

GUIDELINES IN CONDUCTING DATA QUALITY CHECK

A Step-by-Step Guide
to Conducting Data Quality Check
in Support of the Tuberculosis
Control Program



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Abbreviations

ART	Antiretroviral Therapy
BC	Bacteriologically Confirmed
BHW	Barangay Health Worker
CD	Clinically diagnosed
CHO	City Health Officer
CxR	Chest X-ray
DMO	Development Management Officer
DOH	Department of Health
DOH RO	Department of Health Regional Office
DOTS	Delivery of Tuberculosis Services
DQC	Data Quality Check
DS/DRTB	Drug-susceptible/Drug-resistant Tuberculosis
DSSM	Direct Sputum Smear Microscopy
DST	Drug Susceptibility Testing
EPTB	Extrapulmonary TB
GIS	Geographic Information System
HC	Health Center
HIV	Human Immunodeficiency Virus
HUC	Highly-urbanized city
iDOTS	Integrated Delivery of Tuberculosis Services
IMPACT	Innovations and Multisectoral Partnerships to Achieve Control of Tuberculosis
IPT	Isoniazid Preventive Therapy
ITIS	Integrated TB Information System
LGU	Local Government Unit
LTFU	Lost to follow up
MDR TB	Multidrug-resistant Tuberculosis
MOP	Manual of Procedures
MTB/RIF	<i>Mycobacterium tuberculosis</i> /Rifampicin
MTDP	Medical Technologist Deployment Program
NTP	National Tuberculosis Control Program
PhilPACT	Philippine Plan of Action to Control Tuberculosis
PhilSTEP1	Philippine Strategic Tuberculosis Elimination Plan Phase 1
PHO	Provincial Health Officer
PMDT	Programmatic Management of Drug-resistant Tuberculosis
PTOU	Previous Treatment Outcome Unknown
RDQA	Routine Data Quality Assessment
TA	Technical Assistance
TAF	Treatment after Failure
TALF	Treatment after Lost to Follow-up
RHU	Rural Health Unit
TAT	Turnaround Time
USAID	United States Agency for International Development
WHO	World Health Organization

Tools Index

PowerPoint Presentation: Data Quality Check (DQC) for the Integrated TB Information System

IMPACT Forms for RDQA

Sample DQC Forms with Data

About this Toolkit

This toolkit presents the tools, templates, and steps in conducting data quality check in support of the tuberculosis (TB) control program. The tools and templates in this toolkit were developed based on the collective experiences of local government partners of the **IMPACT Project**.

For whom is this toolkit?

This toolkit is intended primarily for NTP staff at the Department of Health (DOH) regional offices who are assigned to provide technical assistance (TA) to provinces and highly urbanized cities (HUCs), and also for the DOH Development Management Officers (DMOs) and Provincial/City Health Office NTP team members involved in data quality check (DQC).

What does this toolkit contain?

This toolkit consists of two parts.

Part 1 provides the background information and rationale for conducting data quality check in support of the TB control program and explains the step-by-step process for performing such.

Part 2 contains the DQC Workshop Activity Design; the WHO Routine Data Quality Assessment (RDQA) procedures; the recommended automated system checks in ITIS; the forms used for the DQC workshop; and the abstract and technical report on the Pilot Run of the WHO RDQA Methodology provided in the annex.

Users of this toolkit may reproduce the tools and templates, including the PowerPoint presentations provided in this package.

Introduction

The magnitude of the TB problem has placed the Philippines third among the 30 high-TB burden countries in incident TB cases per 100,000 population, and fifth among the top 30 countries with high multidrug-resistant TB (MDR-TB) burden in thousand incident cases (WHO Global TB Report 2017). TB continues to be the country's 8th leading cause of death (DOH, 2013) and 8th top cause of illness (DOH, 2014). The 2016 National Tuberculosis Prevalence Survey showed that the burden of TB remains high among Filipino adults and is higher than previously estimated. About 1 million Filipinos are expected to have the TB disease and may not even know it. Factors associated with high prevalence include weaknesses in health systems and poor health-seeking behavior. Poverty and malnutrition further fuel the spread of TB. While the national government and its development partners have made significant investments in the TB control program, TB remains a major public health challenge with serious economic consequences. TB morbidity and premature mortality result in economic losses valued at PhP8 billion (\$171 million) annually (Peabody J. et al., 2005).

The institution of the Directly Observed Treatment, Short Course (DOTS) strategy in 1996 and its nationwide implementation in the public health sector starting 2002 have enabled the country to make significant progress in TB control. Program performance, however, remains variable across cities and municipalities. Moreover, while the TB control program continues to gain broader support and greater momentum, it needs to keep pace with the rate of infection.

The Innovations and Multisectoral Partnerships to Achieve Control of Tuberculosis (IMPACT), a five-year technical assistance (TA) project funded by the United States Agency for International Development (USAID), sought to respond to the abovementioned challenges. The Project provided TA to the Department of Health (DOH) National TB Control Program (NTP) and worked directly with 43 provinces and cities – in Luzon, Visayas, and Mindanao, including the Autonomous Region in Muslim Mindanao – with the greatest burden of TB disease and lowest performance in both case detection and cure rates. IMPACT engaged both public and private sectors at the national and local levels to detect and successfully treat TB cases.

Guided by a harmonized blueprint of technical assistance and research initiatives, as well as the USAID TB Portfolio Results Framework, the Project worked with other USAID cooperating agencies and key partners involved in TB control. IMPACT measured the outcomes of project interventions against a set of national program indicators and targets identified in the enhanced Philippine Plan of Action to Control Tuberculosis (PhilPACT) 2010–2016. IMPACT was implemented from October 2012 to September 2017, with an extension period of seven months from October 2017 to April 2018.

The goal of IMPACT was to reduce TB prevalence by 30%, achieve 85% case detection rate for all forms of TB, and 90% cure rate for new smear-positive cases in all participating sites by 2017 relative to the 2010 baseline.

The Project aimed at achieving three objectives:

- strengthen demand for TB services through adoption of healthy behaviors within families;
- improve supply of TB services, including the availability and quality of public sector services and selective expansion of private sector providers; and
- remove policy and systems barriers to support supply of, and demand for TB services.

IMPACT complemented the health programs of USAID/Philippines and other development partners. Its activities are aligned with the principles of the United States Government Global Health Initiative and the Government of the Philippines' Universal Health Care agenda (*Kalusugan Pangkalahatan*).

PART 1

A. Background

The Integrated TB Information System (ITIS) is the official electronic information system of the National Tuberculosis Control Program (NTP). It is the repository of patient data for both drug-susceptible and drug-resistant TB cases. It also contains data on presumptive drug-resistant TB (DRTB) patients screened at the Programmatic Management of Drug Resistant TB (PMDT) treatment facilities.

Drug-susceptible TB (DSTB) patient data from the DSTB register (NTP Form 6a) are encoded into ITIS by either the DOTS facility staff or the Provincial/City Health Office (PHO/CHO) ITIS encoder. Each entry is initially validated by the head of the facility prior to submission. Entry and submission may be done either online or offline. The submission of ITIS reports happens in real time for online reporting, but quarterly generation follows the schedule indicated in the Manual of Procedures (MOP), i.e., first week of month following end of quarter from DOTS Facility to PHO/CHO, second week from PHO/CHO to DOH Regional Office, and third week from DOH Regional Office to DOH-NTP.

Due to possible automation of generating data resulting from this electronic information system, the checking of data for completeness, accuracy, consistency, and timeliness may follow a different set of procedures compared with data quality check of paper-based reports. However, this data check will still be done because the sources of data is still paper-based—the DSTB Register and the Treatment Card. Comparisons to these records will be done in conducting data quality check (DQC).

This document provides the procedures in conducting data quality check for ITIS data. Like the previous procedures for paper-based reports, it looks at the following attributes of data: completeness, accuracy, consistency and timeliness. These procedures may be applied during DQC workshops or during supervisory and monitoring visits to the facility.

Expected Outputs:

1. Validated data from ITIS for the immediate past period
2. Agreed actions to improve data quality and NTP performance

Outcome: Accurate and reliable TB data that can be used in planning, policy and decision-making.

Assumptions:

1. Budget is allocated on a quarterly basis for the province or highly urbanized city (HUC) to conduct this activity regularly.
2. The province/HUC is fully implementing ITIS for all rural health units (RHUs)/health centers.

B. Definition of Terms

Data Quality Check Process of appraising the quality of records and reports. The attributes of data quality are availability, completeness, accuracy, consistency and timeliness.

<i>Completeness</i>	An attribute found in NTP records and reports when all required information are provided and appropriately encoded in ITIS.
<i>Accuracy</i>	An attribute of the data/information provided in the recording and reporting forms when it conforms to the MOP protocols and guidelines. This includes checking compliance with prescribed NTP procedures such as screening presumptive DRTB patients for multidrug-resistant TB.
<i>Consistency</i>	An attribute of the data/information when two records (e.g., the source and ITIS) have similar or have exact figures when calculated. The data from the paper-based DSTB register should be the same as the ITIS-generated report.
<i>Timeliness</i>	An attribute of the records and reports when updating and submission of reports are done on time. This also includes checking turnaround time.

C. Steps in Conducting Data Quality Check

The DQC procedures described in this document are applicable to all DOTS facilities for records of DSTB patients. For facilities utilizing exclusively paper-based records, previous procedures for DQC of paper-based records and reports will apply.

Other records and reports that are not yet encoded or generated in ITIS (e.g., NTP Laboratory Register, Quarterly Report on TB Microscopy and GeneXpert Laboratory Examinations) are not included in the current procedure but may be checked using previous procedures on DQC for paper-based records.

The main attributes of data to be checked are completeness, accuracy, consistency and timeliness. The point of reference for checking these attributes of ITIS data is the DSTB register, which is the source of information in the ITIS.

It is recommended that quarterly DQCs be completed before the last day of the month following the quarter (e.g., April 30, July 30, October 30 and January 30) as the ITIS administrators enforce this quarterly deadline by locking ITIS editing.

The DQC procedures described here consist mainly of manual verification for data completeness, accuracy and consistency. However, automated system checks for accuracy and timeliness have already been recommended. A summary of proposed automated system checks can be found in Part 2.C. Appraising timeliness will be limited to determining turnaround time as other attributes have been recommended under automated system checks.

To ensure an impartial appraisal of data, the DQC procedures are intended to be performed by a third party and not by the data owner. Hence, records are verified either by the technical supervisor (DOHRO/PHO/CHO) or another DOTS facility in case the DQC is conducted in a workshop participated in by various DOTS-providing facilities. However, the DOTS facility may likewise use these procedures for their internal checking.

Finally, this set of procedures is intended to be implemented quarterly for all DOTS facilities during the gradual phase-in of ITIS reporting until full implementation of quarterly reporting through ITIS. If

majority of facilities are already reporting good quality data after several quarters of conducting DQC and once the automated system checks are fully operational, the procedures may be undertaken for specific facilities only or as needed. It need not be undertaken quarterly once data quality is regularly demonstrated to be of acceptable quality. The WHO Routine Data Quality Assessment (RDQA) procedures, on the other hand, serve the purpose of regional or national appraisal of NTP data and select only a few facilities per province.

Step 1. Checking for Completeness

Task Objective

After this step, you should have checked patient’s data in the DSTB register and ITIS for completeness and supplied the missing information.

Process

1. Prepare or bring out the following NTP records:
 - a. DSTB register
 - b. Access to ITIS
2. Using the DSTB register, count the number of patients registered for the period being checked. Count two periods, both the current quarter and the same quarter one year ago for the cohort report.
3. Record the result of your count in DQC Form A.1 under the column “No. of patients in register.” Record separately for the current cohort and the cohort one year ago. (see example below)

DQC Form A: Assessing DATA COMPLETENESS

A.1. ITIS-Data

<i>Recording Forms</i>	<i>No. of patients in Register</i>	<i>No. of patients in ITIS</i>	<i>Remarks (provide details on missing data)</i>
1. Form 6a. Drug Susceptible TB Register	2015 – 34 2016- 30		

4. Generate the report corresponding to the quarters being checked from ITIS (i.e., **Report 3a** of the two periods being checked).

