analysis plan, the indicator sheets, the strengthening of capacities in analysis and decision-making at different levels. (In Spanish and English).
- 5- Report containing the results of the standardization of the information systems to generate the indicators from the recommendations delivered. (In Spanish and English)

Conclusions

The application of instruments that contribute to the analysis of the data quality of the TB program and laboratory indicators, allows to identify the gaps and generate improvement actions to obtain a better quality of the information.

Including the data quality audit process in the technical assistance carried out in the different processes of the TB program and the TB laboratory, contributes to identifying gaps and intervening in the processes to improve the quality and analysis of the information.

A monitoring and evaluation instrument that includes the sources of information, the numerators and denominators of the indicators, facilitates their follow-up and monitoring in TB laboratories and programs

Recommendations

The data quality audit is a process that must be carried out periodically and systematically in technical assistance at all levels of the data flow, in order to improve the quality and analysis of the information.

The verification of the information sources of each of the indicators of the TB program and of the laboratories, taking into account their numerators and denominators, guarantees the precision in the calculation of the indicators reported and analyzed at all levels of the data flow.

Acknowledgments

To the Supranational and National Reference Laboratories and to the tuberculosis programs of the 17 countries that participate in the project grant for the strengthening of diagnosis in tuberculosis laboratories in the region of the Americas.

Annexes

SNL / NRL data quality instruments.

NTP data quality instruments.

Standardized format of indicators according to the structure of the report to WHO.

Monitoring and Evaluation Guide Document.