

# Impact Malaria Data Hub Specifications

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**U.S. President's Malaria Initiative**

# Welcome



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## U.S. President's Malaria Initiative

This is a technical guide for the IMPACT Malaria (IM) Data Hub, developed by Population Services International (PSI), to support IMPACT Malaria technical team to navigate, maintain and use the IM Data Hub.

The **IMPACT Malaria Data Hub** is the IMPACT Malaria project monitoring system database for IM indicators. It is a web based database in a District

Health Information Software 2 (DHIS2) instance and it houses all IM indicator data for project monitoring and use. It is primarily designed with data users in mind, and so its configuration comes with approaches specifically designed to enable monitoring and promote the use of IM data.

The IM Data Hub is used in IM countries in Africa and Asia and it collects a tremendous amount of data in the following tracks:

1. Case management
2. Malaria in Pregnancy
3. Seasonal Malaria Chemoprevention
4. Global Technical Leadership.

It is used by multiple partners at different levels, from Ministries of Health (MoHs), National Malaria Control Programs (NMCPs), donors like the President's Malaria Initiative (PMI), implementers (PSI, Jhpiego, University of California San Francisco (UCSF)) to track project monitoring and performance.

The IM Data Hub has two instances:

- A **development instance** at [dev.imdatahub.org](http://dev.imdatahub.org) hosted on a ST-3 plan from BAO Systems since Nov 22nd, 2018 for prototyping, testing and piloting
- A **production instance** at [imdatahub.org](http://imdatahub.org) hosted on a ST-3 plan from BAO Systems since Nov 27th, 2019 for actual monitoring and reporting

This guide provides all the information and the technical specifications you need to know about the IM Data Hub. It's an all-inclusive guide on the IM Data Hub and it complements other materials on DHIS2 configuration, as well as training in the IM Data Hub.

# Preface

## 0.1 What is the IM Data Hub?

The Impact Maria (IM) Data Hub is a project monitoring system in DHIS2 used to collect, analyze, monitor and report Impact Malaria indicator data. It's built on DHIS2 core software, and it supports HNQIS (1.4.X) compatibility.

## 0.2 Who should read this guide?

This guide is aimed at two main audiences:

- System Administrators who are involved in the configuration, maintenance and troubleshooting the IM Data Hub,
- IM Project teams and M&E staff involved in supporting M&E activities like data entry, reporting, data analysis and visualizations and project monitoring.

The audiences will find this guide helpful in understanding the overall system set up and how different components work together in the system.

## 0.3 What is covered in this guide.

The guide is divided into seven chapters:

1. Introduction - offers some background information, basic setup, and how to get started on the IM Data Hub quickly
2. Understanding IM Data Hub Components - explores the basic set up to provide an understanding of the different components and how they function
3. Data Specification - builds on the understanding of the IM Data Hub components and talks about the IM indicators and data reporting
4. Metadata Specifications - dives into the data specification and the system components and talks about what lies at the bottom, the metadata
5. Security and Access Model - Explains the security mechanisms and access model

- 6. Customization & Troubleshooting - Guides the customization, troubleshooting, and how to get help on the IM Data Hub
- 7. Appendix

## 0.4 What is not covered in this guide.

The focus of this guide is to walk you through the technical specification of the IM Data Hub. We attempt to showcase some best practices in configuring, testing, troubleshooting, reporting, monitoring, or use of data in the IM Data Hub. However, this is not a training on DHIS2 Fundamentals and you need other references to master these essential skill sets.

## 0.5 Conventions

This guide follows the following abbreviations.

Abbreviation	In Full
CR	Case Reporting
CS	Country Specific
DX	Diagnosis
IM	Impact Malaria
MIP	Malaria In Pregnancy
PMP	Performance Management Plan
RE	Reporting
SMC	Seasonal Malaria Chemoprophylaxis
SS	Supportive Supervision
TL	Technical Leadership
TR	Training
TX	Treatment

### 0.5.1 Data Sets

Data set: [country ISO code] [Data entry form name]:

Examples:

- GH Supportive Supervision
- CD Case Reporting

### 0.5.2 Data Elements

DEs: [country ISO code] [Data entry form name abbreviation] - [Section abbreviation] [DE Form name]:

Examples:



- GH CR - DX Cases confirmed
- CD TL - DX Does this province have national malaria diagnostic supervision tools that adhere to global standards?

### 0.5.3 Indicators

Indicators: [country ISO code] [PMP] [number] - [Section abbreviation]  
[Indicator name]:

Example:

GH PMP 01 - DX Percentage of confirmed malaria cases



# Chapter 1

## Introduction

### 1.1 Background

The Impact Maria (IM) Data Hub is a web-based project monitoring system used to collect, analyze, monitor and report IM indicator data. **IMPACT Malaria** is a five year contract funded by the US President's Malaria Initiative (PMI) to work with national malaria programs to fight malaria and save lives by strengthening diagnosis, treatment, and drug-based prevention for those most at risk, particularly children and pregnant women.

The **IMPACT Malaria Data Hub** is the IMPACT Malaria project monitoring system database for IM indicators. It is a web based database in a District Health Information Software 2 (DHIS2) instance and it houses all IM indicator data for project monitoring and use. It is primarily designed with data users in mind, and so its configuration comes with approaches specifically designed to enable monitoring and promote the use of IM data.

The IM Data Hub is used in IM countries in Africa and Asia and it collects a tremendous amount of data in the following tracks:

1. Case Management
2. Malaria in pregnancy
3. Seasonal Malaria Chemoprevention
4. Global Technical Leadership.

It is used by multiple partners at different levels, from Ministries of Health (MoHs), National Malaria Control Programs (NMCPs), donors like the President's Malaria Initiative (PMI), implementers (PSI, Jhpiego, University of California San Francisco (UCSF)) to track project monitoring and performance.

### 1.1.1 Purpose

The IM Data Hub was developed:

1. To monitor IM indicator data
2. Provide access to IM indicator data at district, country and global level
3. Enable central/global level data management
4. Track project progress and country performance
5. Promote data use for decision making

### 1.1.2 Servers

The IM Data Hub has two instances:

- A **development instance** at [dev.imdatahub.org](https://dev.imdatahub.org) hosted on a ST-3 plan from BAO Systems since Nov 22nd, 2018 for prototyping, testing and piloting. Analytics run daily at 00:00 and 12:00 UTC (EAT -3h)
- A **production instance** at [imdatahub.org](https://imdatahub.org) hosted on a ST-3 plan from BAO Systems since Nov 27th, 2019 for actual monitoring and reporting. Analytics run daily at 00:00 and 12:00 UTC (EAT -3h)

## 1.2 Getting Started

The easiest way to get started on the IM Data Hub is to log in at the dev server at <https://dev.imdatahub.org/> with the IM demo credentials **demoUser** - the pw is provided by your System Admin.

Countries doing data entry or testings have country specific demo accounts based on their country ISO codes - the pw is provided by your System Admin.

Country	username
Congo	CDdemo
Cameroon	CMdemo
Ghana	GHdemo
Kenya	KEdemo
Mali	MLdemo
Niger	NEdemo

## Chapter 2

# Understanding IM Data Hub

### 2.1 Introduction

Now that you're already started and you've got some essential background about the IM Data Hub, we are going to explore the details/components that form the IM Data Hub.

The IM Data Hub is not just a database: it's rather a project monitoring system and it's meant to monitor IM indicators and support decision-makers.

Understanding the IM Data Hub components will allow you to report, analyse, and monitor IM indicators more effectively. We'll dive deeper into the components and understand how they are set up in the IM Data Hub.

This section shows the reporting component, mainly the data sets that the IM Data Hub uses to collect indicator data. We will then walk through the data mining piece, and how the different outputs are pulled together on a dashboard for the project use.

### 2.2 Reporting Component

Reporting into the IM Data Hub to inform the IM Performance Monitoring Plan (PMP) indicators is organized through the use of data sets. A data set is simply a list of data elements that are grouped for data collection.

A data set has a reporting period and is assigned to organization units. The reporting period specifies how often the data is reported, ie. monthly or quarterly, while the organization units determine the location "where" the information is collected from.

The IM Data Hub has two main types of data sets:

1. Global data sets that are common to more than one country (ie. IM Seasonal Malaria Chemoprevention),
2. Country specific data set that are specific to countries (ie. GH Case Reporting).

The data sets are accessible through the **data entry app** (Fig. 2.1) and they appear as forms. They are designed to mimic the paper forms to allow ease of data entry/reporting process.



## Data Entry

Figure 2.1: An icon of the data entry app

### 2.2.1 Global data sets

Global data sets are accessible to relevant countries and are meant to collect data to inform country and global PMP Indicators.

As of Dec 2019, there are five global data sets in the IM Data Hub and all of them begin with IM followed by the [data set name] as shown below in yellow (Fig 2.2). Global data sets are divided into sections (in grey) that groups IM data elements into multiple subheadings for ease of data collection. There are five main sections:

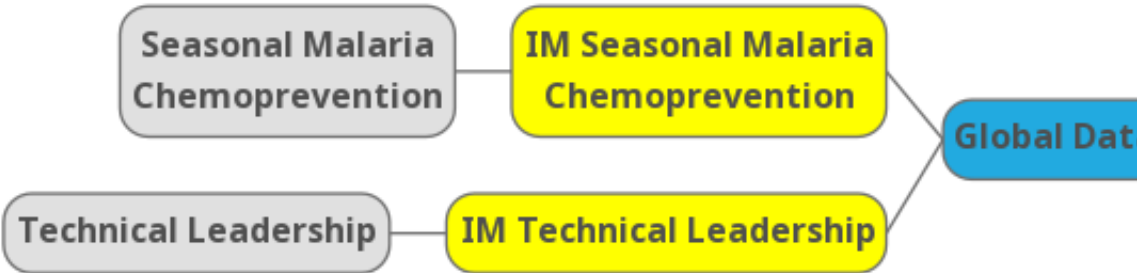
1. Diagnosis
2. Treatment
3. MIP
4. Technical leadership
5. Seasonal Malaria Chemoprevention

#### 2.2.1.1 Accessing Global data sets

1. If you haven't already logged in yet, please log in now at:

IM Data Hub demo

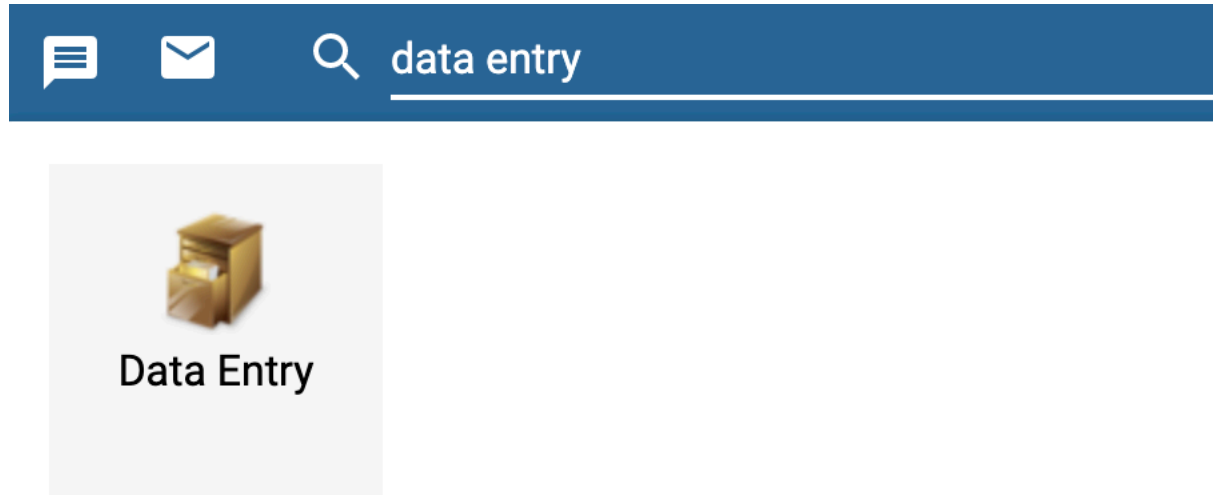
Username :demoUser and Password : ask your System Admin



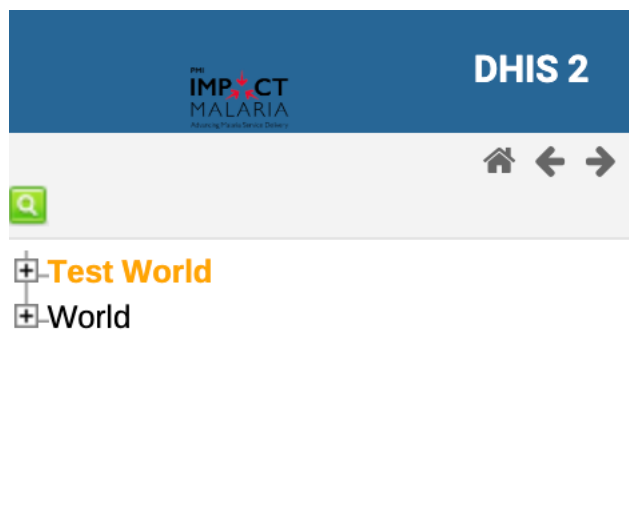
datasets.bb

Figure 2.2: Global datasets

2. Search for the Data Entry App from Apps



3. Click on the test world on top left if not already selected





4. Select **IM Case Reporting** data set and the period to report, ie. October 2019.

The screenshot shows a 'Data Entry' interface with a green header and a light green sidebar. The sidebar contains four labels: 'Organisation Unit', 'Data Set', 'Period', and 'Filter on section'. The main area has four corresponding input fields. The first field, 'Organisation Unit', contains 'Test World'. The second field, 'Data Set', contains 'IM Case Reporting' and is highlighted with a red border. The third field, 'Period', contains 'October 2019' and is also highlighted with a red border. To the right of the 'Period' field is a 'Prev year' button. The fourth field, 'Filter on section', contains 'Show all sections'.

5. Wait for the data entry form to load, and check that you can see the same screen as in Fig 2.3 below. Congratulations! You can now start reporting.

Before completing the records, please notice the **Run validation** button at the top right.

The complete button submits the records into the IM Data Hub.


### 2.2.2 Country Specific Data sets

Country specific data sets are used to report country's Performance Management Plan (PMP) indicators which will ultimately inform the global IM PMP indicators. They are accessible at the desired frequency of reporting (ie. annually, quarterly or monthly) and at the relevant level of data collection (ie. national, province, district or facility level).

Similar to the global data sets, country specific ones are organized in sections (in grey) with multiple subheadings. Fig 2.4

#### 2.2.2.1 Accessing Country Specific Data sets

1. Follow the same steps in section 2.2.1.1 to launch the data entry app. Ensure you are logged in with your country demo account (ie. **Username :GHdemo** and **Password : ask your System Admin**).
2. On the left bar, select the relevant org units you want to report from.
3. Select the relevant data set (ie. **[Country ISO] Case Reporting**) and the period to report (ie. October 2019).
4. Wait for the form to load.


**DHIS 2**

→
**Data Entry**

Organisation Unit

Test World

Data Set

IM Case Reporting

Period

October 2019

⬆ ⬇ ⬆

Prev year

Filter on section

Show all sections

Filter in section

	< 5 years	
IM CR - DX Suspected malaria cases		
IM CR - DX Suspected malaria cases (non-pregnant)		
IM CR - DX Suspected malaria cases (pregnant women)		
IM CR - DX Cases presumed as malaria		
IM CR - DX Cases presumed as malaria (non-pregnant)		
IM CR - DX Cases presumed as malaria (pregnant)		

Figure 2.3: IM Case Reporting Data Entry Form



datasets.bb

Figure 2.4: Country Specific Datasets

For some countries like **Kenya**, **Ghana** and **Mali**, the reporting process for some data sets (ie. [Country ISO] **Case Reporting**) is automated through scripts.