Select Report:

Report Parameters

Reporting Period: Annual

Patients registered during:

Year: 2016

Quarter: 1st Quarter

Month: -Select Month-

Custom Period: From: To:

Based on: Health Facility

Location: -Select Region-
-Select Province-
-Select City/Municipality-
-Select Barangay-

Health Facility: -Select Health Facility-

Generate Report

5. Get the data on “total cases registered.”

Report 3a. Quarterly report on Case Finding of Drug Susceptible TB Cases and IPT
(Source of Data: Form No. Drug Susceptible TB register and Part 3 of Register)

Region: CENTRAL LUSON (Region-10)	Report for: 4th Quarter of year 2016
Province/City: BATAAN	Date Reported: February 18, 2016
DTM Facility:	Reported by: Carlo Argente

Population of catchment area:
 For Province, City and Regional level:
 Population of DTM Facility:
 Total no. of DTM Facility:

A. Bacteriologically confirmed TB Cases registered during the quarter by registration group and sex

Classification	New		Relapses		Previously Treated (Current Relapses)		Total	
	M	F	M	F	M	F	M	F
Pulmonary	16	12	13	9	2	1	18	12
Extrapulmonary	3	1	3	0	0	0	3	1
Subtotal	19	13	16	9	2	1	21	13
TOTAL	19	13	16	9	2	1	21	13

B. Clinically diagnosed TB Cases registered during the quarter by registration group and sex

Classification	New		Relapses		Previously Treated (Current Relapses)		Total	
	M	F	M	F	M	F	M	F
Pulmonary	203	227	75	11	4	1	212	239
Extrapulmonary	3	5	0	0	0	0	3	5
Subtotal	206	232	75	11	4	1	215	244
TOTAL	206	232	75	11	4	1	215	244

C. All New and Relapses TB Cases (All Forms) by Age and Sex

	0-4		5-9		10-14		15-19		20-24		25-29		30-34		35-39		40-44		45-49		50 and Above		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
New	16	12	19	14	28	20	30	16	25	30	18	22	18	12	12	12	12	12	12	12	12	12	12	12
Relapses	0	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Subtotal	16	12	22	17	31	23	33	19	28	33	21	25	21	15	15	15	15	15	15	15	15	15	15	15
TOTAL	16	12	22	17	31	23	33	19	28	33	21	25	21	15	15	15	15	15	15	15	15	15	15	15

D. Source of All New and Relapses TB Cases (All Forms)

Total number of TB Cases	Public Walk-in patients	Other Public Facilities	Private Sector	Community
722	499	22	75	122

E. TB in Children

Total TB Cases less than 15 years old	Number
Pulmonary	109
Extrapulmonary	0

F. HIV Status Among 15 Years Old and Above (Column: Year: 2016 Quarter: 3)

Reporting of Cases	No. of Cases Reported	No. of TB Cases Registered	Among HIV positive, number given	Among HIV positive, number given
Reported by the provider	485	165	165	165
Reported by the patient	0	0	0	0
TOTAL	485	165	165	165

G. Individuals Given IPT

Number given IPT
0

Total cases registered (Table A + Table B + Trans-in cases): 722

6. Note this down in DQC Form A.1 under the third column “No. of patients in ITIS.”

DQC Form A: Assessing DATA COMPLETENESS

A.1. ITIS-Data

Recording Forms	No. of patients in Register	No. of patients in ITIS	Remarks <i>(provide details on missing data)</i>
1. Form 6a. Drug Susceptible TB Register	2015 – 34 2016- 30	2015 – 28 2016-15	

7. Check if all the patients you counted in the DSTB Register are already encoded in ITIS. If there is a discrepancy, note this down under the **Remarks** column.

DQC Form A: Assessing DATA COMPLETENESS

A.1. ITIS-Data

Recording Forms	No. of patients in Register	No. of patients in ITIS	Remarks <i>(provide details on missing data)</i>
1. Form 6a. Drug Susceptible TB Register	2015 – 34 2016- 30	2015 – 28 2016-15	6 cases not encoded in 2015 and 15 cases in 2016 from DSTB register (current quarter and same quarter 1 year ago)

Then do the following:

- a. **If there is ITIS under-reporting (ITIS count lower than manual count):**
 - i. One possible cause is that validation of encoded data has not yet been done. To check this, generate the “per facility report” and check columns on “encoded” vs. “validated”. If there are more “encoded” cases and they tally with the manual count, then go back to the case records that have not yet been validated and click the validate function.



Breakdown of DOTS Encoded Patients for 2015

Region	Province	City/Municipality	Health Facility	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec		Total		
				V	E	V	E	V	E	V	E	V	E	V	E	V	E	V	E	V	E	V	E	V	E	V	E	V	E	V	E
CENTRAL LUZON (Region III)	BATAAN	ABUCAY	ABUCAY RURAL HEALTH UNIT I	12	12	28	28	11	11	4	4	6	6	24	24	15	15	13	13	8	8	23	23	3	3	2	2	149	149	
CENTRAL LUZON (Region III)	BATAAN	ABUCAY	ABUCAY RURAL HEALTH UNIT II	3	3	4	4	4	4	0	0	2	2	7	7	2	2	1	1	0	0	5	5	0	0	1	1	29	29	
CENTRAL LUZON (Region III)	BATAAN	BAGAC	BAGAC RURAL HEALTH UNIT	11	11	6	6	9	9	13	13	5	5	7	7	14	14	4	4	11	11	15	15	5	5	6	6	106	106	
CENTRAL LUZON (Region III)	BATAAN	BALANGA CITY	BALANGA RURAL HEALTH UNIT I	2	2	6	6	14	14	9	9	28	28	5	5	13	13	14	14	19	19	20	20	13	13	14	14	13	150	151
CENTRAL LUZON (Region III)	BATAAN	BALANGA CITY	BALANGA RURAL HEALTH UNIT II	2	2	3	3	1	1	5	5	7	7	7	7	3	3	1	1	6	6	3	3	5	5	7	7	8	50	51
CENTRAL LUZON (Region III)	BATAAN	BALANGA CITY	BALANGA RURAL HEALTH UNIT III	4	4	6	6	6	6	5	5	2	2	7	7	2	2	7	7	4	4	8	8	4	4	3	3	58	58	
CENTRAL LUZON (Region III)	BATAAN	BALANGA CITY	BATAAN GENERAL HOSPITAL DOTS	11	11	12	12	6	6	5	5	5	5	2	2	7	7	9	9	8	8	1	1	6	6	21	21	82	87	
CENTRAL LUZON (Region III)	BATAAN	DINALUPIHAN	DINALUPIHAN RURAL HEALTH UNIT I	16	16	11	11	13	13	7	7	17	17	9	9	8	8	20	20	21	21	35	35	18	18	11	11	11	176	177
CENTRAL LUZON (Region III)	BATAAN	DINALUPIHAN	DINALUPIHAN RURAL HEALTH UNIT II	18	18	8	8	16	16	22	22	15	15	20	20	22	22	26	26	27	27	21	21	17	17	30	30	24	239	240
CENTRAL LUZON (Region III)	BATAAN	HERMOSA	HERMOSA RURAL HEALTH UNIT	26	26	21	21	43	43	16	16	27	27	22	22	23	23	14	14	32	32	21	21	32	32	14	14	291	291	
CENTRAL LUZON (Region III)	BATAAN	LIMAY	LIMAY RURAL HEALTH UNIT	21	21	13	13	31	31	30	30	36	36	18	18	25	25	9	9	9	9	37	37	22	22	31	31	282	282	
CENTRAL LUZON (Region III)	BATAAN	MARIVELES	MARIVELES RURAL HEALTH UNIT I	4	4	8	8	18	18	12	12	6	6	20	20	15	15	17	17	17	17	0	0	0	0	0	0	117	119	
CENTRAL LUZON (Region III)	BATAAN	MARIVELES	MARIVELES RURAL HEALTH UNIT II	12	12	15	15	17	17	14	14	11	11	18	18	24	24	14	14	11	11	19	19	24	24	25	14	14	193	194
CENTRAL LUZON (Region III)	BATAAN	MARIVELES	MARIVELES RURAL HEALTH UNIT III	8	8	15	15	35	35	17	17	20	20	19	19	22	22	23	23	19	19	27	27	28	28	8	8	241	241	
CENTRAL LUZON (Region III)	BATAAN	MORONG	MORONG RURAL HEALTH UNIT	16	16	19	19	23	23	15	15	32	32	19	19	20	20	35	35	23	23	30	30	24	24	18	18	274	276	
CENTRAL LUZON (Region III)	BATAAN	ORANI	ORANI RURAL HEALTH UNIT	5	5	20	20	11	11	10	10	37	37	12	12	19	19	14	14	11	11	16	16	7	7	7	17	179	179	
CENTRAL LUZON (Region III)	BATAAN	ORION	ORION RURAL HEALTH UNIT	21	21	14	14	9	9	6	6	9	9	14	14	7	7	16	16	16	16	10	10	24	24	7	7	173	153	
CENTRAL LUZON (Region III)	BATAAN	PILAR	PILAR RURAL HEALTH UNIT	14	14	9	9	15	15	9	9	13	13	14	14	15	15	13	13	9	9	16	16	11	11	8	8	8	139	140
CENTRAL LUZON (Region III)	BATAAN	SAMAL	SAMAL RURAL HEALTH UNIT	24	24	15	15	7	7	13	13	11	11	12	12	12	12	15	15	13	13	14	14	13	13	17	17	6	160	161

Number of Facilities with Data:	19
Number of Facilities:	19
Percentage of Facilities with Data:	100.00%

- ii. Another possible cause is there may be cases that have not been encoded. This will be seen in the “per facility report” above where both “encoded” and “validated” cases will be less than the manual count. To check this, click the total number of cases in the generated report to display the patient list.

Report 3a. Quarterly report on Case Finding of Drug Susceptible TB Cases and IPT
(Source of Data - Form 6a, Drug Susceptible TB Register and Form 6, IPT Register)

Region: CENTRAL LUZON (Region III) Report for: 4th Quarter of year 2015
Province/City: BATAAN Data Reported: February 16, 2016
DOTS Facility: Prepared by: Clark Fajardo

For Province, City and Regional Level
Total no. of DOTS facilities that submitted reports:
Total no. of DOTS Facility:

A. Bacteriologically confirmed TB Cases registered during the quarter by registration group and sex

Classification	New		Relapse		Previously Treated (except Relapse)		Total	
	M	F	M	F	M	F		
Pulmonary	81	47	13	9	2	5	96	97
Extrapulmonary	0	0	1	0	0	1	0	0
Subtotal	81	47	14	9	2	6	97	97
TOTAL	120	72	23	16	4	11	154	154

B. Clinically diagnosed TB Cases registered during the quarter by registration group and sex

Classification	New		Relapse		Previously Treated (except Relapse)		Total	
	M	F	M	F	M	F		
Pulmonary	283	227	29	11	4	5	513	539
Extrapulmonary	3	9	0	0	0	0	3	9
Subtotal	286	232	29	11	4	5	516	548
TOTAL	519	468	58	22	9	10	999	1007

C. All New and Relapse TB Cases (All Forms) by Age and Sex

	0-14		15-24		25-34		35-44		45-54		55-64		65 and Above		Total	
	M	F	M	F	M	F	M	F	M	F	M	F				
New	88	73	78	69	34	25	38	33	40	28	26	28	25	26	347	279
Relapse	0	0	1	2	1	2	2	4	4	4	4	4	4	4	25	25
Subtotal	88	73	79	71	35	27	40	37	44	32	30	30	29	30	372	304
TOTAL	139	120	114	103	70	64	82	74	88	66	64	64	63	64	404	329

D. Source of All New and Relapse TB Cases (All Forms)

Total number of TB Cases	Public Health in particular	Other Public Facilities	Trans-in
722	439	63	120

E. TB in Children

Total TB cases less than 15 years old	Number
Pulmonary	109
Extrapulmonary	0

F. HIV Status Among 15 Years Old and Above

Number of Cases registered for the quarter (15 years old and above)	No. of cases tested with known HIV status during the quarter	No. of TB cases confirmed positive for HIV	Amt
0	0	0	0

G. Individuals Given IPT

Number given IPT
0

'Click to display patient list'

Total cases registered (Table A + Table B + Trans-in cases): 722

- iii. Sort patient list by TB case number. Identify which TB case number is missing or not yet encoded. Look for this missing case in the DSTB register; apply the search function to determine if it has been encoded in your facility under a different number or different date of registration. If not, encode the missing cases.

The screenshot shows a web browser window with two tabs: 'Reports - Integrated Tuberculosis' and 'Integrated Tuberculosis in...'. The address bar shows the URL: oh.pbsp.org.ph/reports/dstb_reports/reportlist_mop5.php?listtype=LIST_tb_cases. The main content area displays a table titled 'List of TB Patients' with the following columns: No., Date of Reg., TB Case No., Last Name, First Name, Sex, Age, City/Municipal, Province, Region, Health Facility, Source of Patient, Classification, Type of Patient, Category, Bacteriological Status, Date Started Tx, and Treatment Outcome. The table contains six rows of patient data.

No.	Date of Reg.	TB Case No.	Last Name	First Name	Sex	Age	City/Municipal	Province	Region	Health Facility	Source of Patient	Classification	Type of Patient	Category	Bacteriological Status	Date Started Tx	Treatment Outcome
1	2015-12-01	15042213	ALVARO	ALVARO	F.	71	HAPPY VALLEY	DINALUPIHAN	BATAAN	CENTRAL LUZON (Region III) DINALUPIHAN RURAL HEALTH UNIT II	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-12-01	ON TREA
2	2015-10-29	15050245	ALVARO	ALVARO	M.	6	CULIS	HERMOSA	BATAAN	CENTRAL LUZON (Region III) HERMOSA RURAL HEALTH UNIT	OTHER PUBLIC FACILITY	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-10-29	ON TREA
3	2015-10-30	15001124	ALVARO	ALVARO	F.	3	BALUT II	PILAR	BATAAN	CENTRAL LUZON (Region III) PILAR RURAL HEALTH UNIT	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-10-31	ON TREA
4	2015-12-04	15011236	ALVARO	ALVARO	M.	5	BIAAN	MARIVELES	BATAAN	CENTRAL LUZON (Region III) MARIVELES RURAL HEALTH UNIT III	PRIVATE FACILITY	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-13	ON TREA
5	2015-11-20	15011232	ALVARO	ALVARO	M.	6	BIAAN	MARIVELES	BATAAN	CENTRAL LUZON (Region III) MARIVELES RURAL HEALTH UNIT III	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-16	ON TREA
6	2015-11-19	15060242	ALVARO	ALVARO	F.	2	KITANG 2 & LUZ	LIMAY	BATAAN	CENTRAL LUZON (Region III) LIMAY RURAL HEALTH UNIT	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-07	ON TREA

b. If there is ITIS over-reporting (ITIS count higher than manual count), there might be a double encoding of a single case. To check this, generate the patient list like the one above. Check for multiple entries for a single patient name, and delete duplicate records.