## 2.3 Data Mining Component

Once the data is collected or loaded into the IM Data Hub, it then becomes available for data mining. Data mining is a technical process that involves the extraction and analysis of data to generate information.

The data mining component provides tools for enabling the extraction and analysis of the IM PMP indicator data. The information collected through the data elements which compose the global and country specific data sets is pulled into global and country specific PMP indicators. Both the data elements which compose the global and country specific data sets and the global and country specific PMP indicators can be analysed and visualized in the DHIS2 analytics apps.

1. Pivot Tables - extracts data in a tabular format and enables the ability to pivot data elements and indicators,
2. Data Visualizer - generates a variety of charts like standard line, bar charts, pie charts, etc, to pivot data elements and indicators,
3. Maps - gives the ability to visualize IM data elements and indicators on a map.

### 2.3.1 Pivot Table

If you are familiar with Excel, you are probably aware of “pivoting” as the ability to summarize data on tables in multiple dimensions. Excel Pivot Tables have inspired the DHIS2 Pivot Table app.

Pivot Table offers quick access to IM data in a tabular format. It allows the ability to ‘pivot’ data in several dimensions, such as indicators, data elements, periods, and organization units.

In the following subsection, we are going to access and tabulate a sample of IM indicator data using the Pivot Table app.

As an example, we tabulate and pivot **IM Confirmed vs. Suspected Malaria Cases** for last 12 months at the global level (world).

1. Please refresh your browser or login with the demo account below if you have not.

IM Data Hub demo

**Username :demoUser** and **Password :** ask your System Admin

2. From Apps select or search for Pivot Tables
3. Click to launch the app

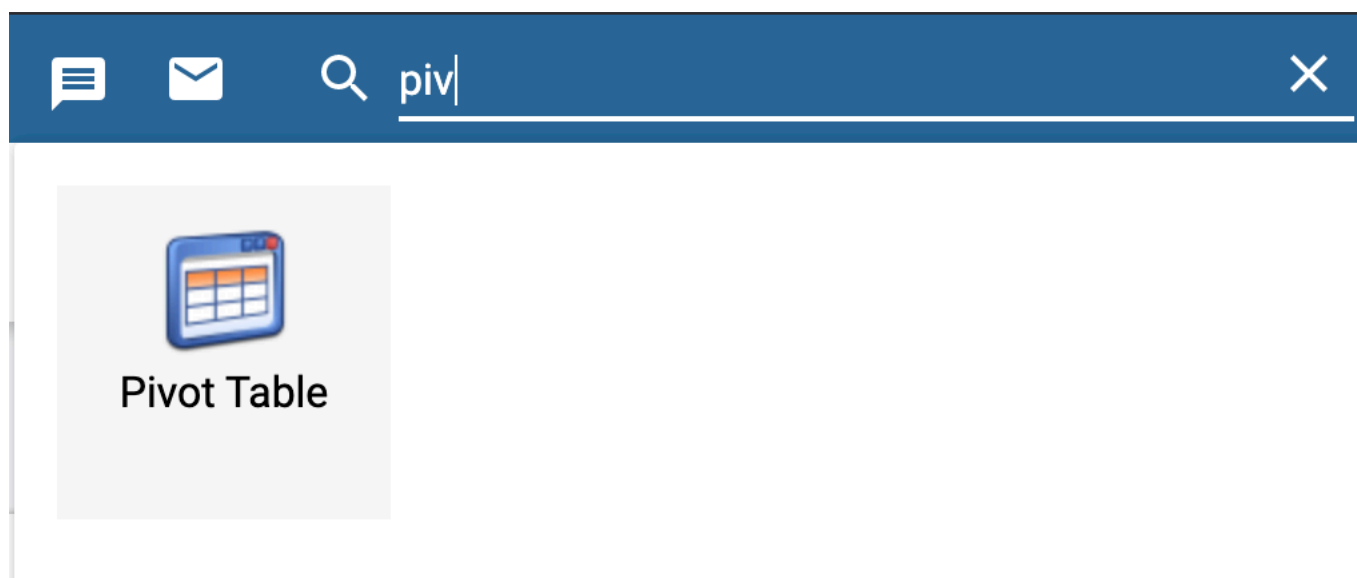


Figure 2.5: Searching Pivot Table App

4. From the indicator group on your left, select IM PMP indicators and then search % of confirmed case and % of suspected malaria cases
5. Make sure you pull all the PMP indicators to the right side
6. Open the organisation unit tab and select world

At least three dimensions must be specified: what, when and where in the pivot table.

7. Click on the update button to generate the report. Check that you can see a table like this one (fig 8). Congratulations! We have tabulated our report.

Save the table as IM PMP - % of confirmed vs suspected cases last 12 months, global.

#### 2.3.1.1 Best practices, tips & tricks

1. Hide empty rows/columns is a very useful Pivot Table option when analysing data across many org units or periods with gaps in the data,
2. Sort your table quickly by clicking on the sort symbol inside the column header cells,
3. You must always save your table as a favourite before you can add it to your dashboard or share it with colleagues,
4. You can add color legends to your table (coloring of cells based on their values) under Options. Multiple legends can now be assigned within the

## DHIS 2 Pivot Tables

**Data**

Indicators

IM PMP Indicators

sus

> >> << <

Selected

IM PMP DX 2 - % of suspected cases tested (NP)

IM PMP DX 2 - % of suspected cases tested (P)

IM PMP DX 1 - % of confirmed cases

IM PMP DX 2 - % of suspected cases tested

**Periods**

**Organisation units**

Figure 2.6: Selecting Indicators in the Pivot Table

DHIS 2 Pivot Tables

Indicators

IM PMP Indicators

sus

> >> << <

Selected

IM PMP DX 2 - % of suspected cases tested (NP)

IM PMP DX 2 - % of suspected cases tested (P)

IM PMP DX 1 - % of confirmed cases

IM PMP DX 2 - % of suspected cases tested

Periods

Organisation units

Untitled

<<< Update

Creating

- Select

- Click

- Click

Working

- Click

- Click

- Click

Figure 2.7: Selecting the organisation unit

<div> <span>&lt;&lt;</span> <span><b>Update</b></span> <span>Favorites</span> <span>Layout</span> <span>Options</span> <span>Download</span> <span>Embed</span> </div>		
World		
Period / Data	IM PMP DX 1 - % of confirmed cases	IM PMP DX 2 - % of suspected
November 2018	0	
December 2018	0	
January 2019	0	
February 2019	0	
March 2019	0	
April 2019	28.9	
May 2019	34.4	
June 2019	37.8	
July 2019	38.2	
August 2019	30.1	
September 2019	35.1	
October 2019		

Figure 2.8: Updating the Pivot Table



same table and are created in the “Legends” portion of the maintenance app.

Next we will create a chart of these using the data visualizer app.

### 2.3.2 Data Visualizer

Data Visualizer allows you to generate various charts, including bar charts, line graphs, pie charts, etc., directly in the IM Data Hub. They follow the same design and logic as the Pivot Table app, but they don’t allow for a dimensional analysis which includes more than one factor.

1. The easiest way to visualize the table in a chart is to open this table as a chart Fig. 2.9.
2. You can as well navigate directly to the Data Visualizer app by selecting the first option **Go to charts** or launching it from the apps menu. We will open ours as chart. Check that you see a chart as in (fig 10).

By default, **open this table as chart** will attempt to visualize the table in a bar chart. We can switch to this chart to different types by selecting the **type**. Ensure you choose the appropriate type.

We’ll stick to this as it is the most appropriate for this case. It shows the comparison.

Save your chart as **IM PMP - % confirmed vs suspected cases last 12 months, global**

### 2.3.3 Maps

The Maps app allows you to set thematic layers of the areas and points, view facilities based on classifications, and visualize catchment areas for the geographical distribution of the IM data elements and indicators.

Example: Malaria Confirmed Cases in the last 3 months by region, Ghana.

To create the map:

1. Navigate to the **Maps** app
2. Click the icon **Maps** to launch the app
3. Add a **thematic layer**
4. Follow the steps to select the dimensions; What, when and where
5. Update the layer

#### 2.3.3.1 Best practices, tips & tricks

1. Try not to put many overlapping layers on a map that will be difficult to interpret,

IM PMP - % confirmed vs suspected cases last 12 months, global		
<div> <span>≪≪</span> <span>Update ▾</span> <span>Favorites ▾</span> <span>Layout ▾</span> <span>Options ▾</span> <span>Download ▾</span> <span>Embed ▾</span> </div>		
IM PMP - % confirmed vs suspected cases last 12 months, global		
World		
Period / Data	IM PMP DX 1 - % of confirmed cases ↕	IM PMP DX 2 - % of suspected cases
November 2018	0	
December 2018	0	
January 2019	0	
February 2019	0	
March 2019	0	
April 2019	28.9	
May 2019	34.4	
June 2019	37.8	
July 2019	38.2	
August 2019	30.1	
September 2019	35.1	
October 2019		

Figure 2.9: Opening this table As a Chart

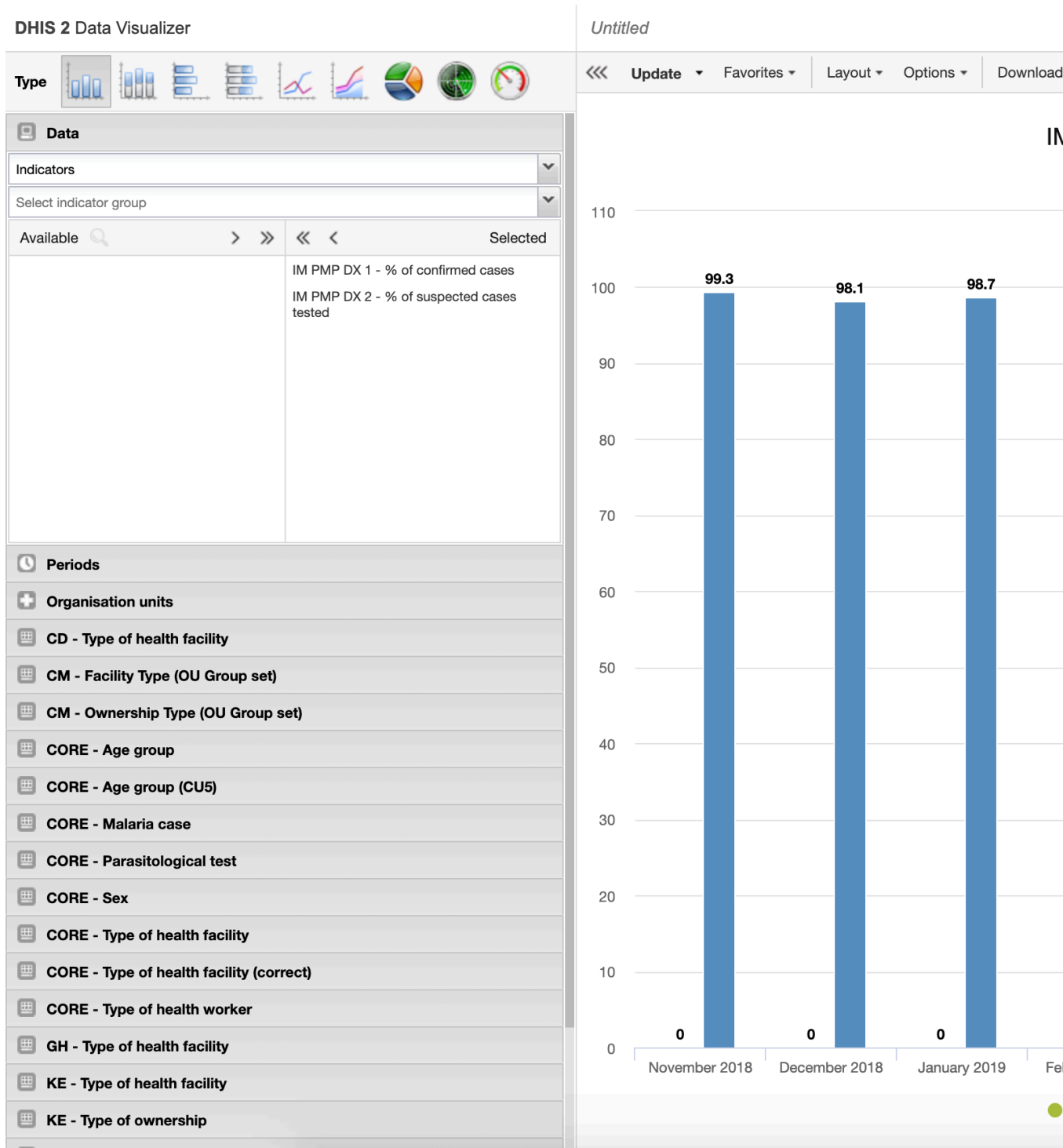


Figure 2.10: A bar chart generated by Data Visualizer App

### GH - Confirmed cases, last 3 months by region [🔗](#)

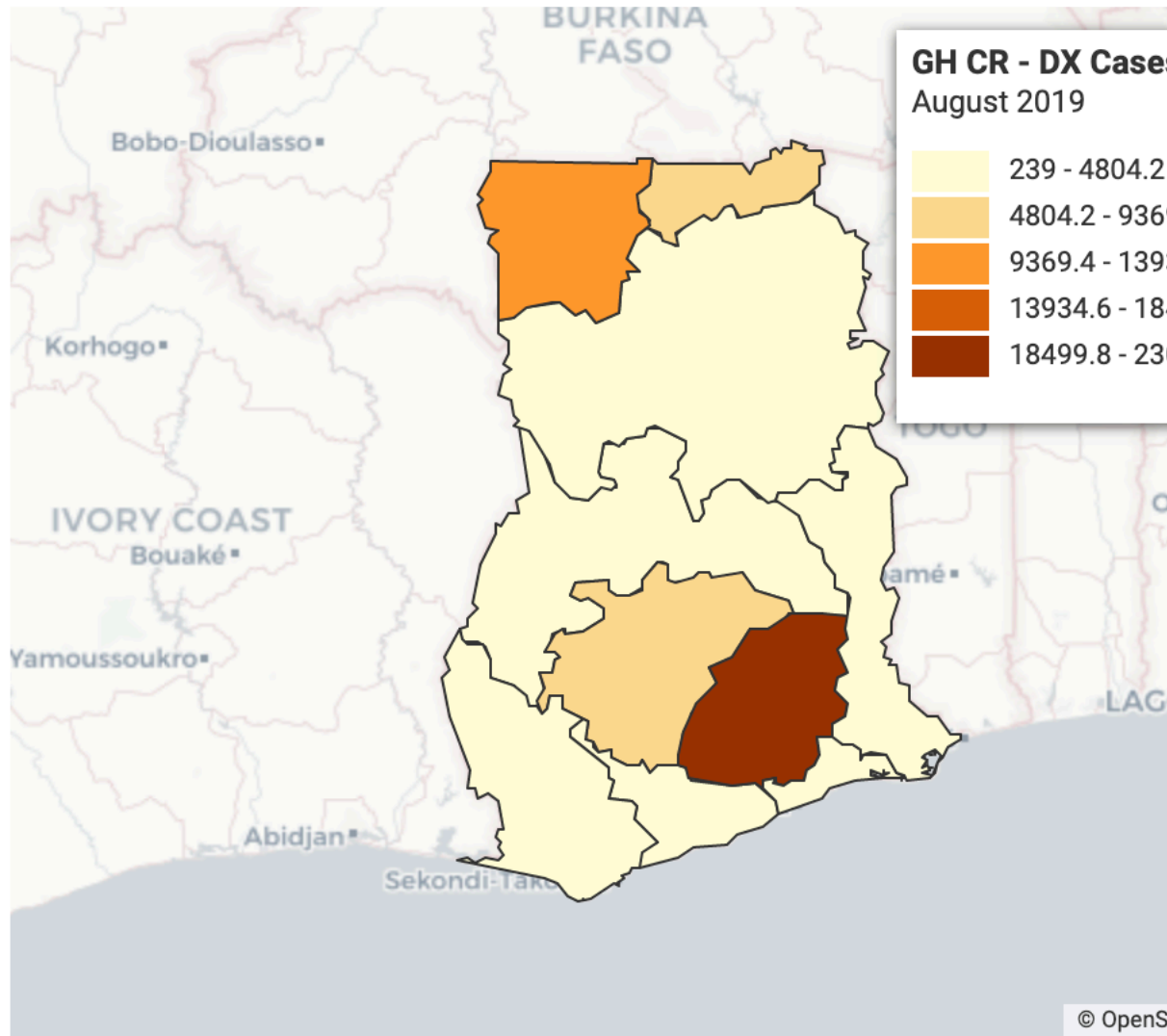


Figure 2.11: Malaria Confirmed Cases last 3 months by Region, Ghana

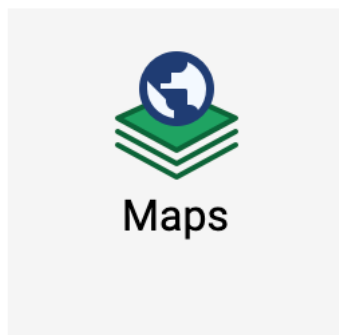


Figure 2.12: The Maps App

2. Use different color schemes when displaying multiple layers on a map,
3. The ordering of the layers is 1: Top Most Layer - 4: Bottom Most Layer.  
Add thematic layers to the map with this in mind.