8. After doing the corrections, check again if the manual count in DSTB tallies with the number of patients in ITIS.

IMPORTANT: You do not have to change the original count in DQC Form A.1, but you need to indicate in the **Remarks** column the reasons for the initial incomplete data.

9. Once all cases in the manual count have been encoded, generate the patient list again based on Procedure #7.a.iii. Check this patient list if all variables had been completely encoded and if there are blank cells. If blank cells are identified, note this under the **Remarks** column in DQC Form A.1. then update the ITIS cases with incomplete entries.

To update a Case

List of TB Patients

No.	Date of Reg.	TB Case No.	Last Name	First Name	Middle Name	Age	Sex	Brgy	City/Municipal	Province	Region	Health Facility	Source of Patient	Classification	Type of Patient	Category	Bacteriological Status	Date Started Tx	Treat Outcome
1	2015-12-01	15042213	...	...	F.	71	M	HAPPY VALLEY	DINALUPIHAN	BATAAN	CENTRAL LUZON (Region III)	DINALUPIHAN RURAL HEALTH UNIT II	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-12-01	ON TREA
2	2015-10-29	15050245	...	...					HERMOSA	BATAAN	CENTRAL LUZON (Region III)	HERMOSA RURAL HEALTH UNIT	OTHER PUBLIC FACILITY	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-10-29	ON TREA
3	2015-10-30	15001124	...	...		3	F	BALUT II	PILAR	BATAAN	CENTRAL LUZON (Region III)	PILAR RURAL HEALTH UNIT	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-10-31	ON TREA
4	2015-12-04	15011236	...	...		5	M	BIAAN	HARIVELES	BATAAN	CENTRAL LUZON (Region III)	HARIVELES RURAL HEALTH UNIT III	PRIVATE FACILITY	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-13	ON TREA
5	2015-11-20	15011232	...	...		6	M	BIAAN	HARIVELES	BATAAN	CENTRAL LUZON (Region III)	HARIVELES RURAL HEALTH UNIT III	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-16	ON TREA
6	2015-11-19	15060242	...	...	O.	2	F	KITANG 2 & LUZ	LIMAY	BATAAN	CENTRAL LUZON (Region III)	LIMAY RURAL HEALTH UNIT	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-07	ON TREA

Open the case to be updated

10. Once done, bring out the following NTP records:
 - a. Presumptive TB Master List
 - b. NTP Laboratory Register
 - c. NTP Treatment Card

11. Check for completeness following previous DQC procedures. Record your results in DQC Form A.2.

A.2. Paper-based records

Recording Forms	No. of Patients w/ COMPLETE data	No. of patients w/ INCOMPELETE data	Remarks (provide details on missing data)
2. Form 1. Presumptive TB Masterlist	120	20	No outcome of referral indicated in remarks from Presumptive TB masterlist (current quarter)
3. Form 3. NTP Laboratory Register	89	10	No signature of Microscopist from NTP Laboratory register (current quarter)
4. Form 4. NTP Treatment Card			Treatment cards (current quarter and same quarter 1 year ago)

Suggested Tools: DQC Form A.1 and DQC Form A.2

Step 2. Checking for Accuracy

Checking accuracy of classification, registration group and treatment outcomes can be done through automatic system checks in ITIS that are currently being developed. Pending their full functionality, current procedures on accuracy checks are limited to checking of the paper-based records, mainly the **Treatment Cards**. The **DSTB Register** can also be used but there are information in the treatment cards that are not available in the DSTB Register unless indicated in the **Remarks** column, namely: history of treatment, results of chest X-ray, results of tuberculin skin test (TST), symptom criteria for children and record of daily drug intake.

Task Objective

After this step, you should have reviewed the treatment cards of patients for the monitoring period and corrected all errors in classification, registration group and treatment outcome, if there are any.

Process

1. Depending on the patient load of the DOTS facility, you may check ALL patient records for a specific period or get a sample (e.g., 30% of the cases).
2. To determine the correct **classification based on anatomical site**, check the following:
 - a. chest X-ray result,
 - b. sputum DSSM result,
 - c. Xpert MTB/RIF result, and
 - d. other laboratory examinations for extrapulmonary tuberculosis (EPTB).

DSSM, chest X-ray and Xpert MTB/Rif will usually lead you to a pulmonary TB while “other exam” is used for extrapulmonary TB (EPTB).

Note: A patient with both pulmonary and extrapulmonary TB should be classified as pulmonary.

Form 4. TB TREATMENT/ IPT CARD

TB CASE NUMBER/ IPT No.		DATE THE CARD WAS OPENED		REGION/PROVINCE		NAME OF DOTS FACILITY	
NAME OF PATIENT:		Date of Birth: ____/____/____		Age: ____ years ____ mos.		Sex: ____ Height: ____ cm.	
COMPLETE ADDRESS AND PHONES:		Other Patient Details:		BCG Scar:		HOUSEHOLD MEMBERS:	
SOURCE OF PATIENT:		Occupation: _____		[] Yes [] No [] Doubtful		First Name | Age | Screened	
[] Public Health Ce [] Other public fac [] Private		Philhealth No.: _____					
DIAGNOSTIC TESTS:		Contact Person: _____					
1. Tuberculin Skin Test:		Contact Nos.: _____					
Result: ____ mm		STORY OF ANTI-TB DRUG INTAKE: [] No [] Yes		When: _____			
Date read: ____/____/____		[] Bacteriologically Confirmed		[] Relapse			
2. CXR Findings:		[] Clinically Diagnosed		[] TB, New-bacteriologically confirm		1. Relapse	
Date of exam: ____/____/____		[] Pulmonary [] Extra-pulmonary		[] TB, New-bacteriologically confirm		2. Relapse After Failure	
3. Other exam:		[] TBDC: _____		[] TB, New-bacteriologically confirm		3. Relapse After Failure	
Date of exam: ____/____/____		[] Bacteriologically Confirmed		[] TB, New-bacteriologically confirm		4. Relapse After Failure	
4. XPERT MTB/RIF (Date/Results):		[] Clinically Diagnosed		[] TB, New-bacteriologically confirm		5. Other	
Date/Results: _____		[] Pulmonary [] Extra-pulmonary		[] TB, New-bacteriologically confirm			
5. DSSM Results:		[] TBDC: _____		[] TB, New-bacteriologically confirm			
Month | Date Examined | Result		REGISTRATION GROUP:		Ia. 2HRZE/10HR		Ib. 2HRZES/1HRZE/9HRE	
1. New		[] New [] IPTOU		1. EPTB, New-CNS/bones or joint		1. EPTB, retx-CNS/bones or joint	
2. Relapse		[] Relapse					
3. Relapse After Failure		[] Relapse After Failure					
4. Other		[] Other					
5. Other		[] Other					
5. PICT done? [] Yes [] No		TREATMENT STARTED:		month ____ day ____ year ____			
DIAGNOSIS: [] TB DISEASE		[] CURED		[] TREATMENT FAILED			
[] TB INFECTION, for IPT (for children below 5yo)		[] TREATMENT COMPLETED		[] LOST TO FOLLOW-UP			
[] TB EXPOSURE, for IPT (for children below 5 yo)		[] DIED specify cause of death: _____		[] NOT EVALUATED			

3. For children, check the five criteria for diagnosing PTB in children (household exposure, clinical symptoms, TST, chest X-ray, and other laboratory exams).

Form 4. TB TREATMENT/ IPT CARD

TB CASE NUMBER/ IPT No. DATE THE CARD WAS OPENED REGION/PROVINCE NAME OF DOTS FACILITY

NAME OF PATIENT: Date of Birth: Age: Sex: Height: BCG Scar: [] Yes [] No [] Doubtful

COMPLETE ADDRESS AND CONTACT NOS.: Other Patient Details: Occupation: Philhealth No.: Contact Person: Contact Nos.:

SOURCE OF PATIENT: [] Public Health Center [] Community [] Other [] Private

DIAGNOSTIC TESTS: 1. Tuberculin Skin Testing (TST): Result: mm Date read: / / 2. CXR Findings: Date of exam: / / TBDC: / / 3. Other exam: Date of exam: / / 4. XPERT MTB/RIF (Date/Results): 5. DSSM Results

Month	Due Date	Date Examined	Result
0			
1			
2			
3			
4			
5			
6			
>7			

5. PICT done? [] Yes [] No

DIAGNOSIS: [] TB DISEASE [] TB INFECTION, for IPT (for children below 5yo) [] TB EXPOSURE, for IPT (for children below 5 yo)

HISTORY OF ANTI-TB DRUG INTAKE: [] No [] Yes When: Duration: [] less than 1 mo. [] 1 mo. or more Check drugs: [] H [] R [] Z [] E [] S

BACTERIOLOGICAL STATUS: [] Bacteriologically Confirmed [] Clinically Diagnosed

CLASSIFICATION OF TB DISEASE: [] Pulmonary [] Extra-pulmonary specify: [] Relapse [] Other [] TALF [] Transfer-in [] Treatment After Failure

REGISTRATION GROUP: [] New [] PTOU [] Relapse [] Other [] TALF [] Transfer-in [] Treatment After Failure

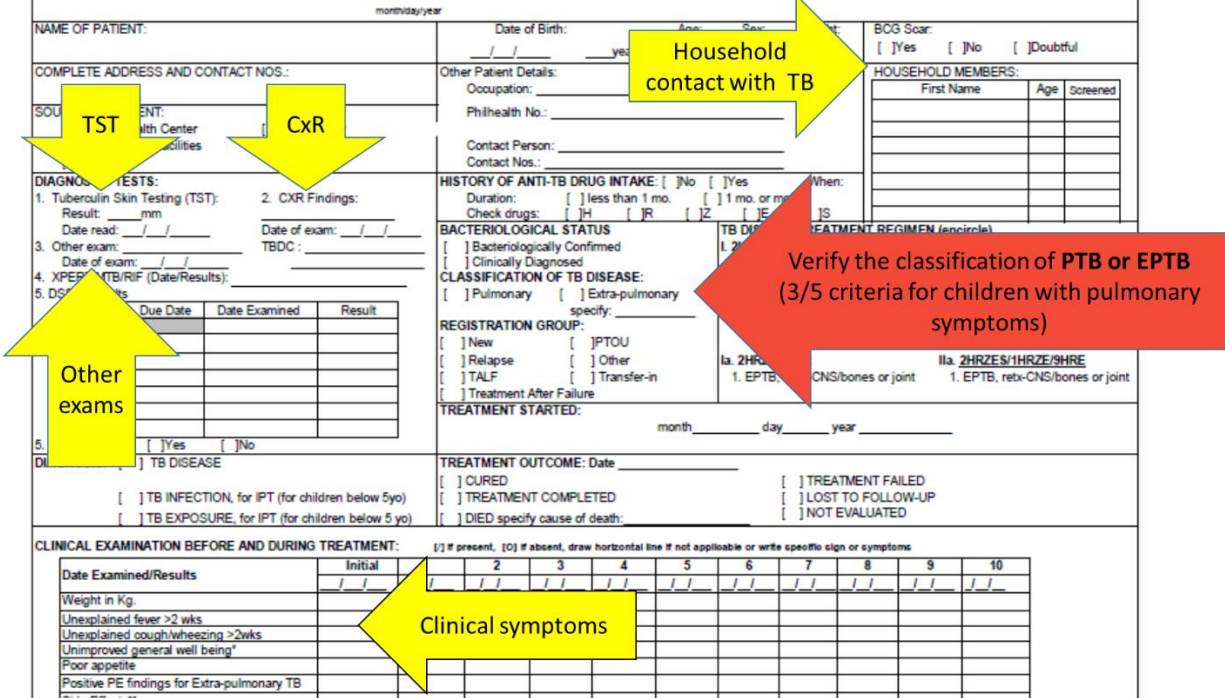
TREATMENT REGIMEN (encircle): I. 2HRZE/1HRZE/9HRE 1. Relapse 2. PTB, New - clinically diagnosed 3. EPTB, New 4. TALF 5. Other IIa. 2HRZE/10HR 1. EPTB, New-CNS/bones or joint IIb. 2HRZES/1HRZE/9HRE 1. EPTB, retx-CNS/bones or joint

TREATMENT STARTED: month ___ day ___ year ___

TREATMENT OUTCOME: Date: [] CURED [] TREATMENT FAILED [] TREATMENT COMPLETED [] LOST TO FOLLOW-UP [] DIED specify cause of death: [] NOT EVALUATED

CLINICAL EXAMINATION BEFORE AND DURING TREATMENT: [] # present, [O] if absent, draw horizontal line if not applicable or write specific sign or symptoms

Date Examined/Results	Initial	1	2	3	4	5	6	7	8	9	10
Weight in Kg.											
Unexplained fever >2 wks											
Unexplained cough/wheezing >2wks											
Unimproved general well being*											
Poor appetite											
Positive PE findings for Extra-pulmonary TB											
Side Effects**											



4. To determine the correct **classification based on bacteriological status**, check the following: DSSM results, Xpert MTB/RIF results or TB culture results (if available).