## 2.4 Data Presentation

Once the IM data elements and PMP indicators are analyzed, processed, and you've come up with different information products, the next big thing is how this information is used in the routine monitoring of the project.

Data use is an art by itself. Some several guides and structures attempt to promote data use. For the IM Data Hub, we promote the use of the Data-to-Action (D2A) frameworks as a tool to strengthen data use for decision-making.

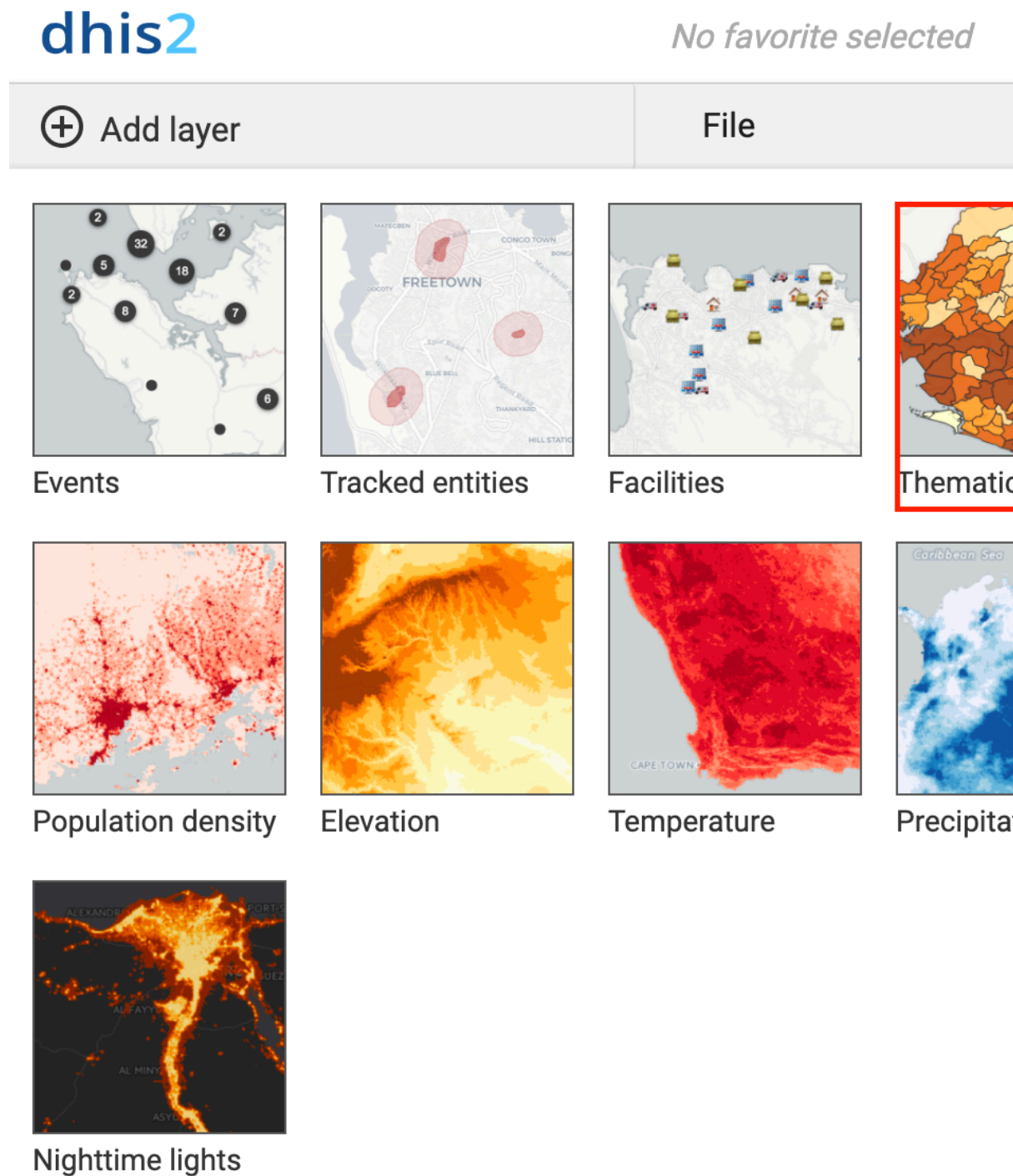


Figure 2.13: Select thematic layer

Add new thematic layer

DATA	PERIOD	ORG UNITS	STY
<hr/>			
Item type			
<hr/>			
Indicator group			
<hr/>			
Aggregation type			
By data element			
<hr/>			

CANCEL



Figure 2.14: Steps to select the dimensions; What, when and where





## Chapter 3

# IM Data Specification

### 3.1 Introduction

The IM data is specified through the use indicators. Indicators consist of a numerator, denominator, and a type of count. The numerator and denominator are data elements, and the count specifies the applied operation. Counts can be a percentage, a number, or a ratio.

In this chapter, we are going to explore the IM indicators and how they are constructed in the Data Hub.

We'll start by a short introduction to data elements and how they form the base/source of the IM indicators. We'll then explore the different counts and wind up by showing you all the IM indicators.

### 3.2 Data Elements

Data elements form the base of IM indicators. As we mentioned in the previous chapter, they define how IM data are collected and stored in the IM Data Hub.

IM Data hub consists of: Global data elements - are shared across a number of countries, Country specific data elements - used by specific country data sets.

IM data elements are grouped into data elements groups by country and programs for easy access from the Analytics apps in DHIS2 (Pivot Table, Data Visualizer and Maps).

The data elements have the following key fields:

1. **uid**, **name**, **shortName**, and **code** for uniquely identifying the data element in the IM Data Hub,
2. **description** to document more information about the data point,

3. **formName** that appears on the data entry form (in our case, data sets),
4. **domainType** that specifies the data model - aggregate or tracker (in our case, aggregate),
5. **aggregationType** defines how data is stored in the IM Data Hub.

### 3.3 Counts

Counts define the operation applied to the IM indicators calculations.

There are four main types of operations:

1. **1 - Atomic (number)** - absolute numbers
2. **1 - Ratio** - a fraction of the numerator and denominator
3. **100 - percent** - a ratio multiplied by 100 percent
4. **1000 - per thousand** - a ratio multiplied by 1000

### 3.4 Indicators

Remember that an indicator has a numerator, a denominator and a count. In this section, you will notice that similar to data elements, indicators also have the uid, short name and code to uniquely identifying them in the IM Data Hub.

The IM PMP indicators are grouped into two types:

Global IM PMP indicators - computes PMP data for global access, Country Specific PMP indicators - computes PMP data for country access.

We present to you a list of all the IM indicators in section 3.4.1

#### 3.4.1 Global IM PMP indicators

code

name

shortName

numerator

denominator

count

DX indicators

IM PMP DX 01

IM PMP DX 01 - Percentage of confirmed malaria cases

IM PMP DX 01 - % of confirmed cases

Number of cases confirmed as malaria by a parasitological test (RDT or microscopy)id :  $\#\{\text{UFGPSP6p9mm}\} + \#\{\text{cZuXXzQuEL6}\} + \#\{\text{ElkFrm5x8Sf}\} + \#\{\text{gIFzQQKCMjb}\}$

Total number of suspected malaria cases who received a parasitological testid :  $\#\{\text{N6j1f9LZiLf}\} + \#\{\text{zsUZQV4CAAd6}\} + \#\{\text{BAZd7D3zQHN}\} + \#\{\text{Rf40G3xMCqI}\}$

100 - Per Cent

IM PMP DX 01 NP

IM PMP DX 01 - Percentage of confirmed malaria cases (NP)

IM PMP DX 01 - % of confirmed cases (NP)

Number of cases confirmed as malaria by a parasitological test (RDT or microscopy)id :  $\#\{\text{sZoMIJ8KFiw}\}$

Total number of suspected malaria cases who received a parasitological testid :  $\#\{\text{uZWRcBbXVO5}\}$

100 - Per Cent

IM PMP DX 01 P

IM PMP DX 01 - Percentage of confirmed malaria cases (P)

IM PMP DX 01 - % of confirmed cases (P)

Number of cases confirmed as malaria by a parasitological test (RDT or microscopy)id :  $\#\{\text{CrV5hkFVvdH}\}$

Total number of suspected malaria cases who received a parasitological testid :  $\#\{\text{hoGKdACnBUs}\}$

100 - Per Cent

IM PMP DX 02

IM PMP DX 02 - Percentage of patients with suspected malaria who received a parasitological test

IM PMP DX 02 - % of suspected cases tested

Number of suspected malaria cases who received a parasitological testid :  $\#\{\text{N6j1f9LZiLf}\} + \#\{\text{BAZd7D3zQHN}\} + \#\{\text{zsUZQV4CAAd6}\} + \#\{\text{Rf40G3xMCqI}\}$

Total number of suspected cases of malariaid :  $\#\{\text{eHWYhy8vO8q}\} + \#\{\text{euw633Z8zIo}\} + \#\{\text{m2CdUYVjGe5}\} + \#\{\text{LMMJ97M5sVl}\}$

100 - Per Cent

IM PMP DX 02 NP

IM PMP DX 02 - Percentage of patients with suspected malaria who received a parasitological test (NP)

IM PMP DX 02 - % of suspected cases tested (NP)

Number of suspected malaria cases who received a parasitological testid :  $\#\{uZWRcBbXVO5\}$

Total number of suspected cases of malariaid :  $\#\{DGZDsRtmqL7\}$

100 - Per Cent

IM PMP DX 02 P

IM PMP DX 02- Percentage of patients with suspected malaria who received a parasitological test (P)

IM PMP DX 02 - % of suspected cases tested (P)

Number of suspected malaria cases who received a parasitological testid :  $\#\{hoGKdACnBUs\}$

Total number of suspected cases of malariaid :  $\#\{erW9vdRJVSE\}$

100 - Per Cent

IM PMP DX 03

IM PMP DX 03 - Percentage of health workers demonstrating competence in correctly classifying cases as not malaria, uncomplicated malaria, and severe malaria

IM PMP DX 03 - % of HWs able to classify cases

Number of health workers who demonstrate correct procedures for correctly classifying cases according to global standardsid :  $\#\{Grnm6jdzAJI\} + \#\{t1vdNH0vIE2\} + \#\{cVUt7HK83ag\} + \#\{vXZ2RDwuyzA\}$

Total number of health workers targeted during the reporting periodid :  $\#\{SZKdCBFJd96\} + \#\{blbz5pmEqoF\} + \#\{pgsaevmKtbM\} + \#\{ytfyZr1Ya\}$

100 - Per Cent

IM PMP DX 04

IM PMP DX 04 - Percentage of health workers demonstrating competence in malaria RDTs

IM PMP DX 04 - % of HWs competent in RDTs

Number of health workers who score 90% or greater in preparation and reading of RDTs during the training post-testid :  $\#\{Mfkn1qCEQEL\} + \#\{TDBa7IcPJAN\} + \#\{eEWSWmY9ghg\} + \#\{s5Ys2ABMGgE\}$

Total number of health workers who completed a post-test during a trainingid :  $\#\{bWQoETmKYEH\} + \#\{rSn9x2JQPJe\} + \#\{soWdw75XP5d\} + \#\{Qni-AsU4SnZr\}$

100 - Per Cent

IM PMP DX 05

IM PMP DX 05 - Percentage of health workers demonstrating competence in malaria microscopy

IM PMP DX 05 - % of HWs competent in microscopy

Number of health workers who score 90% or greater in slide preparation and parasite detection during the training post-testid :  $\#\{mYlff5bXuZB\} + \#\{x7CZVlQSaE6\} + \#\{JygaBsHMOQ0\} + \#\{jf8nKluaF2h\}$

Total number of health workers who completed a post-test during a trainingid :  $\#\{f959MLmYSiX\} + \#\{VdW9y4M8WAK\} + \#\{XenaBO47ky4\} + \#\{om6201JM4BF\}$

100 - Per Cent

PMP DX 06

IM PMP DX 06 - Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality diagnosis of malaria

IM PMP DX 06 - % of facilities with quality DX

Number of targeted facilities that meet 90% or greater on facility checklists for diagnosis during supervisory visitsid :  $\#\{DTdMcXDeHFj\} + \#\{Gj8mqX5twDU\} + \#\{VQT4EOtPiwC\} + \#\{uykAN5XlXKK\} + \#\{TLuX-iPIITDu\} + \#\{IYVEbBi1otu\}$

Total number of targeted facilities who received a supervisory visit during the reporting periodid :  $\#\{aRCKf2dnCpw\} + \#\{oVIXBtQccHN\} + \#\{teWZva5EkPM\}$

100 - Per Cent

PMP DX 07 MC

IM PMP DX 07 - Percentage of targeted facilities with at least one provider trained in malaria diagnosis (microscopy)

IM PMP DX 07 - % of facilities trained (microsc)

0id :  $\#\{JJ9yeyBfn5V\} + \#\{RjcTcWjtJEh\}$

0id :  $\#\{VX2UY9s7UTQ\}$

100 - Per Cent

PMP DX 07 RDT

IM PMP DX 07 - Percentage of targeted facilities with at least one provider trained in malaria diagnosis (RDT)

IM PMP DX 07 - % of facilities trained on RDT

Number of targeted facilities with one or more health workers trained in malaria diagnosisid :  $\#\{\text{GFDsEzfZdjr}\} + \#\{\text{N6oAUOjFBF0}\} + \#\{\text{g1KI3UhtDoJ}\}$

Total number of targeted facilitiesid :  $\#\{\text{VX2UY9s7UTQ}\} + \#\{\text{YpbUd-DBZjlA}\} + \#\{\text{tWSq7bigbmf}\}$

100 - Per Cent

PMP DX 08 MC

IM PMP DX 08 - Percentage of targeted health workers trained in malaria laboratory diagnostics (microscopy)

IM PMP DX 08 - % of HWs trained on (microscopy)

Number of health workers who complete the training course in malaria laboratory diagnostics (microscopy)id :  $\#\{\text{f959MLmYSiX}\} + \#\{\text{GCSv8Ni4KhE}\} + \#\{\text{VdW9y4M8WAK}\} + \#\{\text{XenaBO47ky4}\}$

Total number of targeted health workersid :  $\#\{\text{opuW5lGx2Cc}\} + \#\{\text{CX09R9Mdsj9}\} + \#\{\text{VcPN46GIkwA}\} + \#\{\text{a2RpS8B1eCM}\}$