Form 4. TB TREATMENT/ IPT CARD

TB CASE NUMBER/ IPT No. DATE THE CARD WAS OPENED REGION/PROVINCE NAME OF DOTS FACILITY

NAME OF PATIENT: Date of Birth: Age: Sex: Height: BCG Scar: [] Yes [] No [] Doubtful

COMPLETE ADDRESS AND CONTACT NOS.: Other Patient Details: Occupation: Philhealth No.: Contact Person: Contact Nos.:

SOURCE OF PATIENT: [] Public Health Center [] Community [] Other [] Private

DIAGNOSTIC TESTS: 1. Tuberculin Skin Testing (TST): Result: mm Date read: / / 2. CXR Findings: Date of exam: / / TBDC: / / 3. Other exam: Date of exam: / / 4. XPERT MTB/RIF (Date/Results): 5. DSSM Results

Month	Due Date	Date Examined	Result
0			
1			
2			
3			
4			
5			
6			
>7			

5. PICT done? [] Yes [] No

DIAGNOSIS: [] TB DISEASE [] TB INFECTION, for IPT (for children below 5yo) [] TB EXPOSURE, for IPT (for children below 5 yo)

HISTORY OF ANTI-TB DRUG INTAKE: [] No [] Yes When: Duration: [] less than 1 mo. [] 1 mo. or more Check drugs: [] H [] R [] Z [] E [] S

BACTERIOLOGICAL STATUS: [] Bacteriologically Confirmed [] Clinically Diagnosed

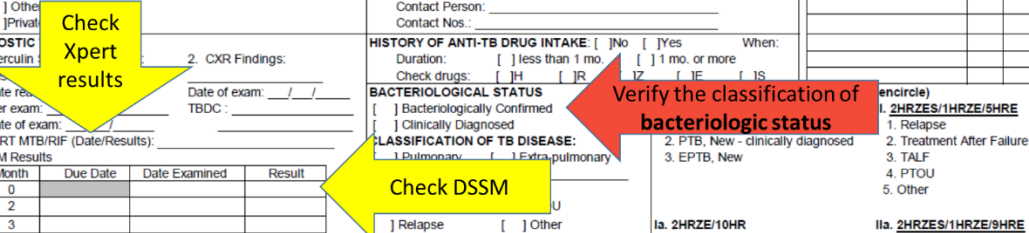
CLASSIFICATION OF TB DISEASE: [] Pulmonary [] Extra-pulmonary specify: [] Relapse [] Other [] TALF [] Transfer-in [] Treatment After Failure

REGISTRATION GROUP: [] New [] PTOU [] Relapse [] Other [] TALF [] Transfer-in [] Treatment After Failure

TREATMENT REGIMEN (encircle): I. 2HRZES/1HRZE/9HRE 1. Relapse 2. PTB, New - clinically diagnosed 3. EPTB, New 4. TALF 5. Other IIa. 2HRZE/10HR 1. EPTB, New-CNS/bones or joint IIb. 2HRZES/1HRZE/9HRE 1. EPTB, retx-CNS/bones or joint

TREATMENT STARTED: month ___ day ___ year ___

TREATMENT OUTCOME: Date: [] CURED [] TREATMENT FAILED [] TREATMENT COMPLETED [] LOST TO FOLLOW-UP [] DIED specify cause of death: [] NOT EVALUATED



5. To determine the correct **registration group**, check the history of treatment and treatment regimen provided.

Form 4. TB TREATMENT/ IPT CARD

TB CASE NUMBER/ IPT No. DATE THE CARD WAS OPENED REGION/PROVINCE NAME OF DOTS FACILITY

NAME OF PATIENT: Age: Sex: Height: BCG Scar: [] Yes [] No [] Doubtful

COMPLETE ADDRESS AND CONTACT NOS.: Other Patient Occurred: HOUSEHOLD MEMBERS: Age Screened

SOURCE OF PATIENT: [] Public Health Center [] Community [] Other public facilities [] Private

DIAGNOSTIC TESTS: 1. Tuberculin Skin Testing (TST): 2. CXR Findings: HISTORY OF ANTI-TB DRUG INTAKE [] No [] Yes When: Duration: [] less than 1 mo. [] 1 mo. or more Check drugs: [] H [] R [] Z [] E [] S

3. Other exam: Date of exam: TBDC: BACTERIOLOGICAL STATUS [] Bacteriologically Confirmed [] Clinically Diagnosed TB DISEASE TREATMENT REGIMEN (encircle) I. 2HRZE/4HR II. 2HRZES/1HRZE/5HRE 1. PTB, New-bacteriologically confirm 1. Relapse 2. PTB, New - clinically diagnosed 2. Treatment After Failure 3. EPTB, New 3. TALF 4. PTOU 5. Other

4. XPERT MTB/RIF (Date/Results): CLASSIFICATION OF TB DISEASE: [] Pulmonary [] Extra-pulmonary specify: REGISTRATION GROUP: [] New [] PTOU [] Relapse [] Other [] TALF [] Transfer-in [] Treatment After Failure Ila. 2HRZE/10HR IIa. 2HRZES/1HRZE/9HRE 1. EPTB, New-CNS/bones or joint 1. EPTB, retx-CNS/bones or joint

5. DSSM Results

Month	Due Date	Date Examined	Result
0			
1			
2			
3			
4			
5			
6			
>7			

5. PICT done? [] Yes [] No TREATMENT STARTED: month day year

DIAGNOSIS: [] TB DISEASE [] TB INFECTION, for IPT (for children below 5yo) [] TB EXPOSURE, for IPT (for children below 5 yo) [] TREATMENT FAILED [] LOST TO FOLLOW-UP [] NOT EVALUATED

Check history of previous treatment

Check treatment regimen

Verify the registration group

6. To determine the correct **treatment outcome**, get last year's cohort in the same quarter you are reviewing and check the following: bacteriologic status at start of treatment, follow-up DSSM results, completion of drug intake and resolution of symptoms.

Form 4. TB TREATMENT/ IPT CARD

TB CASE NUMBER/ IPT No. DATE THE CARD WAS OPENED REGION/PROVINCE NAME OF DOTS FACILITY

NAME OF PATIENT: Date of Birth: Age: Sex: Height: BCG Scar: [] Yes [] No [] Doubtful

COMPLETE ADDRESS AND CONTACT NOS.: Other Patient Details: HOUSEHOLD MEMBERS: First Name Age Screened

SOURCE OF PATIENT: [] Public Health Center [] Community [] Other public facilities [] Private

DIAGNOSTIC TESTS: 1. Tuberculin Skin Testing (TST): 2. CXR Findings: HISTORY OF ANTI-TB DRUG INTAKE [] No [] Yes When: Duration: [] less than 1 mo. [] 1 mo. or more Check drugs: [] H [] R [] Z [] E [] S

3. Other exam: Date of exam: TBDC: BACTERIOLOGICAL STATUS [] Bacteriologically Confirmed [] Clinically Diagnosed TB DISEASE TREATMENT REGIMEN (encircle) I. 2HRZE/4HR II. 2HRZES/1HRZE/5HRE 1. PTB, New-bacteriologically confirm 1. Relapse 2. PTB, New - clinically diagnosed 2. Treatment After Failure 3. EPTB, New 3. TALF 4. PTOU 5. Other

4. XPERT MTB/RIF (Date/Results): CLASSIFICATION OF TB DISEASE: [] Pulmonary [] Extra-pulmonary specify: REGISTRATION GROUP: [] New [] PTOU [] Relapse [] Other [] TALF [] Transfer-in [] Treatment After Failure Ila. 2HRZE/10HR IIa. 2HRZES/1HRZE/9HRE 1. EPTB, New-CNS/bones or joint 1. EPTB, retx-CNS/bones or joint

5. DSSM Results

Month	Due Date	Date Examined	Result
0			
1			
2			
3			
4			
5			
6			
>7			

5. PICT done? [] Yes [] No TREATMENT OUTCOME: Date month day year [] CURED [] TREATMENT COMPLETED [] TREATMENT FAILED [] LOST TO FOLLOW-UP [] NOT EVALUATED

DIAGNOSIS: [] TB DISEASE [] TB INFECTION, for IPT (for children below 5yo) [] TB EXPOSURE, for IPT (for children below 5 yo) [] DIED specify cause of death:

CLINICAL EXAMINATION BEFORE AND DURING TREATMENT: [] If present, [] If absent, draw horizontal line if not applicable or write specific sign or symptoms

Date Examined/Results	Initial	1	2	3	4	5	6	7	8	9	10
Weight in Kg	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Unexplained fever >2 wks	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Unexplained cough/wheezing >2wks	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Unimproved general well being*	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Poor appetite	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Positive PE findings for Extra-pulmonary TB	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /
Side Effects**	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /	/ /

Check bacteriologic status at start Tx

Check DSSM follow-up results

Verify the treatment outcome

Check resolution of symptoms

Step 3. Checking for compliance to MDR screening

The DQC provides an opportunity to check compliance with NTP procedures although this is not strictly an attribute of data. **One aspect included in this toolkit is checking for compliance with MDR TB screening.** This can be checked from the DSTB register and the Form 1. Presumptive TB Master List.

Task Objective

After this step, you should have identified all presumptive MDR TB patients in the DSTB register and Presumptive TB Master List for the monitoring period and checked for Xpert results for each.

Process

- From the DSTB register of current quarter, identify and count the presumptive DRTB, namely: number of retreatment cases (i.e., Relapse, TALF, TAF, PTOU, Other) and number of non-converters (still smear positive at 3 months). Check if the retreatment and non-converters have an Xpert result (see green arrow below). If the results are not indicated in the DSTB register, check the Presumptive TB Master List and look for the name of the same patients. Check column #11 of Presumptive TB Master List for the Xpert results.

Date of Registration (1)	TB Case No. (2)	Name (3)	Date of Birth (4)	Age (5)	Sex (6)	Address (7)	Source of Patient (8)				Anatomic site (P/SP) (9)	Bacteriological status (B/C/C/D) (10)	REGISTRATION GROUP (11)						Treatment Regimen (12)			
							Public Health Centre	Other public facilities	Private	Community			New	Relapse	TALF	Treatment After Failure	PTOU	Other				

Count all retreatment cases

Date Started Treatment (13)	Sputum Examination/Xpert Result (14) (upper space: date of exam; lower space: result)								TREATMENT OUTCOME (15) (Write exact date of last intake of drugs)						PICT Done? Write result & date when PICT was done (16)		Remarks [CXR result, Phis/Health member_TBDC result, CPT/ART, etc] (17)					
	Before Treatment		2 nd mon.	3 rd mon.	4 th mon.	5 th mon.	6 th mon.	7 th mon.	8 th mon.	Cured	Completed	Died	Failed	Lost to Follow-up	Not evaluated	Yes/No		Date/Result				
	DSSM	Xpert																				

Count non-converters

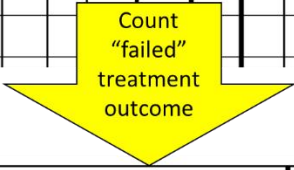
Check if retreatment and non-converters have an Xpert result

- Indicate the numbers in DQC Form B.

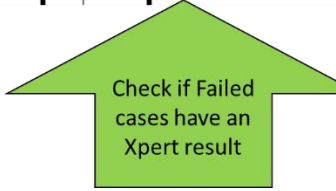
4. Check if Presumptive DRTB are screened	No. identified	No. Screened	Remarks
a. Retreatment cases (Cat 2)	5	5	from DSTB register (current quarter)
b. Non-converters (positive at 3 rd month)	1	0	from DSTB register (current quarter)
c. Cases with Failed Outcome			
d. Identified as Presumptive DRTB from Presumptive TB Masterlist			

3. From the DSTB Register of the same quarter one year ago, identify and count the number of patients with treatment outcome of "Treatment Failed." Among these patients, check for an Xpert MTB/RIF result in the DSTB Remarks column.

Date of Registration (1)	TB Case No. (2)	Name (3)	Date of Birth (4)	Age (5)	Sex (6)	Address (7)	Source of Patient (8)				Anatomic site (PREP) (9)	Bacteriological status (BC/CD) (10)	REGISTRATION GROUP (11)						Treatment Regimen (12)
							Public Health Center	Other public facilities	Private	Community			new	Relapse	TALF	Treatment After Failure	PTOU	Other		Transfer in



Date Started Treatment (13)	Sputum Examination/Xpert Result (14) (upper space: date of exam; lower space: result)								TREATMENT OUTCOME (15) (Write exact date of last intake of drugs)					PICT Done? Write result & date when PICT was done (16)		Remarks (CXR result, PhilHealth member, TBDC re-CPT/ART, etc) (17)		
	Before Treatment	2 nd mon.	3 rd mon.	4 th mon.	5 th mon.	6 th mon.	7 th mon.	8 th mon.	Cured	Completed	Died	Failed	Lost to Follow-up	Not evaluated	Yes/No		Date/Result	
	DSSM	Xpert																



4. Record findings in DQC Form B.

4. Check if Presumptive DRTB are screened	No. identified	No. Screened	Remarks
a. Retreatment cases (Cat 2)	5	5	from DSTB register (current quarter)
b. Non-converters (positive at 3 rd month)	1	0	from DSTB register (current quarter)
c. Cases with Failed Outcome	2	0	from DSTB register (same quarter 1 year ago)
d. Identified as Presumptive DRTB from Presumptive TB Masterlist			

5. If the *Form 1. Presumptive TB Master List* is available, count the number of registered presumptive TB that have been identified as presumptive DRTB by looking at column #12 (Presumptive DRTB Y/N). Among these, check for an Xpert MTB/RIF result by looking at column #11 (Other Diagnostic Tests).

Form 1. Presumptive TB Masterlist

Date of Consult (1)	Name (SURNAME/First name/Middle name) (2)	Age (3)	Sex (4)	Address (5)	Referring Unit (6)	Household Contact of a TB Case? (Y/N) (7)

Count presumptive DRTB

Date Sputum Collected/ Result (8)	Date TST done/ Reading (9)		Chest Xray examination (Date/ result) (10)	Other diagnostic tests (11)	Presumptive DR-TB (Y/N) (12)	Remarks: Write if For treatment (state the TB case number); Write if for referral (specify the facility and outcome of referral); and, write if Not TB. (13)
	1st	2nd				

Cross-check name presumptive DRTB from TB register

Check if there is an Xpert result

6. Record findings in DQC Form B.

4. Check if Presumptive DRTB are screened	No. identified	No. Screened	Remarks
a. Retreatment cases (Cat 2)	5	5	from DSTB register (current quarter)
b. Non-converters (positive at 3 rd month)	1	0	from DSTB register (current quarter)
c. Cases with Failed Outcome	2	0	from DSTB register (same quarter 1 year ago)
d. Identified as Presumptive DRTB from Presumptive TB Masterlist	8	4	from Presumptive TB masterlist (current quarter)

7. Since Step 3 is under Checking for Accuracy, DQC Form B when properly accomplished will look something like the sample below:

Municipality/City: _____

Checked by: _____

DQC Form B: Assessing DATA ACCURACY

Labeling of TB cases [col. 1]	No. of patients with Accurate entries	No. of patients with Inaccurate entries	Remarks [col. 4]
1. Classification	25	0	
2. Registration Group	23	2	2 cases classified as new but with (+) history of treatment > 1 month
3. Treatment outcome	23	2	2 cases classified as new and given Cat 1 but with history of Tx > 1 month
4. Check if Presumptive DRTB are screened	No. identified	No. Screened	Remarks
a. Retreatment cases (Cat 2)	5	3	2 cases with no Xpert result and no remarks indicated but allegedly referred
b. Non-converters (positive at 3 rd month)	2	0	Not indicated if referred for DRTB screening
c. Cases with Failed Outcome	2	0	Not indicated if referred for DRTB screening
d. Identified as Presumptive DRTB from Presumptive TB Masterlist	8	7	1 case of presumptive DRTB not screened, not noted in remarks why

Conclusion:

- Cases with history of treatment misclassified as NEW
- CURED assigned to some cases even if without follow-up smear examination

Suggested Tool: DQC Form B**Step 4. Checking for Consistency**

Once all cases have been encoded and the accuracy based on NTP case definitions has been checked and corrected, a final consistency check will be done to ensure that there are no encoding errors. The ITIS system will generate a quarterly report that, being automated, is expected to have no counting errors. However, should there be errors in encoding, this will reflect as inconsistency between a manual count and the ITIS-generated report. Since this is just a final check, there is no need to manually count all variables in the quarterly report. Instead, only selected variables will be counted from the DSTB Register and compared with the ITIS-generated quarterly report.

Task Objective

After this step, you should have compared the total number of TB cases in the DSTB Register and ITIS, making sure that they are equal for the same monitoring period.

Process

1. From the DSTB Register of the current period, count the following cases:
 - a. Bacteriologically Confirmed NEW
 - b. Bacteriologically Confirmed RELAPSE
 - c. Bacteriologically Confirmed Retreatment (TALF, TAF, PTOU, Other)
 - d. Clinically Diagnosed NEW
 - e. Clinically Diagnosed Relapse
 - f. Clinically Diagnosed Retreatment (TALF, TAF, PTOU, Others)

Record your count using the paper-based *Report 3a. Quarterly Report* on case finding of drug-susceptible TB cases. See sample form below.

Note that only totals are required for this consistency check and there is no need to disaggregate by anatomic classification or by sex.

A. Bacteriologically Confirmed TB Cases Registered During the Quarter by Registration Group and Sex

CLASSIFICATION	NEW		RELAPSE		Previously Treated (except Relapse)		TOTAL	
	M	F	M	F	M	F	M	F
Pulmonary								
Extrapulmonary								
Subtotal								
TOTAL								

B. Clinically Diagnosed TB Cases Registered During the Quarter by Registration Group and Sex

CLASSIFICATION	NEW		RELAPSE		Previously Treated (except Relapse)		TOTAL	
	M	F	M	F	M	F	M	F
Pulmonary								
Extrapulmonary								
Subtotal								
TOTAL								

C. All New and Relapse TB Cases (All Forms) by Age and Sex

	0-4		5-14		15-24		25-34		35-44		45-54		55-64		>=65		TOTAL	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
New																		
Relapse																		
Subtotal																		
TOTAL																		

2. Generate the ITIS report 3a using the same procedures as discussed in completeness check. Compare the six figures above with the ITIS-generated report.

Report 3a. Quarterly report on Case Finding of Drug Susceptible TB Cases and IPT
(Source of Data - Form 6a. Drug Susceptible TB Register and Form 9. IPT Register)

Region:	CENTRAL LUZON (Region III)	Report for:	4th Quarter of year 2015
Province/City:	BATAAN	Date Reported:	February 15, 2016
DOTS Facility:		Prepared by:	Claris Fajardo

Population of catchment area:	
For Province, City and Regional level:	
Total no. of DOTS facilities that submitted reports	
Total no. of DOTS Facility	

A. Bacteriologically confirmed TB Cases registered during the quarter by registration group and sex

Classification	New		Relapse		Previously Treated (except Relapse)		Total	
	M	F	M	F	M	F	M	F
Pulmonary	81	47	13	9	2	1	96	57
Extrapulmonary	0	0	1	0	0	0	1	0
Subtotal	81	47	14	9	2	1	97	57
TOTAL		128		23		3		154

B. Clinically diagnosed TB Cases registered during the quarter by registration group and sex

Classification	New		Relapse		Previously Treated (except Relapse)		Total	
	M	F	M	F	M	F	M	F
Pulmonary	283	227	25	11	4	1	312	239
Extrapulmonary	3	5	0	0	0	0	3	5
Subtotal	286	232	25	11	4	1	315	244
TOTAL		518		36		5		559

C. All New and Relapse TB Cases (All Forms) by Age and Sex

	0-4		5-14		15-24		25-34		35-44		45-54		55-64		65 and Above		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
New	88	71	78	69	34	25	36	23	40	26	35	26	30	25	26	14	367	279
Relapse	0	0	1	2	2	1	3	2	4	4	10	5	11	1	8	5	39	20
Subtotal	88	71	79	71	36	26	39	25	44	30	45	31	41	26	34	19	406	299
TOTAL		159		150		62		64		74		76		67		53		705

D. Source of All New and Relapse TB Cases (All Forms)

Total number of TB Cases	Public Walk-in patients	Other Public Facilities	Private Sector	Community
705	458	63	52	132

E. TB in Children

Total TB cases less than 15 years old	Number
Pulmonary	309
Extrapulmonary	0

F. HIV Status Among 15 Years Old and Above Cohort: Year: 2015 Quarter: 3

Number of Cases registered for the quarter (15 years old and above)	No. of cases tested or with known HIV status during the quarter	No. of TB Cases confirmed positive for HIV	Among HIV positive, number given	
			ART	CPT
0	0	0	0	0

G. Individuals Given IPT

	Number given IPT
Children age 0-4 (without HIV)	0
PLM/HV	0

Number of Trans-in cases: 9

Total cases registered (Table A + Table B + Trans-in cases): 722

- If there are discrepancies, check your manual re-count. Should there still be a discrepancy, generate a patient list of the data which is not consistent, compare this with the paper-based DSTB register and identify the inaccurately encoded variable. Correct the encoding.



List of TB Patients

No.	Date of Reg.	TB Case No.	Last Name	First Name	Middle Name	Age	Sex	Brgy	City/Municipal	Province	Region	Health Facility	Source of Patient	Classification	Type of Patient	Category	Bacteriological Status	Date Started Tx	Trea Outcom
1	2015-12-01	15042213	LOBO	CELESTINO	F.	71	M	HAPPY VALLEY	DINALUPIHAN	BATAAN	CENTRAL LUZON (Region III)	DINALUPIHAN RURAL HEALTH UNIT II	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-12-01	ON TRE
2	2015-10-29	15050245	LOBO	CELESTINO	F.	6	M	CULIS	HERMOSA	BATAAN	CENTRAL LUZON (Region III)	HERMOSA RURAL HEALTH UNIT	OTHER PUBLIC FACILITY	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-10-29	ON TRE
3	2015-10-30	15001124	LOBO	CELESTINO	F.	3	F	BALUT II	PILAR	BATAAN	CENTRAL LUZON (Region III)	PILAR RURAL HEALTH UNIT	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-10-31	ON TRE
4	2015-12-04	15011236	LOBO	CELESTINO	F.	5	M	BIAAN	MARIVELES	BATAAN	CENTRAL LUZON (Region III)	MARIVELES RURAL HEALTH UNIT III	PRIVATE FACILITY	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-13	ON TRE
5	2015-11-20	15011232	LOBO	CELESTINO	F.	6	M	BIAAN	MARIVELES	BATAAN	CENTRAL LUZON (Region III)	MARIVELES RURAL HEALTH UNIT III	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-16	ON TRE
6	2015-11-19	15060242	LOBO	CELESTINO	O.	2	F	KITANG 2 & LUZ	LIMAY	BATAAN	CENTRAL LUZON (Region III)	LIMAY RURAL HEALTH UNIT	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-07	ON TRE

4. Once corrected, generate *Report 3a* again and compare.
5. From the DSTB register of the same quarter 1 year ago, count the following cases:
 - a. Bacteriologically Confirmed NEW, Cured
 - b. Bacteriologically Confirmed NEW, Treatment Completed
 - c. Bacteriologically Confirmed RELAPSE, Cured
 - d. Bacteriologically Confirmed RELAPSE, Treatment Completed
 - e. Clinically Diagnosed NEW, Treatment Completed
 - f. Clinically Diagnosed Relapse, Treatment Completed

Record your count in the paper-based *Report 5a. Quarterly Report on Treatment Outcome of Drug Susceptible TB Cases.*

Note that only totals for cured and completed are required for this consistency check; there is no need to count the other outcomes.

A. Bacteriologically Confirmed New and Relapse TB Cases

Total number of TB cases		Cured	Completed	Died	Failed	Lost to follow-up	Not Evaluated	TOTAL
	New							
	Relapse							

Note: Exclude from the cohort the cases found to be drug resistant at anytime during treatment.

Number of cases excluded from the cohort= _____

B. Clinically Diagnosed New and Relapse TB Cases

Total number of TB cases		Completed	Died	Failed	Lost to follow-up	Not Evaluated	TOTAL
	New						
	Relapse						

Note: Exclude from the cohort the cases found to be drug resistant at anytime during treatment.

Number of cases excluded from the cohort= _____

6. Generate the *ITIS Report 5a*. Compare the six figures above with the ITIS-generated report.

Report 5a. Quarterly Report on Treatment Outcome of Drug Susceptible TB Cases
(Data Source - Form 6a, Drug Susceptible TB Register)

Region:	CENTRAL LUZON (Region III)	Cohort for cases registered in:	1st Quarter of year 2015
Province/City:	BATAAN	Date Reported:	June 17, 2016
DOTS Facility:		Prepared by:	Andro Gutierrez
Population of catchment area:			
For Province, City and Regional level:			
Total no. of DOTS facilities that submitted reports			
Total no. of DOTS Facility			

A. Bacteriologically-confirmed New and Relapse TB Cases

Total number of TB cases	Registration Group	Cured	Completed	Died	Failed	Lost to follow	Not Evaluated	Total
153	New	126	15	4	1	4	3	153
17	Relapse	10	2	1	0	2	2	17

Note: Exclude from the cohort the cases found to be drug resistant at anytime during treatment.
Number of cases excluded from the cohort = 0

B. Clinically-diagnosed New and Relapse TB Cases

Total number of TB cases	Registration Group	Completed	Died	Failed	Lost to follow	Not Evaluated	Total number evaluated
476	New	454	6	0	13	1	476
28	Relapse	27	1	0	0	0	28

Note: Exclude from the cohort the cases found to be drug resistant at anytime during treatment.
Number of cases excluded from the cohort = 0

C. Previously Treated Cases (except Relapse)

Total number of TB cases	Registration Group	Cured	Completed	Died	Failed	Lost to follow	Not Evaluated	Total number evaluated
22	C. Retreatment(excluding relapse)	4	13	2	0	1	2	22

Note: Exclude from the cohort the cases found to be drug resistant at anytime during treatment.
Number of cases excluded from the cohort = 0

D. Other Cohorts

Total number of TB cases	Registration Group	Cured	Completed	Died	Failed	Lost to follow	Not Evaluated	Total number evaluated
0	PLHIV cases (all registration groups)	0	0	0	0	0	0	0
	Children Given IPT							
	PLHIV Given IPT							

Note: Exclude from the cohort the cases found to be drug resistant at anytime during treatment.
Number of cases excluded from the cohort =

7. If there are discrepancies, check your manual re-count. Should there still be a discrepancy, generate a patient list of the data which is not consistent and identify the inaccurately encoded outcome.