100 - Per Cent

PMP DX 08 RDT

IM PMP DX 08 - Percentage of targeted health workers trained in malaria laboratory diagnostics (RDT)

IM PMP DX 08 - % of HWs trained on RDT

Number of health workers who complete the training course in malaria laboratory diagnosticsid :  $\#\{\text{bWQoETmKYEh}\} + \#\{\text{rSn9x2JQPJe}\} + \#\{\text{Qni-AsU4SnZr}\} + \#\{\text{soWdw75XP5d}\}$

Total number of targeted health workersid :  $\#\{\text{opuW5lGx2Cc}\} + \#\{\text{a2RpS8B1eCM}\} + \#\{\text{CX09R9Mdsj9}\} + \#\{\text{VcPN46GIkwA}\}$

100 - Per Cent

PMP DX 09 MC

IM PMP DX 09 - Percentage of targeted supervisors trained in supervision of malaria diagnostics (microscopy)

IM PMP DX 09 - % of SUPVs trained on microscopy

Number of supervisors trained in supervision of malaria diagnosticid :  $\#\{\text{RnEg1HPF7IR}\} + \#\{\text{hbEgIBy1bIf}\} + \#\{\text{zlWYhVAouup}\} + \#\{\text{PgAaubV15e}\} + \#\{\text{vg88HQNpSXz}\}$

Total number of targeted supervisorsid :  $\#\{cGXuIzDaAEP\} + \#\{MFpS8w5h9XS\} + \#\{pVyN8ZZT7TA\} + \#\{aZpDapygzg1\} + \#\{O8ilhnRgkRW\}$

100 - Per Cent

PMP DX 09 RDT

IM PMP DX 09 - Percentage of targeted supervisors trained in supervision of malaria diagnostics (RDT)

IM PMP DX 09 - % of SUPVs trained on RDT

Number of supervisors trained in supervision of malaria diagnosticsid :  $\#\{rvPl8m8kted\} + \#\{sRz3zlhaJrH\} + \#\{jZmH2n22eJf\} + \#\{oFiMCw-BOYLU\}$

Total number of targeted supervisorsid :  $\#\{cGXuIzDaAEP\} + \#\{MFpS8w5h9XS\} + \#\{pVyN8ZZT7TA\} + \#\{aZpDapygzg1\}$

100 - Per Cent

PMP DX 10

IM PMP DX 10 - Percentage of targeted countries with national malaria diagnostic supervision tools that adhere to global standards

IM PMP DX 10 - % of countries with DX tools

Number of targeted countries whose national malaria diagnostic supervision tools adhere to global standardsid :  $\#\{y2aPasQa1gl\}$

Total number of targeted countriesid :  $\#\{y2aPasQa1gl\} \geq 0$

100 - Per Cent

PMP DX 11

IM PMP DX 11 - Percentage of targeted countries with national guidelines for malaria diagnosis that meet global standards

IM PMP DX 11 - % of countries with DX guidelines

Number of targeted countries with national guidelines for malaria diagnosis that meet global standards/id :  $\#\{MUKvaz7q2CD\}$

Total number of targeted countriesid :  $\#\{MUKvaz7q2CD\} \geq 0$

100 - Per Cent

MIP indicators

PMP MIP 25

IM PMP MIP 25 - Percentage of pregnant women who received an ITN during routine ANC

IM PMP MIP 25 - % of pregnant women received ITN

Number of pregnant women who received an insecticide-treated net (ITN) during routine antenatal care (ANC)id :  $\#\{p4bKkXlEOtC\} + \#\{jmLXE-BQDZAy\} + \#\{mEuLOT08NfK\} + \#\{kZAWqatScJ9\}$

Total number of pregnant women attending antenatal visits (Number of first ANC visits as proxy in most countries' RHIS)id :  $\#\{jNJNr4i82le\} + \#\{IGy-PotenyO2\} + \#\{WdEGVnuWiDf\} + \#\{KBe7hShEYAK\}$

100 - Per Cent

PMP MIP 26

IM PMP MIP 26 - Percentage of pregnant women who received three or more doses of IPTp

IM PMP MIP 26 - % of pregnant women with IPTp  $\geq 3$

Number of pregnant women who received three or more doses of IPTp (IPT3)id :  $\#\{IGhCODoV6YY\} + \#\{RS90YaqGgUN\} + \#\{IVRMHcwVnDf\} + \#\{CFaVHFhbS4v\}$

Total number of pregnant women attending antenatal visits (Number of first ANC visits as proxy in most countries' RHIS)id :  $\#\{jNJNr4i82le\} + \#\{IGy-PotenyO2\} + \#\{WdEGVnuWiDf\} + \#\{KBe7hShEYAK\}$

100 - Per Cent

PMP MIP 27

IM PMP MIP 27 - Percentage of pregnant women who received two doses of IPTp

IM PMP MIP 27 - % of pregnant women with IPTp = 2

Number of pregnant women who received two doses of IPTp (IPT2)id :  $\#\{Y73pLgWXfTh\} + \#\{LF9PqTGXhBc\} + \#\{inFlJdtBRGo\} + \#\{SZgN28ZELh9\}$

Total number of pregnant women attending antenatal visits (Number of first ANC visits as proxy in most countries' RHIS)id :  $\#\{jNJNr4i82le\} + \#\{IGy-PotenyO2\} + \#\{WdEGVnuWiDf\} + \#\{SZgN28ZELh9\}$

100 - Per Cent

PMP MIP 28

IM PMP MIP 28 - Percentage of pregnant women who received one dose of IPTp

IM PMP MIP 28 - % of pregnant women with IPTp = 1

Number of pregnant women who received one dose of IPTp (IPT1)id :  $\#\{i5xgliv1YDl\} + \#\{qk8A67ySRR0\} + \#\{jrvQeHC4vrr\} + \#\{uuWS-sTlrVtU\}$



Total number of pregnant women attending antenatal visits (Number of first ANC visits as proxy in most countries' RHIS)id :  $\#\{jNJNr4i82le\} + \#\{IGy-PotenyO2\} + \#\{WdEGVnuWiDf\} + \#\{KBe7hShEYAK\}$

100 - Per Cent

PMP MIP 29

IM PMP MIP 29 - Percentage of targeted health workers demonstrating competence in treatment of MiP

IM PMP MIP 29 - % of HWs competent in MiP (TX)

Number of health workers who score a pass mark on supervisory or quality improvement checklists measuring case management of MiPid :  $\#\{vKOVZ3Jckex\} + \#\{AkJUjEErkX5\} + \#\{RJVS WuXI87o\} + \#\{S2sRLkbN81y\}$

Total number of targeted health workers who received a supervisory visit during the reporting periodid :  $\#\{t7LA2WZducS\} + \#\{yOXzK6ElVJr\} + \#\{gnjJP-PJNSJF\} + \#\{fJlele1NEHo\}$

100 - Per Cent

PMP MIP 30

IM PMP MIP 30 - Percentage of targeted health workers demonstrating competence in prevention of MiP

IM PMP MIP 30 - % of HWs competent in MiP (PREV)

Number of health workers who score a pass mark on supervisory or quality improvement checklists measuring IPTp and counselling for MiPid :  $\#\{aOen-VQmDtkc\}$

Total number of targeted health workers who received a supervisory visit during the reporting periodid :  $\#\{fpDelOtHjG4\}$

100 - Per Cent

PMP MIP 31

IM PMP MIP 31 - Percentage of health workers trained in IPTp

IM PMP MIP 31 - % of HWs trained on IPTp

Number of health workers who complete the training course on IPTpid :  $\#\{yQ11Q5pQ2lx\} + \#\{CxioZ7hV8e9\} + \#\{eEITioVuAGg\} + \#\{jKtX2TrReqh\}$

Total number of targeted health workersid :  $\#\{yoNR9Ct37gT\} + \#\{FVF9sYgBAH2\} + \#\{wHuGUXeSGM8\} + \#\{bf7z94n1SLP\}$

100 - Per Cent

PMP MIP 32

IM PMP MIP 32 - Percentage of targeted countries with national guidelines for prevention and treatment of MiP that meet global standards

IM PMP MIP 32 - % of countries with MiP guides

Number of targeted countries with national guidelines for prevention and treatment of MiP that meet global standardsid : #{C0UniRKgGAG}

Total number of targeted countriesid : #{C0UniRKgGAG}>=0

100 - Per Cent

PMP MIP 33

IM PMP MIP 33 - Functional active RMNCH/MiP/ANC/community health Working Group

IM PMP MIP 33 - Active HWGs

Functional/active malaria/MiP/ANC/community health or RMNCH Working Group with a MiP lens that meets periodicallyid : #{wHtxPnCGqBV}

Functional/active malaria/MiP/ANC/community health or RMNCH Working Group with a MiP lens that meets periodicallyid : #{wHtxPnCGqBV}>=0

1 - Atomic (number)

SMC indicators

PMP SMC 34

IM PMP SMC 34 - Percentage of targeted children who receive all 4 doses of SMC in a round in intervention area (or all 3 per national guidance where only 3 doses are indicated)

IM PMP SMC 34 - % of children received 4 doses

Number of targeted children receiving all recommended SMC doses during a campaign, in the intervention areaid : #{ioU1w8yCIWv}

Number of children in target age range in the intervention areaid : #{jAD6Dh7z1d1}

100 - Per Cent

PMP SMC 35

IM PMP SMC 35 - Percentage of targeted children who receive a dose of SMC in intervention area

IM PMP SMC 35 - % of children dosed

Number of targeted children receiving a dose of SMC in the intervention areaid : #{cOBjDRbvSyW}

Number of children in target age range in the intervention areaid : #{wr0GIInmvDcB}

100 - Per Cent

PMP SMC 36

IM PMP SMC 36 - Percentage of targeted children who receive a dose of SMC in the first cycle

IM PMP SMC 36 - % of children dosed (cy. 1)

Number of targeted children who received a dose of SMC during the first cycleid :  $\#\{\text{HaSIpoMB2ub}\}$

Number of children in target age range in the intervention areaid :  $\#\{\text{pW2ZZhtd9Lz}\}$

100 - Per Cent

PMP SMC 37

IM PMP SMC 37 - Percentage of targeted children who receive a dose of SMC in the second cycle

IM PMP SMC 37 - % of children dosed (cy. 2)

Number of targeted children who received a dose of SMC during the second cycleid :  $\#\{\text{wot02J4aRZm}\}$

Number of children in target age range in the intervention areaid :  $\#\{\text{AiA5kpzCOVw}\}$

100 - Per Cent

PMP SMC 38

IM PMP SMC 38 - Percentage of targeted children who receive a dose of SMC in the third cycle

IM PMP SMC 38 - % of children dosed (cy. 3)

Number of targeted children who received a dose of SMC during the third cycleid :  $\#\{\text{ZCibgANrNQq}\}$

Number of children in target age range in the intervention areaid :  $\#\{\text{Q0hsAMcsvkm}\}$

100 - Per Cent

PMP SMC 39

IM PMP SMC 39 - Percentage of targeted children who receive a dose of SMC in the fourth cycle

IM PMP SMC 39 - % of children dosed (cy. 4)

Number of targeted children who received a dose of SMC during the fourth cycleid :  $\#\{\text{Q71hAveCSGo}\}$

Number of children in target age range in the intervention areaid :  $\#\{\text{InNkmkUawo7}\}$

100 - Per Cent

PMP SMC 40

IM PMP SMC 40 - Percentage of health workers trained to deliver SMC according to national guidelines

IM PMP SMC 40 - % of HWs trained on SMC

Number of health workers who complete the training course on delivering SMCid :  $\#\{\text{y6qGAzE5DRa}\}$

Total number of targeted health workersid :  $\#\{\text{nE14FEYzkVX}\}$

100 - Per Cent

PMP SMC 41

IM PMP SMC 41 - Percentage of targeted countries with annual SMC implementation plans

IM PMP SMC 41 - % of countries with ANN SMC plans

Number of countries with annual operational SMC implementation plansid :  $\#\{\text{hBYYaPLEFFf}\}$

Total number of targeted countries anticipated to have plansid :  $\#\{\text{gN3w6Jx7q5h}\}$

100 - Per Cent

TL indicators

PMP TL 42

IM PMP TL 42 - Contribution to national, regional or global guidance/policy documents related to malaria (including RH)

IM PMP TL 42 - Contribution

Contribution to national, regional guidance/policy documents or related to malaria (including RH)id :  $\#\{\text{tJXmW64MUxf}\}$

Contribution to national, regional guidance/policy documents or related to malaria (including RH)id : 1

1 - Atomic (number)

PMP TL 43

IM PMP TL 43 - Number of program activity outputs disseminated to the global health community

IM PMP TL 43 - Outputs to GH community

By type of output (activity reports, operational research/evaluation reports, technical briefs, learning briefs, synthesis brief, discussion brief, infographic, case studies, peer-reviewed publications, webinars, oral/poster presentations, blog posts, short video clips, photos) By dissemination channelid :  $\#{P4YDP2FNh3X}$

By type of output (activity reports, operational research/evaluation reports, technical briefs, learning briefs, synthesis brief, discussion brief, infographic, case studies, peer-reviewed publications, webinars, oral/poster presentations, blog posts, short video clips, photos) By dissemination channelid : 1

1 - Atomic (number)

PMP TL 44

IM PMP TL 44 - Participation in targeted national, regional or global level Working group(s) and/or taskforce(s)

IM PMP TL 44 - Participation in TWGs.

Participation in national, regional or global working group(s) or taskforce(s) related to malaria (including RH)id :  $\#{XxfoDreiw9Z}$

Participation in national, regional or global working group(s) or taskforce(s) related to malaria (including RH)id : 1

1 - Atomic (number)

TX indicators

PMP TX 12

IM PMP TX 12 - Percentage of children under 5 appropriately treated for fever according to iCCM or country algorithms by community health workers

IM PMP TX 12 - % of CU5 fever treated

Number of children under 5 correctly treated for malaria fever by community health workerid :  $\#{sYGiQi29bny} + \#{sHbqsn1y9zL}$

Number of CU5 presented to CHWs with feverid :  $\#{jQCXu21pwiA} + \#{pGLrWpOTB1m}$

100 - Per Cent

PMP TX 13

IM PMP TX 13 - Percentage of confirmed severe malaria cases that were appropriately managed according to national guidelines

IM PMP TX 13 - % of confirmed severe cases

Number of confirmed severe malaria cases that were appropriately managed according to national guidelinesid :  $\#{WY24SnaT4l7}$

Number of severe malaria cases reviewedid :  $\#{WY24SnaT4l7}$

100 - Per Cent

PMP TX 13 NP

IM PMP TX 13 - Percentage of confirmed severe malaria cases that were appropriately managed according to national guidelines (NP)

IM PMP TX 13 - % of confirmed severe cases (NP)

Number of confirmed severe malaria cases that were appropriately managed according to national guidelines (NP)id : #{W6NdGzWJurN}

Number of severe malaria cases reviewed (NP)id : #{W6NdGzWJurN}

100 - Per Cent

PMP TX 13 P

IM PMP TX 13 - Percentage of confirmed severe malaria cases that were appropriately managed according to national guidelines (P)

IM PMP TX 13 - % of confirmed severe cases (P)

Number of confirmed severe malaria cases that were appropriately managed according to national guidelines (P)id : #{h5toMEwrcCi}

Number of severe malaria cases reviewed (P)id : #{h5toMEwrcCi}

100 - Per Cent

PMP TX 14

IM PMP TX 14 - Percentage of uncomplicated malaria cases that received first-line antimalarial treatment according to national guidelines

IM PMP TX 14 - % of uncomplicated cases

Number of reported uncomplicated malaria cases that receive the appropriate first-line antimalarial treatmentid : #{Aj2LczZnc35} + #{JLxVyp3qGve} + #{V6CvG07Copy} + #{i4BsFSVy41V}