8. Once corrected, generate *Report 5a* again and compare.
9. Indicate in DQC Form C whether the initial check showed consistent or inconsistent results and indicate reasons in the **Remarks** column. Note that the initial finding on consistency should be recorded, not the post-corrected finding.

DQA Form C: Assessing CONSISTENCY OF DATA

C.1. ITIS DATA

NTP Forms	Consistent		Remarks
	Yes	No	
1. Qtr. Report on Case Finding	✓		
2. Qtr. Report on Treatment Outcomes		✓	There were 5 cases with no recorded treatment outcome (not MDRTB)

C.2. Paper-based data

NTP Forms	Consistent		Remarks
	Yes	No	
1. Treatment Card with TB Register			
2. Qtr. Report on Lab. Activities			

10. For Part C.2. Paper-based data of DQA Form C, using the same set of treatment cards used in *Checking for Accuracy*, compare the information in the treatment card with that of the TB register. Make sure that all information are consistent in both records. Record the number of inconsistencies under the “NO” column. And note the details under the **Remarks** column.
11. Do the quarterly report and lab activities next and record findings in the last row.

Step 5. Checking for Timeliness

Timeliness of updating records can be aided by automated system checks, still to be developed, that prompt the user on due dates of sputum follow-up and expected end of treatment based on treatment start date. One of the suggested enhancements is computation of turnaround time (TAT).

In this step, timeliness of starting treatment is measured by getting TAT. While program turnaround time is defined as interval between the date sputum was collected and the date treatment was started, the former is not available in the DSTB Register and ITIS. Only the date DSSM (or Xpert whichever is earlier) was read is indicated under date of baseline DSSM result. Hence, for purposes of these procedures, TAT will be estimated as the interval between date DSSM (or Xpert) was read and treatment started. This will be disaggregated for bacteriologically confirmed (BC) and clinically diagnosed (CD) TB cases.

Task Objective

After this step, you should have computed the average program turnaround time for bacteriologically confirmed and clinically diagnosed TB cases.

Process

1. Generate the patient list for the current period. Convert this to an Excel file using the Excel upload command on the right upper portion of the table.



List of TB Patients

No.	Date of Reg.	TB Case No.	Last Name	First Name	Middle Name	Age	Sex	Brgy	City/Municipal	Province	Region	Health Facility	Source of Patient	Classification	Type of Patient	Category	Bacteriological Status	Date Started Tx	T Outcome
1	2015-12-01	15042213	ABAY	CELESTINO	F.	71	M	HAPPY VALLEY	DINALUPIHAN	BATAAN	CENTRAL LUZON (Region III)	DINALUPIHAN RURAL HEALTH UNIT II	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-12-01	ONT
2	2015-10-29	15050245	ABAY	CELESTINO	F.	6	M	CULIS	HERMOSA	BATAAN	CENTRAL LUZON (Region III)	HERMOSA RURAL HEALTH UNIT	OTHER PUBLIC FACILITY	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-10-29	ONT
3	2015-10-30	15001124	ABAY	CELESTINO	F.	3	F	BALUT II	PILAR	BATAAN	CENTRAL LUZON (Region III)	PILAR RURAL HEALTH UNIT	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-10-31	ONT
4	2015-12-04	15011236	ABAY	CELESTINO	F.	5	M	BIAAN	MARIVELES	BATAAN	CENTRAL LUZON (Region III)	MARIVELES RURAL HEALTH UNIT III	PRIVATE FACILITY	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-13	ONT
5	2015-11-20	15011232	ABAY	CELESTINO	F.	6	M	BIAAN	MARIVELES	BATAAN	CENTRAL LUZON (Region III)	MARIVELES RURAL HEALTH UNIT III	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-16	ONT
6	2015-11-19	15060242	ABAY	CELESTINO	F.	2	F	KITANG 2 & LUZ	LIMAY	BATAAN	CENTRAL LUZON (Region III)	LIMAY RURAL HEALTH UNIT	PUBLIC HEALTH CENTER	Pulmonary	NEW	I	Clinically diagnosed (DSTB)	2015-11-07	ONT

2. From the Excel file, delete or hide other columns except the following: TB case number, patient name, date start treatment, date baseline DSSM and baseline DSSM result. Make sure that dates are formatted as “dates” in format cell command.

TB Case No.	Name of Patient	DATE START TREATMENT	DATE BASELINE DSSM	Result (baseline DSSM)
161010002	AB	1/9/2016	1/2/2016	0
161010005	BB	1/14/2016	1/5/2016	0
161010007	CA	1/20/2016	1/11/2016	0
161010008	CB	1/22/2016	1/10/2016	0
161010003	AC	1/10/2016	1/8/2016	1+
161010004	BA	1/10/2016	1/8/2016	1+
161010009	CC	1/25/2016	1/23/2016	1+
161010010	DA	1/27/2016	1/24/2016	1+
161010001	AA	1/5/2016	1/2/2016	2+
161010006	BC	1/15/2016	1/13/2016	2+

- Sort the list according to result of baseline sputum to separate those with negative results (“0”) from those with positive results
- Add a column after Result (baseline DSSM) and label as TAT. Insert the formula for computing TAT as “= (cell on date start treatment) – (cell on date baseline DSSM)”. Apply this formula to all rows to get TAT for each patient.

1	A	B	C	D	E	F
2	TB Case No.	Name of Patient	DATE START TREATMENT	DATE BASELINE DSSM	Result (baseline DSSM)	TAT
3	161010002	AB	1/9/2016	1/2/2016	0	7
4	161010005	BB	1/14/2016	1/5/2016	0	9
5	161010007	CA	1/20/2016	1/11/2016	0	9
6	161010008	CB	1/22/2016	1/10/2016	0	12
7	161010003	AC	1/10/2016	1/8/2016	1+	2
8	161010004	BA	1/10/2016	1/8/2016	1+	2
9	161010009	CC	1/25/2016	1/23/2016	1+	2
10	161010010	DA	1/27/2016	1/24/2016	1+	3
11	161010001	AA	1/5/2016	1/2/2016	2+	3
12	161010006	BC	1/15/2016	1/13/2016	2+	2

=C3-D3

- Add another column at the end of the table for the average TAT. Compute for the average TAT of BC and CD cases separately. In the last column of the last CD patient, insert the formula for computing average as “=AVERAGE (select all TAT cells of CD cases)”. Do the same for BC cases. Alternatively, median (the value with equal number of units that are lower and higher) and mode (the most frequently occurring value) may also be obtained using the above formula but using MODE or MEDIAN instead of AVERAGE.

1	A	B	C	D	E	F	
2	TB Case No.	Name of Patient	DATE START TREATMENT	DATE BASELINE DSSM	Result (baseline DSSM)	TAT	
3	161010002	AB	1/9/2016	1/2/2016	0	7	
4	161010005	BB	1/14/2016	1/5/2016	0	9	=AVERAGE(F3:F6)
5	161010007	CA	1/20/2016	1/11/2016	0	9	↑
6	161010008	CB	1/22/2016	1/10/2016	0	12	
7	161010003	AC	1/10/2016	1/8/2016	1+	2	
8	161010004	BA	1/10/2016	1/8/2016	1+	2	
9	161010009	CC	1/25/2016	1/23/2016	1+	2	=AVERAGE(F7:F12)
10	161010010	DA	1/27/2016	1/24/2016	1+	3	
11	161010001	AA	1/5/2016	1/2/2016	2+	3	↑
12	161010006	BC	1/15/2016	1/13/2016	2+	2	

6. Record the TAT in *DQC Form D*.

DQC Form D. Assessing Timeliness

NTP Forms	Updated		Remarks
	Yes	No	
1. Updating of DSSM follow-up			
2. Assignment of Treatment Outcomes			
3. Turnaround time (TAT)	9 days for CD 2 days for BC		

Step 6. Summarizing DQC Findings

Task Objectives

After this step, you should have prepared a summary of all findings for each DOTS facility.

Process

1. Summarize the DQC findings using the *DQC Form E*. This will be submitted to the CHO/PHO for reference in comparing data quality during the next DQC. Data from DQC forms A-D should be included in the summary.

DQC Form E: SUMMARY FORM

1) What are the important findings in the DQC that you would like to address?

	FINDINGS (include quantitative findings)
Completeness	<ul style="list-style-type: none"> only 23/30 cases encoded 5/35 cases did not have Tx outcome encoded
Accuracy	<ul style="list-style-type: none"> 35/35 of cases had accurate classification (P/EPTB; BC/CD) 2/35 cases with inaccurate reg group (NEW even is with history of treatment) 3/30 cases had completed outcome but incomplete record of intake Only 2/5 retreatment case with Xpert result; 0/1 non-converter referred for Xpert; 0/2 failed TB cases referred for Xpert
Consistency	<ul style="list-style-type: none"> ITIS quarterly reports consistent with no discrepancy
Timeliness	<ul style="list-style-type: none"> TAT was 9 days for CDTB and 3 days for BCTB

2. Keep a record of all DQC findings and note which DOTS facility has made the greatest improvement.

Step 7. Computing NTP Indicators

The core indicators as of the present quarter should be computed. The indicators can be viewed using the TB GIS Dashboard, which is linked to ITIS data. Record the indicators at the lower portion of *DQC Form E*. Determine the variance from expected accomplishment for the period and propose interventions to address identified gaps in subsequent periods. The actions should be discussed by the DOTS facility with variance below the target accomplishment.

2) Which program indicator target did you not reach? What do you think is the major reason for not reaching the target?

	Accomp.	Reasons for Variance
1. Case Notification Rate (all forms)		
2. TB Case Detection Rate (all forms)		
3. Treatment Success Rate (all forms)		
4. Cure Rate (New Bacteriologically-confirmed)		

PART 2

A. DQC Workshop Activity Design

Expected outputs

At the end of the workshop, the PHO/CHO should be able to generate from ITIS the following validated reports:

1. Report 3a. Quarterly Report on Case Finding of Drug-susceptible TB Cases and IPT
2. Report 5a. Quarterly Report on Treatment Outcome of Drug-susceptible TB cases

Target participants

1. DOTS facility Medical or Nursing Staff in-charge on Reports
2. DOTS Facility ITIS (designated) Encoders
3. PHO/CHO NTP Coordinators (Facilitator)
4. PHO/CHO ITIS Technical Staff/Encoders (Facilitator)
5. DOHRO NTP Coordinators (Facilitator)
6. DOHRO ITIS Technical Staff/Encoders (Facilitator)

Requirements

The DOTS facility staff are required to bring the following:

1. Form 4. NTP Treatment Cards (both current and cohort in the period being checked)
2. Form 6a. Drug Susceptible TB Register (both current and cohort of period being checked)
3. Laptop computers (at least 1 per facility)
4. For offline versions – submission of updated dispatch files at least 7 working days before the workshop, and also the latest dispatch file submitted (saved in a flash drive)
5. Updated encoding of NTP records into ITIS

Logistical requirements for the workshop are as follows:

1. Should have internet connection of at least 10 mbps bandwidth, preferably with fiber network connectivity. If there is good signal from a mobile provider, an alternative is to provide mobile pocket Wi-Fi (5+10 mbps) for every two devices
2. Electric outlets and extensions cords adequate for number of devices expected
3. Ample space for workstations (desks and tables) according to number of DOTS facilities
4. At least one facilitator for every five DOTS facilities. However, for facilities with a large number of patients, more facilitators will be required.

General Guidelines

1. DQC procedures will be undertaken by a partner facility instead of the facility that owns the data. The DSTB Register and treatment cards should be given to the partner facility for checking.
2. Each facility will access ITIS using their user accounts and compare this with the manual verification done by the partner facility.

3. Each procedure will be done simultaneously and sequentially by all participants (i.e., completeness, accuracy, consistency, timeliness). The participant should not proceed to the next step without finishing the prior steps.
4. DQC Forms will be provided to record all findings during each step of the DQC procedures.
5. Findings for each facility will be summarized at the end of the checking. This will be submitted to the PHO/CHO for comparison and appropriate intervention.
6. Once the DQC procedures are completed, all facilities should submit the updated ITIS file and report in accordance with submission protocols. A tally of all facilities that have submitted validated reports at the end of the DQC procedures should be monitored by the PHO/CHO to ensure a complete provincial report at the end of the workshop.
7. Determination of core NTP indicators as of the current period will be done once validated reports are available. A discussion on reasons for variance, key findings, recommendations and agreements will conclude the workshop.