Total number of reported malaria cases during reporting periodid : #{UFG-PsP6p9mm} + #{PoyoVEewRIq} + #{ElkFrm5x8Sf} + #{cZuXXzQuEL6} + #{gIFzQQKCMjb} + #{y8geJquiy1f} + #{E04lKfKfIKc}

100 - Per Cent

PMP TX 14 NP

IM PMP TX 14 - Percentage of uncomplicated malaria cases that received first-line antimalarial treatment according to national guidelines (NP)

IM PMP TX 14 - % of uncomplicated cases (NP)

Number of reported uncomplicated malaria cases that receive the appropriate first-line antimalarial treatment (NP)id : #{RY1937S07k0} + #{n9YAgSwzX8J} + #{Jz05wiLIOae}

Total number of reported malaria cases during reporting periodid :  
 $\#\{sZoMIJ8KFiw\} + \#\{RnZK9U6WoAm\} + \#\{WuWNNgy0A1Z\} + \#\{rKatBh8TmW2\}$   
 $+ \#\{KcMPvVefT1h\}$

100 - Per Cent

PMP TX 14 P

IM PMP TX 14 - Percentage of uncomplicated malaria cases that received first-line antimalarial treatment according to national guidelines (P)

IM PMP TX 14 - % of uncomplicated cases (P)

Number of reported uncomplicated malaria cases that receive the appropriate first-line antimalarial treatmentid :  $\#\{Ldvf3MSggqO\} + \#\{KZHiYuvgkMm\}$   
 $+ \#\{PfB1cg2ktB9\}$

Total number of reported malaria cases during reporting periodid :  
 $\#\{CrV5hkFVvdH\} + \#\{qXQ0d9NKQtI\} + \#\{AmUi4XKbJ6X\} +$   
 $\#\{HiIx2iQ8Wxy\} + \#\{YMiDfYBOpWk\} + \#\{RfziOIqzJCP\}$

100 - Per Cent

PMP TX 14 P (CL)

IM PMP TX 14 - Percentage of uncomplicated malaria cases that received first-line antimalarial treatment according to national guidelines (P) (CL)

IM PMP TX 14 - % of uncomplicated cases (P) (CL)

Number of reported uncomplicated malaria cases that receive the appropriate first-line antimalarial treatmentid :  $\#\{Ldvf3MSggqO\}$

Total number of reported malaria cases during reporting periodid :  
 $\#\{CrV5hkFVvdH\} + \#\{qXQ0d9NKQtI\}$

100 - Per Cent

PMP TX 15

IM PMP TX 15 - Percentage of targeted health workers demonstrating competence in management of severe malaria

IM PMP TX 15 - % of HWs competent in severe cases

Number of health workers who score a pass mark on supervisory or quality improvement checklists measuring the diagnosis and management of severe malariaid :  $\#\{QYPXt95CyCY\} + \#\{es8NwgtSAsX\} + \#\{lomzmDp50ZG\} +$   
 $\#\{Ct1pZ0T1x2R\}$

Health workers assessed on diagnosis and management of severe malariaid :  $\#\{W4wiC7ioFKS\} + \#\{b3GBk3DB8ou\} + \#\{g0OQgJCDs0U\} +$   
 $\#\{WNhkeZnc1XT\}$

100 - Per Cent

## PMP TX 16

IM PMP TX 16 - Percentage of targeted health workers demonstrating competence in management of uncomplicated malaria

IM PMP TX 16 - % of HWs competent (uncomp cases)

Number of health workers who score a pass mark on supervisory or quality improvement checklists measuring the diagnosis and treatment of uncomplicated malariaid :  $\#\{\text{gmsvdmKMmP1}\} + \#\{\text{l4uAwIXVrPp}\} + \#\{\text{HsD3L7BZa5T}\} + \#\{\text{umfGv9oznIa}\}$

Health workers assessed on diagnosis and management of uncomplicated malariaid :  $\#\{\text{HcmlwDCmBSZ}\} + \#\{\text{uNnp6IHODyP}\} + \#\{\text{GtohCrGevVV}\} + \#\{\text{Wq1oBD43sCc}\}$

100 - Per Cent

## PMP TX 17

IM PMP TX 17 - Percentage of targeted health workers demonstrating compliance to treatment with WHO guidelines for cases with positive malaria test results

IM PMP TX 17 - % of HWs adhered (+ve cases)

Number of health workers who comply to treatment with a WHO-recommended antimalarial for cases with positive malaria test results during clinical assessment visits measured through direct observation during supervision visitsid :  $\#\{\text{Do9KBfS22qD}\} + \#\{\text{eJSUmK8XCOW}\} + \#\{\text{wVlGTvl4xvH}\} + \#\{\text{E77z4UQBHJE}\}$

Health workers assessed on management of positive malaria casesid :  $\#\{\text{Bli6iNQMtP5}\} + \#\{\text{w1gYh10blt1}\} + \#\{\text{ibu7rlMvF7s}\} + \#\{\text{YC-sROGVIXGz}\}$

100 - Per Cent

## PMP TX 18

IM PMP TX 18 - Percentage of health workers demonstrating adherence to negative test results according to global standards

IM PMP TX 18 - % of HWs adhered (-ve cases)

Number of health workers demonstrating adherence to negative test results according to global standards measured through direct observation through supervision visitsid :  $\#\{\text{jhcbf1Yfhr5}\} + \#\{\text{yChCRfBYBx2}\} + \#\{\text{u6hbx56NqZQ}\} + \#\{\text{Y0IgOx4kim8}\}$

Health workers assessed on management of negative malaria casesid :  $\#\{\text{vskYx-CrS9Hk}\} + \#\{\text{FORs5r9LYU3}\} + \#\{\text{oV5ypvYLOjj}\} + \#\{\text{WvrndytTbHq}\}$

100 - Per Cent



## PMP TX 19

IM PMP TX 19 - Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality malaria case management

IM PMP TX 19 - % of facilities with CM standards

Number of targeted facilities that meet 90% or greater on facility checklists for quality case management during supervisory visitsid :  $\#\{Bjg3UQZTo7O\} + \#\{vsI12KXd1od\}$

Total number of targeted facilities who received a supervisory visit during the reporting periodid :  $\#\{TpcOpmZBdLf\} + \#\{XY77QRYfFiA\}$

100 - Per Cent

## PMP TX 20

IM PMP TX 20 - Percentage of targeted health facilities regularly reporting routine malaria case data

IM PMP TX 20 - % of facilities reporting cases

Number of health facilities reporting monthly routine malaria case load data on diagnosis and treatment within an agreed timescale at least 2 months in the past 3 monthsid :  $\#\{xV85TQT3GEj\}$

Total number of target health facilities scheduled to report monthly routine malaria case load data during the reporting periodid :  $\#\{pDisUBYkiUY\}$

100 - Per Cent

## PMP TX 21

IM PMP TX 21 - Percentage of targeted health facilities that receive a supervisory visit

IM PMP TX 21 - % of facilities with SUPV visits

Number of health facilities that receive a supervisory visit that covers malaria case management and/or malaria in pregnancy (MiP)id :  $\#\{TpcOpmZBdLf\}$

Total number of health facilities targeted for supervision during the reporting periodid :  $\#\{RncgLNY0xwy\}$

100 - Per Cent

## PMP TX 22

IM PMP TX 22 - Percentage of health workers trained in management of severe malaria

IM PMP TX 22 - % of HWs trained on severe malaria

Number of health workers who complete the training course on severe malaria case managementid : #{Ly61ha78oUu}

Total number of health workers targetedid : #{DoyuoVEARPV}

100 - Per Cent

PMP TX 23

IM PMP TX 23 - Percentage of targeted health workers trained according to national guidelines in malaria case management with ACTs

IM PMP TX 23 - % of HWs trained on ACTs

Number of health workers who complete the national training course on malaria case management with ACTsid : #{wfxNAGkledf}

Total number of health workers targetedid : #{cqKHdgtfjID}

100 - Per Cent

PMP TX 24

IM PMP TX 24 - Percentage of targeted countries with national guidelines for malaria treatment that meet global standards

IM PMP TX 24 - % of countries with TX guidelines

Number of targeted countries with national guidelines for malaria treatment that meet global standardsid : #{YVLRuSGpePK}

Total number of targeted countriesid : #{YVLRuSGpePK}>0

100 - Per Cent

NA

IM PMP Tx 2 - Percentage of severe malaria cases appropriately managed

% of severe malaria cases appropriately managed

Numid : #{km1IPVcORaY}

Denid : #{W6NdGzWJurN}

100 - Per Cent

NA

IM PMP Tx 3 - Percentage of uncomplicated malaria cases that received first-line antimalarial treatment according to national guidelines

% of uncomplicated malaria cases managed

Numid : #{RYl937S07k0}

Denid : #{oWhqaiv26dB}

100 - Per Cent

**3.4.2 Country IM PMP indicators****3.4.2.1 Kenya**

code

name

shortName

numerator

denominator

count

DX indicators

NA

KE PMP 01 - DX Percentage of patients with suspected malaria who received a parasitological test

KE PMP 01 - DX % tested suspected cases

Numid : #{Rf40G3xMCqI}

Denid : #{m2CdUYVjGe5}

100 - Per Cent

NA

KE PMP 02 - DX Percentage of health workers demonstrating competence in malaria RDTs

KE PMP 02 - DX % HWs malaria RDTs

Numid : #{s5Ys2ABMGgE}

Denid : #{soWdw75XP5d}

100 - Per Cent

NA

KE PMP 03 - DX Percentage of HCWs demonstrating competence in malaria microscopy

KE PMP 03 - DX % HWs malaria microscopy

Numid : #{x7CZVlQSaE6}

Denid : #{VdW9y4M8WAK}

100 - Per Cent

NA

KE PMP 04 - DX Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality diagnosis of malaria (microscopy)

KE PMP 04 - DX % HFs malaria microscopy

Numid : #{uykAN5XlXKK}

Denid : #{HDK9LRt5rDv}

100 - Per Cent

NA

KE PMP 04 - DX Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality diagnosis of malaria (RDT)

KE PMP 04 - DX % HFs malaria RDTs

Numid : #{TLuXiPIITDu}

Denid : #{HDK9LRt5rDv}

100 - Per Cent

NA

KE PMP 05 - DX Percentage of HCWs demonstrating competence or knowledgeable in correctly classifying uncomplicated and severe malaria

KE PMP 05 - DX % HWs classify cases correctly

Numid : #{cVUt7HK83ag}

Denid : #{blbz5pmEqoF}

100 - Per Cent

NA

KE PMP 06 - DX Percentage of targeted supervisors trained in supervision of malaria diagnostics (microscopy)

KE PMP 06 - DX % supervisors trained (microscopy)

Numid : #{PgAauebV15e}

Denid : #{pVyN8ZZT7TA}

100 - Per Cent

NA

KE PMP 06 - DX Percentage of targeted supervisors trained in supervision of malaria diagnostics (RDT)

KE PMP 06 - DX % supervisors trained (RDT)

Numid : #{jZmH2n22eJf}

Denid : #{pVyN8ZZT7TA}

100 - Per Cent

NA

KE PMP 07 - DX Percentage of targeted counties with recommended malaria diagnostic supervision tools

KE PMP 07 - DX % counties w/malaria DX tools

Numid : #{zTF23dP6a65}

Denid : R{dfroFhEbqHJ.ACTUAL\_REPORTS}

100 - Per Cent

NA

KE PMP 08 - DX DX Percentage of targeted health workers trained in malaria diagnostics (RDT)

KE PMP 08 - DX % HWs trained (RDT)

Numid : #{soWdw75XP5d}

Denid : #{a2RpS8B1eCM}

100 - Per Cent

NA

KE PMP 08 - DX Percentage of targeted health workers trained in malaria diagnostics (microscopy)

KE PMP 08 - DX % HWs trained (microscopy)

Numid : #{VdW9y4M8WAK}

Denid : #{a2RpS8B1eCM}

100 - Per Cent

NA

KE PMP 09 - DX Percentage of targeted facilities with at least one provider trained in RDT

KE PMP 09 - DX % HF's with 1 provider trained (RDT)

Numid : #{g1KI3UhtDoJ}

Denid : #{mZJOvYsr84U}

100 - Per Cent

NA

KE PMP 10 - DX Percentage of targeted facilities with at least one provider trained in microscopy

KE PMP 10 - DX % HF's with 1 provider trained (mic)

Numid : #{RjcTcWjtJEh}

Denid : #{azuQmfnMNVU}

100 - Per Cent

NA

KE PMP 11 - DX Percentage of targeted facilities with recommended guidelines/SOPs for malaria diagnosis

KE PMP 11 - DX % HF's with SOPs

Numid : #{sjDRGLS9yjA}

Denid : #{WrYkhf4k7pL}

100 - Per Cent

TX indicators

NA

KE PMP 12 - TX Percentage of suspected cases confirmed +ve for malaria

KE PMP 12 - TX % confirmed malaria cases

Numid : #{gIFzQQKCMjb}

Denid : #{Rf40G3xMCqI}

100 - Per Cent

NA

KE PMP 13 - TX Percentage of confirmed uncomplicated malaria cases that received first-line antimalarial treatment according to recommended national guidelines

KE PMP 13 - TX % cases correctly treated

Numid : #{V6CvG07Copy}

Denid : #{gIFzQQKCMjb}

100 - Per Cent

NA

KE PMP 14 - TX Percentage of laboratory confirmed severe malaria cases treated according to recommended guidelines (the administration of a recommended antimalarial)

KE PMP 14 - TX % severe cases correctly treated

Numid : #{dumrnf9ppLQ}

Denid : #{T32qa5ftQkW}

100 - Per Cent

NA

KE PMP 15 - TX Percentage of targeted HCWs demonstrating compliance to treatment according to national guidelines for cases with positive malaria test results

KE PMP 15 - TX % HWs compliance positive cases

Numid : #{E77z4UQBHJE}

Denid : #{YCsROGVIXGz}

100 - Per Cent

NA

KE PMP 16 - TX Percentage of HCWs demonstrating adherence to negative test results according to recommended guidelines

KE PMP 16 - TX % HWs compliance negative cases

Numid : #{Y0IgOx4kim8}

Denid : #{oV5ypvYLOjj}

100 - Per Cent

NA

KE PMP 17 - TX Percentage of targeted HCWs demonstrating competence in management of severe malaria according to national guidelines

KE PMP 17 - TX % HWs competent severe cases

Numid : #{Ct1pZ0T1x2R}

Denid : #{WNhkeZnc1XT}

100 - Per Cent

NA

KE PMP 18 - TX Percentage of targeted HCWs demonstrating competence in management of uncomplicated malaria according to national guidelines

KE PMP 18 - TX % HWs competent unc malaria

Numid : #{umfGv9oznIa}

Denid : #{GtohCrGevVV}

100 - Per Cent

NA

KE PMP 19 - TX Percentage of targeted facilities that meet global standards (including appropriate materials, documentation, and qualified staff) for quality malaria case management

KE PMP 19 - TX % HFs compliant quality case mngt

Numid : #{Sigw3MWtZ5d}

Denid : #{YZCHWOIahjV}

100 - Per Cent

NA

KE PMP 20 - TX Percentage of admitting facilities with HCWs trained in management of severe malaria

KE PMP 20 - TX % HFs provider trained (severe)

Numid : #{JVOBcq2tayS}

Denid : #{A20vEAmjRAS}

100 - Per Cent

NA

KE PMP 21 - TX Percentage of health workers trained on malaria case management

KE PMP 21 - TX % HWs trained case mngt

Numid : #{Y2Wizwyg2Zt}

Denid : #{HKwLM21EySC}

100 - Per Cent

NA

KE PMP 22 - TX Percentage of targeted health facilities that receive a supervisory visit