Standard Program

Time	Duration	Activity
DAY 1		
8-10 am	2 hours	<ul style="list-style-type: none"> • Checking completeness • Encoding of missing data
10am-12 pm	2 hours	Checking accuracy of data
1-4 pm	3 hours	Checking consistency of reports
4-5 pm	1 hour	Checking timeliness
DAY 2		
8-12 am	4 hours	Determining and Analyzing NTP Indicators <ul style="list-style-type: none"> • Analysis per LGU/DOTS Facility • Review of plans against performance • Agreements on next steps
1-5 pm	4 hours	For PHO/CHO: <ul style="list-style-type: none"> • Consolidation of LGU reports • Analysis of NTP indicators • Review of Plans against Performance

B. Summary of WHO RDQA Procedures

1. Develop the objectives and design for the region. The recommendation is to conduct RDQA annually for at least two DOTS facilities per province.
2. Finalize sites for visits.
3. Coordinate with the respective PHOs and RHUs.
4. Familiarize yourself with the RDQA Forms to be used (see attached toolkit: RDQA forms).
5. For data validation, do the following procedures:

- a. Using the RHU/HC TB register (paper-based), **randomly select at least 10 patients** from the designated cohort. If there are less than 10 patients for that period, include all and extend your random selection to the next quarter.
- b. Get the data for the 10 patients from the following records:
 - i. TB Register
 - ii. ITIS – ask the RHU staff to generate the list of patients of the cohort period
 - iii. Treatment Card – check if the treatment cards for selected patients are available
- c. Using the **RDQA Forms for treatment facility, check the consistency and accuracy** of data by doing the following:
 - i. Check completeness of treatment cards and encoding in the ITIS (3.1)
 - ii. Among smear-positive TB cases, check the turnaround time from sputum result to start of treatment if within 1 week (3.4)
 - iii. In Categories A and B sites, check consistency of recording “HIV testing done” (3.5)
 - iv. In Categories A and B sites with HIV+, check consistency of recording “ART given” (3.7)
 - v. Check among retreatment cases and non-converters (at 3 months) if DRTB screening was done (3.8)
 - vi. Check accuracy of treatment outcomes and the consistency of recording treatment outcomes (3.9)
 - vii. Check conduct of TB supervisory visits for the entire year (3.10)
 - viii. Check the sputum results of “Cured” patients (2.3) – **you will also use the TB Laboratory Register for this procedure**
 - ix. Check for “primary defaulters” in the same period (2.1) – **use both TB Laboratory register and HC TB register for this procedure**
6. For triangulation with patient data, write down the TB case number of the selected patients in the **RDQA Patient Interview Form** (same toolkit). Request a health staff or *barangay* (village) health worker to accompany you to the residence of the patients selected. The treatment cards you randomly selected for patients 1st to 5th will be the priority patients to be visited. If time will allow, you may proceed to visit patients 6th to 10th. (*Therefore, for this exercise you will need to visit a minimum of 5 patients and maximum of 10 patients*).
7. Explain the purpose of your visit to the patient then proceed to ask the questions and record accordingly. **Note that you need to bring the treatment cards of the patients to answer the questions.**
8. Consolidate the findings in all provinces and generate the web diagram (see toolkit: RDQA consolidation template).

C. Recommended Automated System Checks in ITIS

The recommended system checks are intended to prompt the ITIS user when encoded variables are not conforming with NTP standard definitions based on comparison with other variables. They may either be alerts only or mandatory, meaning, required to be corrected before entry is accepted. Ideally, if encoding

is already facility-based, these system checks should be mandatory to avoid encoding of inaccurate and inconsistent data.

1. If cured, this should have two negative DSSM results in continuation phase
2. If classified as CD, can check chest X-ray results (currently included as one variable in ITIS)
3. If Category 2, there must be an Xpert result
4. If NEW, this should have no history of previous treatment
5. For children diagnosed as TB, check the 3/5 clinical criteria
6. For outcome of cured or completed, there must be at least 168 days treatment for Category 1 or 224 days for Category 2 (if DOT recording in ITIS is used).
7. For treatment completed among children, check resolution of symptoms.
8. Alert the encoder if data on follow-up sputum exam has not been updated at prescribed times (e.g., 56 days, 140 days, 168 days after start treatment for Category 1; 84-140-224 days for Category 2).
9. Alert the encoder if no outcome has been encoded after 168 or 224 days from start of treatment (for Category 1 and Category 2, respectively).
10. Automate computation of turnaround time.

D. Data Quality Check Forms

A.1. ITIS-Data

Recording Forms	No. of patients in Register	No. of patients in ITIS	Remarks (provide details on missing data)
1. Form 6a. Drug Susceptible TB Register			from DSTB register (current quarter and same quarter 1 year ago)

A.2. Paper-based records

Recording Forms	No. of Patients w/ COMPLETE data	No. of patients w/ INCOMPELETE data	Remarks (provide details on missing data)
2. Form 1. Presumptive TB Masterlist			from Presumptive TB Masterlist (current quarter)

3. Form 3. NTP Laboratory Register			from NTP Laboratory Register (current quarter)
4. Form 4. NTP Treatment Card			Treatment cards (current quarter and same quarter 1 year ago)

DQC Form B: Assessing DATA ACCURACY (paper-based records)

Labeling of TB cases [col. 1]	No. of patients with Accurate entries	No. of patients with Inaccurate Entries	Remarks [col. 4]
1. Classification			from DSTB Register (current quarter)
2. Registration Group			from DSTB Register (current quarter)
3. Treatment outcome			from DSTB Register (same quarter 1 year ago)
4. Check if Presumptive DRTB are screened	No. identified	No. Screened	Remarks
a. Retreatment cases (Category 2)			from DSTB Register (current quarter)
b. Non-converters (positive at 3 rd month)			from DSTB Register (current quarter)
c. Cases with Failed Outcome			from DSTB Register (same quarter 1 year ago)
d. Identified as Presumptive DRTB from Presumptive TB Masterlist			from Presumptive TB Masterlist (current quarter)

DQC Form C: Assessing CONSISTENCY OF DATA

C.1. ITIS DATA

NTP Forms	Consistent		Remarks
	Yes	No	
1. Quarterly Report on Case Finding			From DSTB register (current quarter)
2. Quarterly Report on Treatment Outcomes			From DSTB register (same quarter 1 year ago)

C.2. Paper-based data

NTP Forms	Consistent		Remarks
	Yes	No	
1. Treatment Card with TB Register			
2. Quarterly Report on Laboratory Activities			

DQC Form D. Assessing Timeliness

NTP Forms	Updated		Remarks
	Yes	No	
1. Updating of DSSM Follow-up			
2. Assignment of Treatment Outcomes			
3. Turnaround Time (TAT)			

DQC Form E: SUMMARY FORM

1) What are the important findings in the DQC that you would like to address?

	FINDINGS (include quantitative findings)
Completeness	
Accuracy	
Consistency	
Timeliness	

2) Which program indicator target did you not reach? What do you think is the major reason for not reaching the target?

	Accomplishment	Reasons for Variance
1. Case Notification Rate (all forms)		
2. TB Case Detection Rate (all forms)		
3. Treatment Success Rate (all forms)		
4. Cure Rate (New bacteriologically confirmed)		

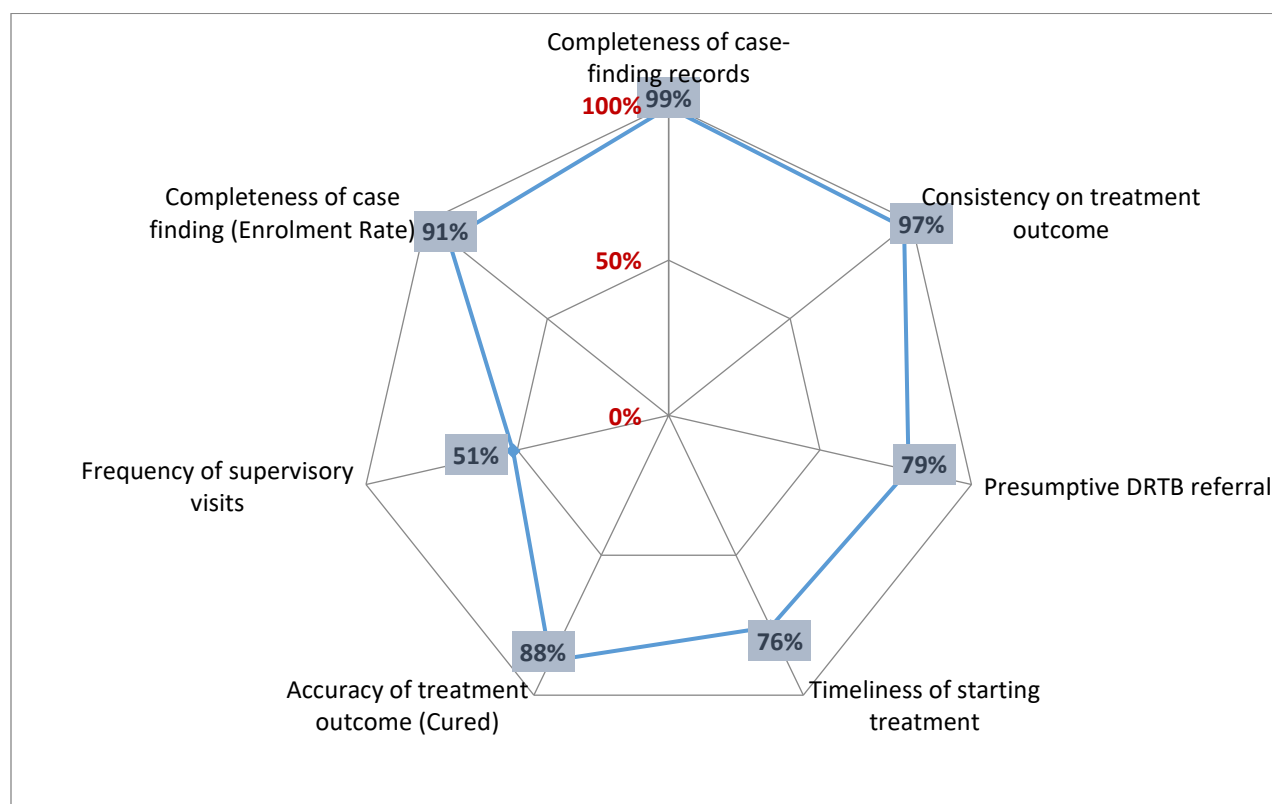
ANNEX

Pilot Run of the WHO Routine Data Quality Assessment (RDQA) Methodology

Abstract:

The WHO Routine Data Quality Assessment (RDQA) Method consists of tools that can be used by NTP and partners in measuring data quality and to facilitate routine supervision and review. Using these standard methods, the IMPACT Project conducted a pilot run of the WHO RDQA in select project sites. The objective of the pilot was to assess data management and reporting systems through conduct of joint assessments of data quality.

A total of 18 Rural Health Units/Health Centers from nine provinces/cities were visited. Data assessment consisted of two parts: review of records/reports and patient interviews. A total of 185 patient records were reviewed and, of these, a total of 129 patients were visited and interviewed. The summary of the findings is illustrated below.



For the patient interview, good concordance between the record and patient response was noted (i.e., duration of treatment – 91% concordance, sputum follow-up examination done – 92%, treatment outcome – 90%, and history of treatment – 89%).

The RDQA methodology is a feasible alternative as periodic data quality assessment. With two teams doing the patient visits, an average of five days was needed to complete two facility visits and, per facility,

a sample of 10 records reviewed and 5-10 patients interviewed. Once ITIS recording and reporting have been demonstrated to be timely and functional, it is recommended that the data quality checks (i.e., data validation) being done by provinces/cities be transitioned from the traditional workshop-type DQC to periodic random on-site monitoring using the RDQA method.

Technical Report

Background

In 2011, the WHO in collaboration with the KNCV Tuberculosis Foundation and The Union developed simplified tools for use by NTPs, projects and technical partners to measure data quality and to facilitate routine supervision and review. These tools involved review of records and reports and triangulation of data with patient interviews. It has been used in countries such as India and Cambodia.

During the inter-CA technical working group meeting in October 2016, the PHL WHO Medical Officer presented the RDQA procedures and sample results in India and Cambodia. Adoption of the WHO RDQA procedures by DOH regional coordinators was proposed. In response, the DOH-NTP requested the procedures to be pilot tested in select sites. This pilot was conducted by the IMPACT project from February to March 2017.

The procedures used for this pilot were based on the WHO Manual on Use of Routine Data Quality Assessment (RDQA) tool for TB Monitoring. Additional tools such as the Excel data collection matrices and web diagrams were provided by the WHO Medical Officer

Objectives

The objective of the pilot was to assess data management and reporting systems through conduct of joint assessments of data quality

Methods

Sample Site Selection

Sampling was purposive. The IMPACT project decided to implement in at least 2 provinces per Regional project team, one with high case finding performance and another with low case finding performance. As recommended by the WHO Medical Officer, and similar to the sampling procedure done in Cambodia/India, two DOTS facilities per province were selected. Based on this sampling procedure, the following sites were included:

Region	Province	RHUs/HCs
3	Pampanga	Lubao RHU I, Sasmuan
CAR	Benguet	Buguias, Itogon
MIMAROPA	Romblon	Odiongan, Romblon
4A	Rizal	Rodriguez, Antipolo
NCR	Marikina	Malanday, Pugad Lawin
7	Cebu	Alcoy, Medellin
6	Aklan	Altavas, Nabas
10	Misamis Oriental	Opol, Gingoog City
	Bukidnon	Malaybalay City, Maramag

Data Quality Assessment

The procedures for data collection were based on the WHO Manual on RDQA. A total of 10–15 patient records from the cohort enrolled a year ago (i.e., January–March 2016) per facility were randomly selected for checking.