KE PMP 22 - TX % HFs supervised

Numid : #{egcmJ7NFPBG}

Denid : #{WRP6ICberkf}

100 - Per Cent

NA

KE PMP 23 - TX Percentage of targeted health facilities regularly reporting routine malaria case data

KE PMP 23 - TX % HFs reporting on time



Numid : #{A6is0WZ7UVI}+#{WUsfoJ01oa8}

Denid : #{k0OSOd7UeDj}+#{Jz08Pq3eoMi}

100 - Per Cent

MIP indicators

NA

KE PMP 24 - MIP Percentage of pregnant women receiving a free ITN during first ANC visit

KE PMP 24 - MIP % pregnant women received ITN

Numid : #{mEuLOT08NfK}

Denid : #{WdEGVnuWiDf}

100 - Per Cent

NA

KE PMP 25 - MIP Percentage of pregnant women who received three doses of IPTp according to recommended guidelines

KE PMP 25 - MIP % pregnant women IPT3

Numid : #{IVRMHcwVnDf}

Denid : #{WdEGVnuWiDf}

100 - Per Cent

NA

KE PMP 26 - MIP Percentage of pregnant women who received two doses of IPTp

KE PMP 26 - MIP % pregnant women IPT2

Numid : #{inFlJdtBRGo}

Denid : #{WdEGVnuWiDf}

100 - Per Cent

NA

KE PMP 27 - MIP Percentage of pregnant women who received one dose of IPTp

KE PMP 27 - MIP % pregnant women IPT1

Numid : #{jrvQeHC4vrr}

Denid : #{WdEGVnuWiDf}

100 - Per Cent

NA

KE PMP 28 - MIP Percentage of targeted HCWs demonstrating competence in prevention of MiP

KE PMP 28 - MIP % HWs competent MIP prevention

Numid : #{ORROqdVXqV5}

Denid : #{idmDOiFKv1Y}

100 - Per Cent

NA

KE PMP 29 - MIP Percentage of targeted HCWs demonstrating competence in treatment of MiP

KE PMP 29 - MIP % HWs competent MIP treatment

Numid : #{RJVSWuXI87o}

Denid : #{fJlele1NEHo}

100 - Per Cent

NA

KE PMP 30 - MIP Percentage of HCWs trained in MIP as per recommended guidelines

KE PMP 30 - MIP % HWs trained MIP

Numid : #{jKtX2TrReqh}

Denid : #{bf7z94n1SLP}

100 - Per Cent

NA

KE PMP 31 - MIP Percentage of targeted facilities with recommended guidelines for prevention and treatment of MIP

KE PMP 31 - MIP % HFs guidelines prev and treat

Numid : #{BTa5Qz98z3e}

Denid : #{BdgvH1NHCpk}

100 - Per Cent

NA

KE PMP 32 - MIP Functional/active MIP TWGs

KE PMP 32 - MIP Functional/active MIP TWGs

Numid : #{iOf4wYGTQnz}

Denid : #{Ou1JytOIUDS}

100 - Per Cent

NA

KE PMP 33 - MIP Functional/active CM TWGs

KE PMP 33 - MIP Functional/active CM TWGs

Numid : #{ISrVXrVhGWy}

Denid : #{LELIkDnSPSg}

100 - Per Cent

TL indicators

NA

KE PMP 34 - TL Contribution to national, regional or global guidance/policy documents related to malaria (including RH)

KE PMP 34 - TL Contribution to national policies

Numid : #{tJXmW64MUxf}

Denid : 1

1 - Atomic (number)

NA

KE PMP 35 - TL Number of program activity outputs disseminated to the global health community

KE PMP 35 - TL Program outputs disseminated

Numid : #{P4YDP2FNh3X}

Denid : 1

1 - Atomic (number)

NA

KE PMP 36 - TL Participation in targeted national or regional level Working group(s) and/or taskforce(s)

KE PMP 36 - TL Participation in WGs

Numid : #{XxfoDreiw9Z}

Denid : 1

1 - Atomic (number)

NA

KE PMP 37 - TL Contribution to regional or global guidance/policy documents to related to malaria

KE PMP 37 - TL Contribution to guidance/policy

Numid : #{OneitAtRzhO}

Denid : 1

1 - Atomic (number)

NA

KE PMP 38 - TL Percentage of facilities with updated data wall charts showcasing malaria indicators

KE PMP 38 - TL % HFs data-wall charts on malaria

Numid : #{cZbiIH1nPdE}

Denid : #{qO8BdhE2NPm}

100 - Per Cent

NA

KE PMP 39 - TL Percentage of IM focus counties conducting quarterly data-led review meetings

KE PMP 39 - TL % counties data-led review meetings

Numid : #{EnT6cC7Kpzx}

Denid : R{dfroFhEbqHJ.ACTUAL\_REPORTS}

100 - Per Cent

### 3.4.2.2 Ghana

code

name

shortName

numerator

denominator

count

DX indicators

NA

GH PMP 01 - DX Percentage of confirmed malaria cases

GH PMP 01 - DX % confirmed malaria cases

Numid : #{cZuXXzQuEL6}

Denid : #{zsUZQV4CAd6}

100 - Per Cent

NA

GH PMP 01 - DX Percentage of confirmed malaria cases by test type

GH PMP 01 - DX % confirmed malaria cases by test

Numid : #{C6fu4gyFJyt}

Denid : #{PwOl1Z017wD}

100 - Per Cent

NA

GH PMP 01 - DX Percentage of confirmed malaria cases (NP)

GH PMP 01 - DX % confirmed malaria cases (NP)

Numid : #{rKatBh8TmW2}

Denid : #{CpFbufOJ1rF}

100 - Per Cent

NA

GH PMP 01 - DX Percentage of confirmed malaria cases (P)

GH PMP 01 - DX % confirmed malaria cases (P)

Numid : #{YMiDfYBOpWk}

Denid : #{vAjxUR9K0mp}

100 - Per Cent

NA

GH PMP 02 - DX Percentage of patients with suspected malaria who received a parasitological test

GH PMP 02 - DX % suspected cases tested

Numid : #{zsUZQV4CAd6}

Denid : #{euw633Z8zIo}

100 - Per Cent

NA

GH PMP 02 - DX Percentage of patients with suspected malaria who received a parasitological test by microscopy

GH PMP 02 - DX % suspected cases tested (micr)

Numid : #{PwOl1Z017wD.LpJA6F7X60g}

Denid : #{euw633Z8zIo}

100 - Per Cent

NA

GH PMP 02 - DX Percentage of patients with suspected malaria who received a parasitological test by RDT

GH PMP 02 - DX % suspected cases tested (RDT)

Numid : #{PwOl1Z017wD.QOpXmMLmbT4}

Denid : #{euw633Z8zIo}

100 - Per Cent

NA

GH PMP 02 - DX Percentage of patients with suspected malaria who received a parasitological test (NP)

GH PMP 02 - DX % suspected cases tested (NP)

Numid : #{CpFbufOJ1rF}

Denid : #{kpeH1yY1HA3}

100 - Per Cent

NA

GH PMP 02 - DX Percentage of patients with suspected malaria who received a parasitological test (P)

GH PMP 02 - DX % suspected cases tested (P)

Numid : #{vAjsxUR9K0mp}

Denid : #{dmDdKI5KYVQ}

100 - Per Cent

NA

GH PMP 03 - DX Percentage of health workers demonstrating competence in malaria microscopy (parasite detection)

GH PMP 03 - DX % HWs parasite detection

Numid : #{KGdsCrdl9ba}

Denid : #{ubSPJnm2719}

100 - Per Cent

NA

GH PMP 03 - DX Percentage of health workers demonstrating competence in malaria microscopy (slide preparation)

GH PMP 03 - DX % HWs slide preparation

Numid : #{KSg5YQbFJY0}

Denid : #{ubSPJnm2719}

100 - Per Cent

NA

GH PMP 03 - DX Percentage of health workers demonstrating competence in malaria microscopy (species identification)

GH PMP 03 - DX % HWs species identification

Numid : #{T0cJykJxWvk}

Denid : #{ubSPJnm2719}

100 - Per Cent

NA

GH PMP 04 - DX Percentage of health workers demonstrating competence in malaria RDTs

GH PMP 04 - DX % HWs malaria RDTs

Numid : #{i8lD2Tc7BOM}

Denid : #{olr3t0zkdUn}

100 - Per Cent

NA

GH PMP 05 - DX Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality diagnosis of malaria (microscopy)

GH PMP 05 - DX % HFs malaria microscopy

Numid : #{TKxb2PFjRwO}

Denid : #{oVIXBtQccHN}

100 - Per Cent

NA

GH PMP 05 - DX Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality diagnosis of malaria (RDT)

GH PMP 05 - DX % HFs malaria RDTs

Numid : #{vvgD4UQFNye}

Denid : #{oVIXBtQccHN}

100 - Per Cent

NA

GH PMP 06 - DX Percentage of health workers demonstrating competence in correctly classifying cases as not malaria, uncomplicated malaria, and severe malaria

GH PMP 06 - DX % HWs malaria case mnngt

Numid : #{t1vdNH0vIE2}

Denid : #{pgsaevmKtbM}

100 - Per Cent

NA

GH PMP 07 - DX Percentage of targeted supervisors trained in supervision of malaria diagnostics (microscopy)

GH PMP 07 - DX % supervisors trained (microscopy)

Numid : #{zlWYhVAouup}

Denid : #{aZpDapygzg1}

100 - Per Cent

NA

GH PMP 07 - DX Percentage of targeted supervisors trained in supervision of malaria diagnostics (RDT)

GH PMP 07 - DX % supervisors trained (RDT)

Numid : #{oFiMCwBOYLU}

Denid : #{aZpDapygzg1}

100 - Per Cent

NA

GH PMP 08 - DX Percentage of targeted districts adhering to national malaria diagnostic supervision protocol

GH PMP 08 - DX % districts adherent dx tools

Numid : #{tpADDhwJvm3}

Denid : R{jVmnSOBUkeG.ACTUAL\_REPORTS}



100 - Per Cent

NA

GH PMP 09 - DX Percentage of targeted health workers trained in malaria laboratory diagnostics (microscopy)

GH PMP 09 - DX % HWs trained (microscopy)

Numid : #{XenaBO47ky4}

Denid : #{VcPN46GIkwA}

100 - Per Cent

NA

GH PMP 09 - DX Percentage of targeted health workers trained in malaria laboratory diagnostics (RDT)

GH PMP 09 - DX % HWs trained (RDT)

Numid : #{QniAsU4SnZr}

Denid : #{VcPN46GIkwA}

100 - Per Cent

NA

GH PMP 10 - DX Percentage of targeted facilities with at least one provider trained in malaria parasitological diagnosis

GH PMP 10 - DX % HF with 1 provider trained

Numid : #{W0G6LUKSSnG}

Denid : #{tWSq7bigbm}

100 - Per Cent

NA

GH PMP 11 - DX Percentage of targeted facilities with national guidelines for malaria diagnosis

GH PMP 11 - DX % HF with national guidelines

Numid : #{EU2SBKsgxLd}

Denid : #{oVIXBtQccHN}

100 - Per Cent

TX indicators

NA

GH PMP 12 - TX Percentage of malaria cases (presumed and confirmed) that received the recommended antimalarial treatment according to national guidelines

GH PMP 12 - TX % cases correctly treated

Numid : #{i4BsFSVy41V}

Denid : #{cZuXXzQuEL6} + #{E04lKfKfIKc}

100 - Per Cent

NA

GH PMP 12 - TX Percentage of malaria cases (presumed and confirmed) that received the recommended antimalarial treatment according to national guidelines (NP)

GH PMP 12 - TX % cases correctly treated (NP)

Numid : #{Jz05wiLIOae}

Denid : #{rKatBh8TmW2} + #{KcMPvVefT1h}

100 - Per Cent

NA

GH PMP 12 - TX Percentage of malaria cases (presumed and confirmed) that received the recommended antimalarial treatment according to national guidelines (P)

GH PMP 12 - TX % cases correctly treated (P)

Numid : #{PfB1cg2ktB9}

Denid : #{YMiDfYBOpWk} + #{RfziOIqzJCP}

100 - Per Cent

NA

GH PMP 13 - TX Percentage of severe malaria cases that were treated according to national guidelines

GH PMP 13 - TX % severe cases correctly treated

Numid : #{oCpv0PXpm38}

Denid : #{bi3pI9REwqS}

100 - Per Cent

NA

GH PMP 14 - TX Percentage of children under 5 appropriately treated for fever according to CCM or country algorithms or national guidelines by community health workers (CHPS Staff)

GH PMP 14 - TX % CU5 correctly treated by CHWs

Numid : #{F9NoFjuDa4W}

Denid : #{x9V7Fnjnh3W}

100 - Per Cent

NA

GH PMP 15 - TX Percentage of targeted health workers demonstrating compliance to treatment with WHO-recommended ACTs for cases with positive malaria test results

GH PMP 15 - TX % HWs compliance positive cases

Numid : #{wVlGTvl4xvH}

Denid : #{ibu7rlMvF7s}

100 - Per Cent

NA

GH PMP 16 - TX Percentage of health workers demonstrating adherence to negative test results according to global standards

GH PMP 16 - TX % HWs compliance negative cases

Numid : #{u6hbx56NqZQ}

Denid : #{WvrndytTbHq}

100 - Per Cent

NA

GH PMP 17 - TX Percentage of targeted health workers demonstrating competence in management of severe malaria according to WHO guidelines

GH PMP 17 - TX % HWs competent severe cases

Numid : #{lomzmDp50ZG}

Denid : #{g0OQgJCDs0U}

100 - Per Cent

NA

GH PMP 18 - TX Percentage of targeted health workers demonstrating competence in management of uncomplicated malaria

GH PMP 18 - TX % HWs competent unc malaria

Numid : #{HsD3L7BZa5T}

Denid : #{Wq1oBD43sCc}

100 - Per Cent

NA

GH PMP 19 - TX Percentage of targeted facilities that meet global standards (including appropriate materials, documentation, and qualified staff) for quality malaria case management

GH PMP 19 - TX % HFs compliant quality case mngt

Numid : #{UVHLhFuqoVk}

Denid : #{J0bw03xwqlH}

100 - Per Cent

NA

GH PMP 20 - TX Percentage of targeted health workers trained in management of severe malaria according to national guidelines in malaria case management

GH PMP 20 - TX % HWs trained severe malaria

Numid : #{SVODiwEcdgd}

Denid : #{QCuGMfgsVaK}

100 - Per Cent

NA

GH PMP 21 - TX Percentage of targeted health workers trained according to national guidelines in malaria case management with ACTs

GH PMP 21 - TX % HWs trained case mngt ACTs

Numid : #{VfDLFFUYJzW}

Denid : #{iQlzs8iDrPV}

100 - Per Cent

NA

GH PMP 22 - TX Percentage of targeted health facilities that receive a quarterly/semi-annual supervisory visit

GH PMP 22 - TX % HFs supervised

Numid : #{J0bw03xwqlH}

Denid : #{nk4hdODaKK0}

100 - Per Cent

NA

GH PMP 23 - TX Percentage of targeted health facilities regularly reporting routine malaria case data

GH PMP 23 - TX % HF's reporting on time

Numid : #{Z0aqwa22PYb} + #{katkPagbEeB} + #{MwdunKjMqSS} +  
#{rGBsSAFdUmq}

Denid : #{FJG59eImr6t} + #{S3oGeLMj5qW} + #{eKUPUTJnM8I} +  
#{t0AC67lGHwT}

100 - Per Cent

NA

GH PMP 24 - TX Percentage of targeted districts with national guidelines for malaria treatment that meet national standards

GH PMP 24 - TX % districts guidelines on tx

Numid : #{iiFzfmXIK3U}

Denid : R{jVmnSOBUkeG.ACTUAL\_REPORTS}

100 - Per Cent

MIP indicators

NA

GH PMP 25 - MIP Percentage of pregnant women who received an ITN during routine ANC visit/interaction

GH PMP 25 - MIP % pregnant women received ITN

Numid : #{kZAWqatScJ9}

Denid : #{KBe7hShEYAK}

100 - Per Cent

NA

GH PMP 26 - MIP Percentage of pregnant women who received three or more doses of IPTp according to national guidelines

GH PMP 26 - MIP % pregnant women IPT3

Numid : #{CFaVHFhbS4v}

Denid : #{KBe7hShEYAK}

100 - Per Cent

NA

GH PMP 27 - MIP Percentage of pregnant women who received two doses of IPTp

GH PMP 27 - MIP % pregnant women IPT2

Numid : #{SZgN28ZELh9}

Denid : #{KBe7hShEYAK}

100 - Per Cent

NA

GH PMP 28 - MIP Percentage of pregnant women who received one dose of IPTp

GH PMP 28 - MIP % pregnant women IPT1

Numid : #{uuWSsTlrVtU}

Denid : #{KBe7hShEYAK}

100 - Per Cent

NA

GH PMP 29 - MIP Percentage of targeted health workers demonstrating competence in prevention of MiP

GH PMP 29 - MIP % HWs prevention MIP

Numid : #{aqOOzx0bgiA}

Denid : #{DjbIYfqQC8i}

100 - Per Cent

NA

GH PMP 30 - MIP Percentage of targeted health workers demonstrating competence in treatment of MiP

GH PMP 30 - MIP % HWs treatment MIP

Numid : #{S2sRLkbN81y}

Denid : #{gnjJPPJNSJF}

100 - Per Cent

NA

GH PMP 31 - MIP Percentage of targeted health workers trained in IPTp per national guidelines

GH PMP 31 - MIP % HWs trained IPTp

Numid : #{eETioVuAGg}

Denid : #{wHuGUXeSGM8}

100 - Per Cent

NA

GH PMP 32 - MIP Percentage of targeted districts with national guidelines for prevention and treatment of MiP that meet national standards

GH PMP 32 - MIP % districts guidelines on MIP

Numid : #{JNsc7SinzVA}

Denid : R{jVmnSOBUkeG.ACTUAL\_REPORTS}

100 - Per Cent

NA

GH PMP 33 - MIP Number of national MiP/RH/ANC Working Group participated in by IM staff

GH PMP 33 - MIP # of national WGs joined

Numid : #{RzhqmTVkT0P}

Denid : 1

1 - Atomic (number)

TL indicators

NA

GH PMP 39 - TL Number of program activity outputs disseminated to the global health community

GH PMP 39 - TL # of outputs disseminated

Numid : #{P4YDP2FNh3X}

Denid : 1

1 - Atomic (number)

NA

GH PMP 40 - TL Number of targeted national, regional or global level Working group(s) and/or taskforce(s) participated in

GH PMP 40 - TL # of WGs joined

Numid : #{XxfoDreiw9Z}

Denid : 1

1 - Atomic (number)

NA

GH PMP 41 - TL Number of regional or global guidance/policy documents contributed to malaria related issues

GH PMP 41 - TL # of documents contributed to

Numid : #{tJXmW64MUxf}

Denid : 1

1 - Atomic (number)

NA

GH PMP 42 - TL Percentage of facilities with updated data wall charts showcasing malaria indicators

GH PMP 42 - TL % HFs data-wall charts on malaria

Numid : #{bJ4OXMnhmS0}

Denid : R{IK0bdLXmBn0.ACTUAL\_REPORTS}

100 - Per Cent

NA

GH PMP 43 - TL Percentage of IM districts conducting quarterly data-led review meetings

GH PMP 43 - TL % OUs data-led review meetings

Numid : #{KBXEqUHeNXE}

Denid : R{jVmnSOBUkeG.ACTUAL\_REPORTS}

100 - Per Cent

### 3.4.2.3 Demoncratic Republic of Congo

code

name

shortName

numerator

denominator

count

DX indicators

NA

CD PMP - DX Percentage of health workers demonstrating competence in malaria microscopy

CD PMP - DX % HWs competent in malaria microscopy

Numid : #{jf8nKluaF2h}

Denid : #{om6201JM4BF}



100 - Per Cent

NA

CD PMP - DX Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality diagnosis of malaria

CD PMP - DX % HF's quality malaria dx

Numid : #{IYVEbBilotu}

Denid : #{jGkzcQyNUNV}

100 - Per Cent

NA

CD PMP - DX Percentage of targeted facilities with national guidelines for malaria diagnosis that meet global standards

CD PMP - DX % HF's meet global standards

Numid : #{XSxU2y6GXrr}

Denid : #{uRPZ7FLjflC}

100 - Per Cent

NA

CD PMP - DX Percentage of targeted provinces with national malaria diagnostic supervision tools that adhere to global standards

CD PMP - DX % provinces adhere global standards

Numid : #{ajqXNRgblHk}

Denid : R{ZCAcgsYrGTP.ACTUAL\_REPORTS}

100 - Per Cent

NA

CD PMP - DX Percentage of targeted supervisors trained in supervision of malaria diagnostics

CD PMP - DX % supervisors trained in malaria dx

Numid : #{vg88HQNpSXz}

Denid : #{O8ilhnRgkRW}

100 - Per Cent

**3.4.2.4 Mali**

code

name

shortName

numerator

denominator

count

DX indicators

NA

ML PMP 01 - DX Percentage of patients with suspected malaria who received a parasitological test

ML PMP 01 - DX % suspected cases tested

Numid : #{BAZd7D3zQHN}

Denid : #{LMMJ97M5sVl}

100 - Per Cent

NA

ML PMP 01 - DX Percentage of patients with suspected malaria who received a parasitological test (NP)

ML PMP 01 - DX % suspected cases tested (NP)

Numid : #{OG6loaaPPta}

Denid : #{sFNGVQb1U5L}

100 - Per Cent

NA

ML PMP 01 - DX Percentage of patients with suspected malaria who received a parasitological test (P)

ML PMP 01 - DX % suspected cases tested (P)

Numid : #{cYgEOZdVSu5}

Denid : #{Lbm20lLkv6L}

100 - Per Cent

NA

ML PMP 02 - DX Number of cases confirmed as malaria by a parasitological test (RDT or microscopy)

ML PMP 02 - DX % confirmed malaria cases

Numid : #{ElkFrm5x8Sf}

Denid : #{BAZd7D3zQHN}

100 - Per Cent

NA

ML PMP 02 - DX Number of cases confirmed as malaria by a parasitological test (RDT or microscopy) (NP)

ML PMP 02 - DX % confirmed malaria cases (NP)

Numid : #{WuWNNgy0A1Z}

Denid : #{OG6loaaPPta}

100 - Per Cent

NA

ML PMP 02 - DX Number of cases confirmed as malaria by a parasitological test (RDT or microscopy) (P)

ML PMP 02 - DX % confirmed malaria cases (P)

Numid : #{AmUi4XKbJ6X}

Denid : #{cYgEOZdVSu5}

100 - Per Cent

NA

ML PMP 03 - DX Percentage of targeted health workers demonstrating competence in correctly classifying cases as negative (confirmed as not malaria), uncomplicated malaria, complicated malaria, and severe malaria

ML PMP 03 - DX % HWs competent case mngt

Numid : #{vXZ2RDwuyzA}

Denid : #{ytfbfxZr1Ya}

100 - Per Cent

NA

ML PMP 04 - DX Percentage of health workers demonstrating competence in malaria RDTs

ML PMP 04 - DX % HWs malaria RDTs

Numid : #{TDBa7IcPJAN}

Denid : #{rSn9x2JQPJe}

100 - Per Cent

NA

ML PMP 05 - DX Percentage of health workers demonstrating competence in malaria microscopy

ML PMP 05 - DX % HWs malaria microscopy

Numid : #{PEOQBH2TD24}

Denid : #{GCSv8Ni4KhE}

100 - Per Cent

NA

ML PMP 06 - DX Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality diagnosis of malaria (microscopy)

ML PMP 06 - DX % HF's malaria microscopy

Numid : #{Gj8mqX5twDU}

Denid : #{teWZva5EkPM}

100 - Per Cent

NA

ML PMP 06 - DX Percentage of targeted facilities that meet standards (including appropriate materials, documentation, and qualified staff) for quality diagnosis of malaria (RDT)

ML PMP 06 - DX % HF's malaria RDTs

Numid : #{VQT4EOtPiwC}

Denid : #{teWZva5EkPM}

100 - Per Cent

NA

ML PMP 07 - DX Percentage of targeted facilities with at least one provider trained in malaria diagnosis

ML PMP 07 - DX % HF's with 1 provider trained

Numid : #{N6oAUOjFBF0}

Denid : #{YpbUdDBZjIA}

100 - Per Cent

NA

ML PMP 08 - DX Percentage of targeted health workers trained in malaria laboratory diagnostics (microscopy)

ML PMP 08 - DX % HWs trained (microscopy)

Numid : #{GCSv8Ni4KhE}

Denid : #{CX09R9Mdsj9}

100 - Per Cent

NA

ML PMP 08 - DX Percentage of targeted health workers trained in malaria laboratory diagnostics (RDT)

ML PMP 08 - DX % HWs trained (RDT)

Numid : #{rSn9x2JQPJe}

Denid : #{CX09R9Mdsj9}

100 - Per Cent

NA

ML PMP 09 - DX Percentage of targeted supervisors trained in supervision of malaria diagnostics (microscopy)

ML PMP 09 - DX % supervisors trained (microscopy)

Numid : #{hbEgIBy1bIf}

Denid : #{MFpS8w5h9XS}

100 - Per Cent

NA

ML PMP 09 - DX Percentage of targeted supervisors trained in supervision of malaria diagnostics (RDT)

ML PMP 09 - DX % supervisors trained (RDT)

Numid : #{sRz3zlhaJrH}

Denid : #{MFpS8w5h9XS}

100 - Per Cent

NA

ML PMP 10 - DX Percentage of targeted health districts with national malaria diagnostic supervision tools adhere to national standards

ML PMP 10 - DX % districts sup tools nat standards

Numid : #{fEDZSnnqQM8}

Denid : #{nUyU7k7knZD}

100 - Per Cent

NA

ML PMP 11 - DX Percentage of targeted districts with national guidelines for malaria diagnosis that meet national standards

ML PMP 11 - DX % districts guideline nat standards

Numid : #{Iu13qrpBgfW}

Denid : #{nUyU7k7knZD}

100 - Per Cent

TX indicators

NA

ML PMP 12 - TX Percentage of malaria cases (presumed and confirmed) that received first-line antimalarial treatment according to national guidelines

ML PMP 12 - TX % cases correctly treated

Numid : #{x4VF1RbQzQf}

Denid : #{gZNPPAuMZTv}

100 - Per Cent

NA

ML PMP 12 - TX Percentage of malaria cases (presumed and confirmed) that received first-line antimalarial treatment according to national guidelines (NP)

ML PMP 12 - TX % cases correctly treated (NP)

Numid : #{Nr5DUqTxNBu}

Denid : #{V64pOp9iOSO}

100 - Per Cent

NA

ML PMP 12 - TX Percentage of malaria cases (presumed and confirmed) that received first-line antimalarial treatment according to national guidelines (P)

ML PMP 12 - TX % cases correctly treated (P)

Numid : #{gb97L4YbngN}

Denid : #{VHK6rCw6nCM}

100 - Per Cent

NA

ML PMP 13 - TX Percentage of uncomplicated malaria cases that received first-line antimalarial treatment according to national guidelines

ML PMP 13 - TX % unc cases correctly treated

Numid : #{JLxVyp3qGve}

Denid : #{DmSkJD4HLqS}

100 - Per Cent

NA

ML PMP 13 - TX Percentage of uncomplicated malaria cases that received first-line antimalarial treatment according to national guidelines (NP)

ML PMP 13 - TX % unc cases correctly treated (NP)

Numid : #{n9YAgSwzX8J}

Denid : #{ot3qZtzsOBh}

100 - Per Cent

NA

ML PMP 13 - TX Percentage of uncomplicated malaria cases that received first-line antimalarial treatment according to national guidelines (P)

ML PMP 13 - TX % unc cases correctly treated (P)

Numid : #{KZHiYuvgkMm}

Denid : #{yTfVdx0NIOh}

100 - Per Cent

NA

ML PMP 14 - TX Percentage of targeted health workers demonstrating compliance to treatment with WHO-recommended ACTs for cases with positive malaria test results

ML PMP 14 - TX % HWs compliance positive cases

Numid : #{eJSUmK8XCOW}

Denid : #{w1gYh10blt1}

100 - Per Cent

NA

ML PMP 15 - TX Percentage of targeted health workers demonstrating adherence to negative test results according to global standards

ML PMP 15 - TX % HWs compliance negative cases

Numid : #{yChCRfBYBx2}

Denid : #{FORs5r9LYU3}

100 - Per Cent

NA

ML PMP 16 - TX Percentage of targeted health workers demonstrating competence in management of complicated or severe malaria according to WHO guidelines

ML PMP 16 - TX % HWs competent sever cases

Numid : #{es8NwgtSAsX}

Denid : #{b3GBk3DB8ou}

100 - Per Cent

NA

ML PMP 17 - TX Percentage of targeted health workers demonstrating competence in management of uncomplicated malaria according to national guidelines

ML PMP 17 - TX % HWs competent unc malaria

Numid : #{14uAwIXVrPp}

Denid : #{uNnp6IHODyP}

100 - Per Cent

NA

ML PMP 18 - TX Percentage of targeted facilities that meet global standards (including appropriate materials, documentation, and qualified staff) for quality malaria case management

ML PMP 18 - TX % HFs compliant quality case mnngt

Numid : #{vsI12KXd1od}

Denid : #{XY77QRYfFiA}

100 - Per Cent

NA

ML PMP 19 - TX Percentage of targeted health workers trained in management of complicated or severe malaria according to national guidelines in malaria case

ML PMP 19 - TX % HWs trained severe malaria

Numid : #{RO6irxovRAO}

Denid : #{ddWTWat3EDS}

100 - Per Cent

NA



ML PMP 20 - TX Percentage of health workers trained according to national guidelines in malaria case management with ACTs

ML PMP 20 - TX % HWs trained case mngt ACTs

Numid : #{r4Gt4QQOoFD}

Denid : #{rJvwXMR6FUC}

100 - Per Cent

NA

ML PMP 21 - TX Percentage of targeted health facilities that receive a quarterly supervisory visit

ML PMP 21 - TX % HF's supervised

Numid : #{teWZva5EkPM}

Denid : #{wfz9d5EpD2c}

100 - Per Cent

NA

ML PMP 22 - TX Percentage of targeted health facilities regularly reporting routine malaria case data

ML PMP 22 - TX % HF's reporting on time

Numid : #{iBcwqsqDLeT}

Denid : R{Mzg2dfU0Sdj.ACTUAL\_REPORTS}

100 - Per Cent

NA

ML PMP 23 - TX Percentage of targeted districts with national guidelines for malaria treatment that meet national standards

ML PMP 23 - TX % districts treatment guidelines

Numid : #{pklKswSY4dg}

Denid : #{nUyU7k7knZD}

100 - Per Cent

MIP indicators

NA

ML PMP 24 - MIP Percentage of pregnant women who received an ITN during routine ANC visit/interaction

ML PMP 24 - MIP % pregnant women received ITN

Numid : #{jmLXEBQDZAy}

Denid : #{IGyPotenyO2}

100 - Per Cent

NA

ML PMP 25 - MIP Percentage of pregnant women who received three or more doses of IPTp according to national guidelines (during ANC)