Three records were checked: NTP Treatment Card, NTP Register and the Integrated TB Information System (ITIS). The following were checked:

1. Completeness of case finding records: treatment cards, TB register and encoding in the ITIS
2. Consistency of treatment outcomes
3. Presumptive DRTB referral (DRTB screening among retreatment cases and non-converters)
4. Timeliness of starting treatment (time from sputum result to start of treatment among smear positive TB cases within one week)
5. Accuracy of *cured* treatment outcome
6. Frequency of supervisory visits (for the entire year 2015)
7. Completeness of case finding (Enrolment Rate)
8. Consistency of recording HIV status (in Categories A and B sites)
9. Consistency of recording ART for TB-HIV co-infected (in Categories A and B sites)

The TB Laboratory Register was also checked for accuracy of treatment outcomes and primary defaulters.

For the patient interviews 10 patients were randomly selected from among the initial records, and a minimum of five were visited depending on distance of residence, travel time and availability of the patient. Eleven questions during patient interview served to validate the records (*See Table 1*).

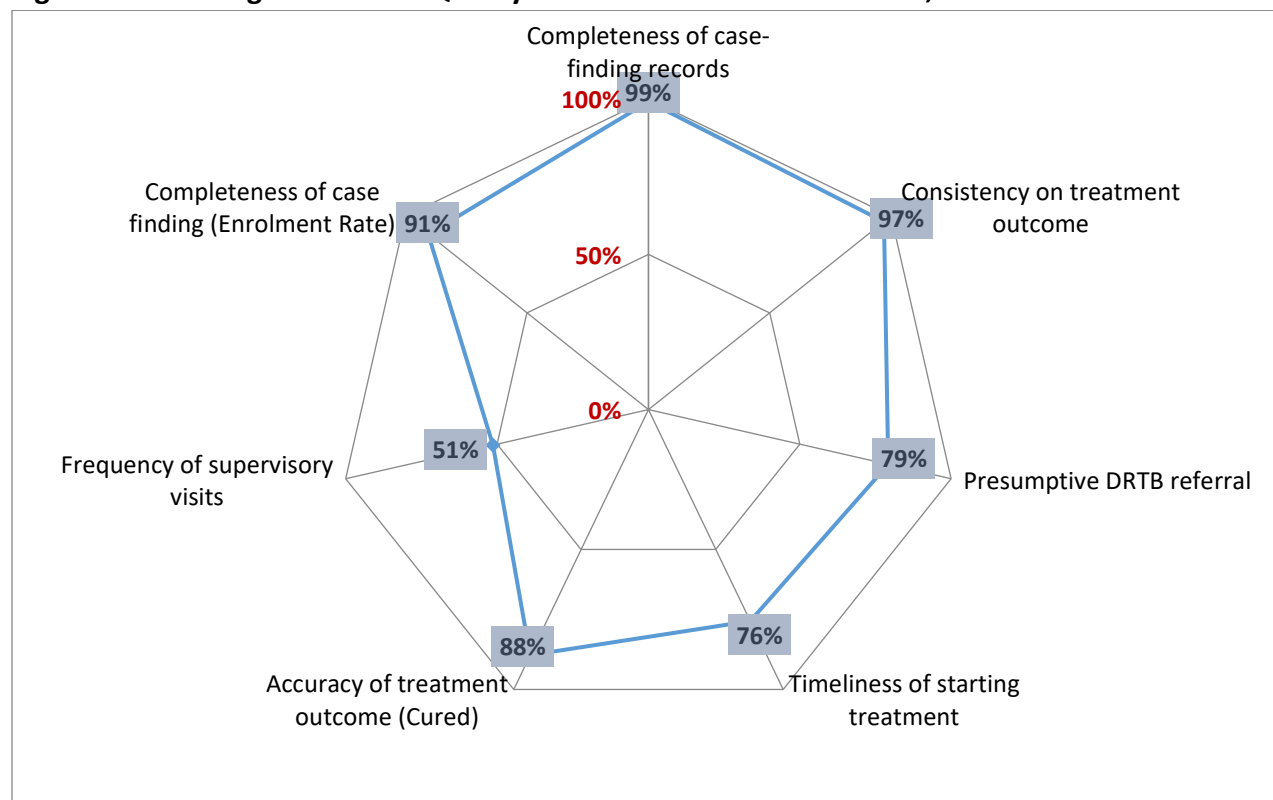
Results and Discussions

Only 18 of the 20 facilities purposively selected were visited. Due to human resource issues within the project, two facilities from a city in NCR were dropped from the pilot. A total of 185 patient records were reviewed (range 9–13 per facility). Of 174 patients targeted for patient visits, only 129 (74%) were located and available for interview. Forty-five patients were not located during the visits (i.e., transferred residence) or not available (i.e., at work).

Review of patient records

The data were summarized using the WHO tools that generate a web diagram of data quality attributes. A summary of the findings is shown in *Figure 1*. Overall, the NTP data showed good quality with more than 90% rating in terms of completeness of records, consistency of treatment outcome, and completeness of case finding (i.e., primary default). Accuracy of reporting cured treatment outcome was moderately good at 88%. The rest of the attributes required attention: presumptive DRTB referral (79%), timeliness of starting treatment (76%) and frequency of supervisory visits (51%).

Figure 1. Web Diagram of Data Quality Assessment in Nine Provinces, IMPACT. Jan-Mar 2016



The findings per data quality attribute are described below:

1. Completeness of case finding records: treatment cards, TB register and encoding in the ITIS

There was a high rate of completeness with 99% of all records reviewed completely encoded in the treatment card, TB register and ITIS. Only three records were deficient because there were no treatment cards.

2. Consistency of treatment outcomes

Originally, the rating was only 63% of records reviewed had consistent treatment outcome in all three records. However, 34% of the cases actually had incomplete encoding of the outcome in ITIS resulting in an inconsistent rating. But only 3% (4/181) had a different treatment outcome recorded in at least one of the records. Hence, adjusting by removing the incomplete records (n=67) showed that consistency of outcome was 97% (114 out of 117).

The monitoring, conducted in March 2016, showed that the encoding of treatment outcome in ITIS was not updated and delayed. During DQC workshops for the first quarter, conducted in April onwards, these incomplete outcomes were usually encoded.

3. Presumptive DRTB referral (DRTB screening among retreatment cases and non-converters)

Among retreatment cases and non-converters (i.e., still sputum positive at three months of treatment), only 79% were referred for DRTB screening based on remarks in the record or a recorded Xpert test. There was no documentation of reasons for non-referral, but the issue of access (time, distance, cost) to DRTB screening service frequently surfaced during program reviews.

4. Timeliness of starting treatment (time from sputum result to start of treatment among smear positive TB cases within 1 week)

Among smear-positive cases, 76% are initiated treatment within one week of the sputum examination reading. Most common reason cited for delay was delay in patient follow-up visit. This points to a gap either in proper advice and instructions to patients or patient-tracking systems in place. A unique set-up wherein there was a central city TB microscopy laboratory catering to all health centers was also noted to delay treatment initiation owing to irregular retrieval of results by the health center.

5. Accuracy of *cured* treatment outcome

A large majority (88%) of those with cured treatment outcome was validated to have a documented negative DSSM result in the laboratory register. Only 1 case (0.9%) was labelled cured despite a positive sputum follow-up examination and, hence, should have been labelled as "treatment failed." The rest (13 cases or 11%) had no record or incomplete sputum follow-up in the laboratory register.

6. Frequency of supervisory visits (for the entire year 2015)

The recommended frequency of monitoring is quarterly (NTP-MOP) or 4 times a year. Using this standard, only 51% of the expected monitoring visits was done. Commonly cited reasons by PHO/CHO coordinators during program implementation reviews were work demand of other programs and lack of transportation support to conduct monitoring.

7. Completeness of case finding (Enrolment Rate)

Ninety-one percent (91%) of smear positive cases from the NTP Laboratory Register were enrolled in treatment and entered in the TB register. Of the 16 smear-positive patients who were not treated, 1 case (0.6%) was traced using ITIS as being treated for DRTB while the rest (8%) were not followed up (no remarks indicated).

8. Consistency of recording HIV status (in Categories A and B sites)

There were three facilities that were implementing TB-HIV collaborative activities. But only 37% of eligible clients were able to undergo HIV testing and knew their status. While the two facilities tested 85% and 100% of their cases, there was one facility which used an old treatment card wherein the HIV status was not yet a data field. This facility documented the HIV status in only 16% of its patients.

9. Consistency of recording ART for TB-HIV co-infected (in Categories A and B sites)

There were no documented TB-HIV cases among patients reviewed and this indicator was not checked.

Interview of Patients

Findings of patient interviews are summarized in *Table 1*. Comparing the data in the patient record with the responses of the patient showed good concordance (i.e., similar answer with data recorded) in duration of treatment (91%), sputum follow-up examination done (92%) and treatment outcome (90%). There was moderate concordance in the history of treatment (89%).

Table 1. Summary of data from patient interviews in nine provinces, IMPACT, 2016

		N	YES	NO	No answer/ unrecalled
1	Could the team trace, interview and confirm that the case has received TB treatment services?	174	129 (74%)	45 (26%)	--
2	Was the treatment categorization correct based on previous history of treatment?	129	115 (89%)	10 (8%)	4 (3%)
3	Are the details correct for the duration of treatment taken?	129	118 (91%)	8 (6%)	3 (2%)
4	Are the details correct for sputum tests done? (Ask the patient, how many times did he submit sputum while on treatment?)	129	119 (92%)	5 (4%)	5 (4%)
5	Are the details correct for treatment outcome? (based on sputum tests done and treatment duration)	129	116 (90%)	11 (8%)	2 (2%)
6	Did the patient have any household members who are coughing for more than two weeks? (during the time patient was on treatment)	129	33 (26%)		
7	If yes to the above question, did the health center encourage the symptomatic contact to get examined for TB already?	33	29 (88%)	4 (12%)	--
8	How much did the patient or the relatives have to pay for TB diagnosis and treatment? (includes payment for any medical services, such as diagnostic tests and ancillary medicines)	84	1,834.9		
9	How much money did the patient have to spend on travel for each visit to health center? (includes transportation costs. If cost of meals is recalled by patient, indicate separately from transportation costs)	82	163.6		
10	What were the delays in seeking consultation (in days)? - Estimate how long s/he consulted the RHU/HC since start of symptoms	87	49.3		
11	What were the delays in starting treatment (in days)? - Estimate the time between first contact with a government health facility and start of treatment	74	6.3		

Other parameters were also elicited during patient interviews – household contact tracing, cost of health care and delays in treatment. Of the 33 respondents who recalled having a household member with cough during his/her treatment, 88% reported that their household member was

encouraged by health staff to consult the health center. This was an unexpectedly high affirmative response considering that latent TB infection among child contacts has been universally low throughout the country.

In terms of spending, the average amount spent until diagnosis was PhP1,830. But the range was very wide at PhP36 to PhP25,000. The higher spectrum included money spent for hospitalization and private consultation due to the disease. A more precise estimate was the average cost for a single visit to the health center at PhP163.60 (range: PhP20 to PhP1,200). The daily cost favored community or home-based daily treatment over facility-based treatment.

In terms of delays, 49.3 days was the average interval between onset of symptoms and initial consult with a health facility, while 6.3 days was the average interval between first consult and initiation of treatment. It is notable that the latter is within the 1-week standard of the program for turnaround time.

Conclusions and Recommendations

The following are the major findings on data quality and data management:

1. The NTP data is of good quality based on good ratings in completeness of records, consistency of treatment outcome, completeness in case finding (enrolment rate), and accuracy of reporting cured outcome. Triangulation with patient responses showed high concordance with the data in the records.
2. The major areas for improvement are the timely updating of treatment outcome in ITIS, improving referral of presumptive DRTB for screening and timely treatment within 1 week of consult.
3. Supervision was not done quarterly as per NTP recommendation. On average, only half of the desired visits was done.
4. Cost of seeking consult was still high and so was the cost for a single visit to the facility. This underscores the need for more community-based approaches to TB management.
5. There was a significant delay in seeking initial consult. But interval from consult to initiation of treatment was minimal and within a week.
6. The RDQA methodology is a feasible alternative to periodic data quality assessment. Our experience showed that with two teams doing the patient visits, an average of five days was needed to complete two facility visits and, per facility, a sample of 10 records reviewed and 5–10 patients interviewed.

Based on these findings, the following are recommended:

1. Once ITIS recording and reporting had been demonstrated to be timely and functional, transition the data quality checks (i.e., data validation) being done by provinces/cities, from the traditional workshop-type DQC to periodic random on-site monitoring using the RDQA method.
2. Once the transition is decided, the WHO RDQA procedure can be done at least annually by DOH Regional Offices in collaboration with other partners to gauge data quality and to guide supervision and review in their regions. If the recommended two facilities per province is

sampled, a region with five provinces and two RDQA teams can complete the data assessment in 25 working days. A smaller sample or more data assessors may be used when there are time constraints.

3. Unsatisfactory findings in the RDQA should be critically analyzed and, if needed, further investigated.

Useful Resources

- i. WHO 2011. Manual on use of Routine Data Quality Assessment (RDQA) Tool for NTP monitoring. Geneva: WHO
- ii. *Full Report on Pilot Implementation of WHO RDQA (IMPACT 2017)*