ML PMP 25 - MIP % pregnant women IPT3

Numid : #{RS90YaqGgUN}

Denid : #{IGyPotenyO2}

100 - Per Cent

NA

ML PMP 26 - MIP Percentage of pregnant women who received two doses of IPTp

ML PMP 26 - MIP % pregnant women IPT2

Numid : #{LF9PqTGXhBc}

Denid : #{IGyPotenyO2}

100 - Per Cent

NA

ML PMP 27 - MIP Percentage of pregnant women who received one dose of IPTp

ML PMP 27 - MIP % pregnant women IPT1

Numid : #{qk8A67ySRR0}

Denid : #{IGyPotenyO2}

100 - Per Cent

NA

ML PMP 28 - MIP Percentage of targeted health workers demonstrating competence in prevention of MiP

ML PMP 28 - MIP % HWs competent MIP prevention

Numid : #{FGSiegFTyBL}

Denid : #{YQ1zwUfv6Gx}

100 - Per Cent

NA

ML PMP 29 - MIP Percentage of targeted health workers demonstrating competence in treatment of MiP

ML PMP 29 - MIP % HWs competent MIP treatment

Numid : #{AkJUjEErkX5}

Denid : #{yOXzK6ElVJr}

100 - Per Cent

NA

ML PMP 30 - MIP Percentage of health workers trained in IPTp per national guidelines

ML PMP 30 - MIP % HWs trained IPTp

Numid : #{CxioZ7hV8e9}

Denid : #{FVF9sYgBAH2}

100 - Per Cent

NA

ML PMP 31 - MIP A functional/active national MiP/MNCH/ANC Working Group

ML PMP 31 - MIP functional national working group

Numid : #{wHtxPnCGqBV}

Denid : 1

100 - Per Cent

SMC indicators

NA

ML PMP 32 - SMC Percentage of targeted children who receive all 4 rounds doses of SMC during a campaign, in an intervention area (or all 3 per national guidance where only 3 doses are indicated)

ML PMP 32 - SMC % CU5 who received all doses

Numid : #{ioU1w8yCIWv}

Denid : #{jAD6Dh7z1d1}

100 - Per Cent

NA

ML PMP 33 - SMC Number of targeted children receiving a dose of SMC in the intervention area

ML PMP 33 - SMC % CU5 who received a dose

Numid : #{cOBjDRbvsyW}

Denid : #{jAD6Dh7z1d1}

100 - Per Cent

NA

ML PMP 34 - SMC Percentage of targeted children who receive dose of SMC in the first cycle

ML PMP 34 - SMC % CU5 who received a dose 1st wave

Numid : #{HaSIpoMB2ub}

Denid : #{jAD6Dh7z1d1}

100 - Per Cent

NA

ML PMP 35 - SMC Percentage of targeted children who receive dose of SMC in the second cycle

ML PMP 35 - SMC % CU5 who received a dose 2nd wave

Numid : #{wot02J4aRZm}

Denid : #{jAD6Dh7z1d1}

100 - Per Cent

NA

ML PMP 36 - SMC Percentage of targeted children who receive dose of SMC in the third cycle

ML PMP 36 - SMC % CU5 who received a dose 3rd wave

Numid : #{ZCibgANrNQq}

Denid : #{jAD6Dh7z1d1}

100 - Per Cent

NA

ML PMP 37 - SMC Percentage of targeted children who receive dose of SMC in the fourth cycle

ML PMP 37 - SMC % CU5 who received a dose 4th wave

Numid : #{Q71hAveCSGo}

Denid : #{jAD6Dh7z1d1}

100 - Per Cent

NA

ML PMP 38 - SMC Percentage of health workers trained to deliver SMC according to national guidelines

ML PMP 38 - SMC % HWs trained on SMC

Numid : #{y6qGAzE5DRa}

Denid : #{nE14FEYzkVX}

100 - Per Cent

NA

ML PMP 39 - SMC Percentage of targeted districts with annual SMC implementation plans

ML PMP 39 - SMC % annual operational SMC plans

Numid : #{hBYYaPLEFFf}

Denid : #{gN3w6Jx7q5h}

100 - Per Cent

TL indicators

NA

ML PMP 40 - TL Contribution to regional or national guidance/policy documents related to malaria (including RH)

ML PMP 40 - TL Contribution to national policies

Numid : #{tJXmW64MUxf}

Denid : 1

1 - Atomic (number)

NA

ML PMP 41 - TL Number of country-level program activity outputs disseminated to the national health community

ML PMP 41 - TL Program outputs disseminated

Numid : #{P4YDP2FNh3X}

Denid : 1

1 - Atomic (number)

NA

ML PMP 42 - TL Participation in targeted regional or global level Working group(s) and/or taskforce(s)

ML PMP 42 - TL Participation in WGs

Numid : #{XxfoDreiw9Z}

Denid : 1

1 - Atomic (number)

## Chapter 4

# IM Metadata Specification

### 4.1 Introduction

In the previous chapter, we learned about the IM PMP indicators and how they are stored or constructed in the IM Data Hub. That is essential knowledge for you to start monitoring IM PMP indicators from the source to how they are presented in the IM Data Hub.

In this chapter, we'll dive deep to the bottom and explore what lies beneath the IM Data Hub, the metadata. Metadata defines what, why, where, and how parts are set up in the IM Data Hub. They provide references to different objects in the IM Data Hub.

Already you are familiar with data sets, data elements, indicators: all these are essentially metadata themselves.

The IM Data Hub metadata are specified in either CSV, JSON or XML formats and are available at the metadata API endpoint:

<https://imdatahub.org/api/metadata>

Metadata has a name, uid, code that uniquely identifies the object in the IM Data Hub. It also has a sharing setting that defines the access group (have a look to the section 'Access model' for further info on this).

All IM Data Hub metadata can be accessed individually by specifying their names or ids on the API endpoint. For example, the metadata for a data element with the short name **suspected malaria cases** is accessed at:

<https://imdatahub.org/api/29/dataElements/eHWYhy8v08q.json>

In the following sections we discuss the IM Data Hub metadata in three main groups:

1. Organization Unit stores information about the location where IM indicator data is reported, analyzed, or presented,
2. Metadata that specifies what, why, and how IM Data Hub components are set up. They include; datasets, data elements, sections, data elements groups and group sets, organization unit groups and group sets, indicators, indicator groups, categories, category options, categories, category combinations, and category option combinations,
3. CORE metadata - any metadata that is shared publicly within the IM Data Hub for re-usability across the IM Data Hub.

## 4.2 Organization Units (OUs)

Organization Units specify the location or where the IM data elements are collected, analyzed, or presented.

There are two main types of OUs in the IM Data Hub:

1. Test - a list of OUs for development and testing objects. This is where we have been doing our practices,
2. World - a list of OUs for production or real use in the IM Data Hub.

The OUs in DHIS2 are structured in the form of a tree or through a hierarchy to allow entries, data processing, and drill downs/ups on the Analytics apps. They also define access levels in the IM Data Hub (have a look to the section ‘Access model’ for further info on this)).

The IM Data Hub OUs are grouped into OU groups and group sets for disaggregation of IM data elements and indicators. We discuss the groups in section [@ref{ougroup}](#)

### 4.2.1 OU Trees

As we mentioned above, the IM Data Hub OUs are organized in a tree-like structure that provides different levels for reporting, data processing, and presentation of IM data. In this section, we describe the OU structure by country.

The structure is in the form hierarchy and begins with the country to subnational level 4.

	Subnational Country level 1	Subnational level 2	Subnational level 3	Subnational level 4
Camerod	Region	District	Aire de santé	Facility
Cote d'Ivoire	Region	District	Facility	/
DRC	Province	Zone de santé	Aire de santé	Facility
Kenya	County	Sub-county	Ward	Facility
Ghana	Region	District	Sub-district	Facility



	Subnational Countrylevel 1	Subnational level 2	Subnational level 3	Subnational level 4
Mali	Region	District	Aire de santé	Facility
Niger	Province	District Sanitaire	Aire de santé	Facility
Sierra Leone	Province	District	Chiefdom	Facility
Zambia	Province	District	Facility	/

The following is the Metadata endpoint for organization unit levels.  
<https://imdatahub.org/api/organisationUnitLevels.json>

Next we'll talk about the OU groups and group sets.

### 4.2.2 OU Groups, OU Group sets

The IM Data Hub OUs consist of the following OU groups and group sets by countries and the type or ownership of facility:

A table showing OU groups and group set

OU group set

OU groups

CM - Facility Type (OU Group set)

CM CSI, CM Hopital, CM Unknown facility type, CM CMA

CM - Ownership Type (OU Group set)

CM Public

ML - Facility Type (OU Group set)

ML Hospital, ML CSCom, ML CSRef

ML - Ownership Type (OU Group set)

ML Public

NE - Facility type

NE CSI, NE Hopital

NE - Ownership type

NE Public

### 4.3 Metadata

The IM Data Hub implements the following metadata types:

A table showing metadata types implemented in the IM Data Hub

Metadata

Description

Data elements

Description

Data elements forms the basis of the IM Data Hub. They define what is recorded in the system. IM Data Hub data elements follows PSI DHIS2 standards for names and short names & the IM Indicator matrix for the form names.

For instance: IM CR - DX Suspected malaria cases is a data element that records suspected malaria cases

Data element groups

Description

Data element groups provides a mechanism for classifying IM Data Hub data elements into a common theme.

For instance: CD Supportive Supervision groups together all IM supportive supervision data elements. recorded in Congo

Data sets

Description

Data reporting in the IM Data Hub is organized through the use of the use of data sets.

A data set is a collection of data elements grouped together for data collection.

For instance: IM Case Reporting is a data set used to report case reporting data globally

Sections

Description

Section are used to split the IM Data Hub data sets into small reportable chunks known as modules.

They allow for a bit more flexibility when it comes to using the tabular forms in DHIS2 and are quick and simple to design.

For instance: Diagnosis, Treatment, MIP and Reporting are section within the IM Case Reporting data set

Category combos

#### Description

Category combos are used to apply IM disaggregation onto the data elements and indicators. They allow multiple categories to be combined into a related set.

For instance: IM PMP DX 1 - Percentage of confirmed malaria cases (NP) is disaggregated according to the following categories; CORE - Sex | CORE - Parasitological test | CORE - Age-group

#### Periods

#### Description

IM Data Hub supports DHIS2 standard period types to report and analyze performance over time.

For instance: 201901 to report on January of 2019

#### Indicator

#### Description

Indicators allows the computation of IM data. They consist of a numerator, a denominator and a data element

#### Indicator groups

#### Description

Similar to data elements groups, indicator groups - groups together IM indicator to allow easy access from the analytical tools

For instance: KE PMP is an indicator group with all PMP indicators for Kenya

## 4.4 CORE Metadata

CORE Metadata are reserved objects in the data hub. They are shared publicly within the IM Data Hub for re-use in the IM Data Hub. There are two main types of CORE metadata.

1. Category: a group of cat options for disaggregation/attributes,
2. Category Combination: a combination of classes used to apply disaggregation onto data elements/indicators.

The following is a list of all IM Data Hub CORE metadata.

### 4.4.1 Category

A table showing core categories set in the IM Data Hub

name

id

dataDimensionType

categoryOptions

CORE - Age group

JhSWHy2jOSU

DISAGGREGATION

< 5 years, >= 5 years, Unknown age group

CORE - Age group (CU5)

Xefm8oW3pkF

DISAGGREGATION

3-11 months, 12-59 months, Unknown age group

CORE - Malaria case

pDXpwgS0vPG

DISAGGREGATION

Presumed, Confirmed, Unknown malaria case

CORE - Parasitological test

lcitYzHH0qa

DISAGGREGATION

RDT, Microscopy, Unknown parasitological test

CORE - Sex

R192IcXWsCx

DISAGGREGATION

Male, Female, Unknown sex

CORE - Type of health facility

yYOva72MZyZ

DISAGGREGATION

Public, Private, Other type of HF, Unknown type of HF

CORE - Type of health facility (correct)

NNFAQZG9keS

DISAGGREGATION

Hospital, Health centre, Other type of HF, Unknown type of HF

CORE - Type of health worker

gwgoQPKhJdq

DISAGGREGATION

Supervisor, Clinical staff, Laboratory-based staff, Community-based staff, Other type of HW, Unknown type of HW

#### 4.4.2 Category Combination

A table showing core category combos set in the IM Data Hub

name

id

dataDimensionType

categories

CD - Type of health facility | CORE - Type of health facility

trkkw7Sqneh

DISAGGREGATION

CD - Type of health facility, CORE - Type of health facility

CORE - Age-group

s6PIj7AEo4C

DISAGGREGATION

CORE - Age group

CORE - Age-group (CU5)

XRB1m49tshW

DISAGGREGATION

CORE - Age group CU5

CORE - Malaria case

vuvcFOW0mGh

DISAGGREGATION

CORE - Malaria case

CORE - Malaria case | Sex | Age-group

ritXllZj5kI

DISAGGREGATION

CORE - Malaria case, CORE - Sex, CORE - Age group

CORE - Parasitological test

cCnujLPVBoQ

DISAGGREGATION

CORE - Parasitological test

CORE - Parasitological test | Age-group

jyv6IyPKPo2

DISAGGREGATION

CORE - Parasitological test, CORE - Age group

CORE - Sex

d8pbG5hn8ez

DISAGGREGATION

CORE - Sex

CORE - Sex | Age-group

NnVXBadHoq5

DISAGGREGATION

CORE - Sex, CORE - Age group

CORE - Sex | Age-group (CU5)

x2c5hEXrAtG

DISAGGREGATION

CORE - Sex, CORE - Age group CU5

CORE - Type of health facility

gfezS3MheUM

DISAGGREGATION

CORE - Type of health facility

CORE - Type of health worker | Sex

tbPCZwFdG5Y

DISAGGREGATION

CORE - Type of health worker, CORE - Sex

GH - Type of health facility | CORE - Type of health facility

tCP9XXfJUz0

DISAGGREGATION

GH - Type of health facility, CORE - Type of health facility

KE - Type of health facility | CORE - Type of health facility

bbcas85CNo2

DISAGGREGATION

KE - Type of health facility, CORE - Type of health facility





## Chapter 5

# Security Mechanism & Access Model

### 5.1 Introduction

Security mechanisms are technical tools or techniques used to implement security services. They define how the system is accessed, by whom, and provides an audit record of all the activities that have taken place.

Access model, on the other hand, defines how objects are accessed or shared in the system.

In this chapter, we discuss the security mechanism and access model applied in the IM Data Hub.

### 5.2 Security Mechanism

There are two main security mechanisms implemented in the IM Data Hub:

1. Authentication: a mechanism that restricts access to only authorized users or clients in the IM Data Hub,
2. Audit trail: a mechanism that detects whether there was an attempt, unexpected, or any unauthorized activity has taken place.

In this section, we discuss the authentication mechanisms and where to find the audit trail.

#### 5.2.1 Authentication Mechanisms

The IM Data Hub supports two types of authentication:

1. Basic Authentication: a mechanism that allows users to login or send their credentials over an HTTP web server,
2. OAuth 2: a mechanism that allows third party clients or apps to connect on behalf of a user via reusable tokens. OAuth2 access is based on the IM Data Hub user roles. We'll discuss user roles in the Access model section.

#### 5.2.1.1 Basic Authentication

Users can login IM Data Hub by specifying their **username** and **password** on the login page.

Technically, the username is appended with a colon and the password is encoded and then sent over to the server.

IM Data Hub also provides two factor authentication mechanisms which allows the users to receive a **2FA code** for confirmation at the time of login. The two factor authentication is enabled on the user settings app. You can read more about the 2FA mechanism here: <https://www.google.com/landing/2step/>

#### 5.2.1.2 OAuth 2 Authentication

Third-party apps can connect to IM Data Hub via tokens provided by the OAuth 2 authentication mechanism. The IM Data Hub does not support the fine-grained OAuth 2 roles, but rather it provides access based on the user roles.

Setting up OAuth 2 authentication requires access to the IM Data Hub Web API. You can find the specification about this in the developer's guide.

### 5.3 Access Model

Access Model defines what and how objects are shared or accessed in the IM Data Hub. Objects, in this case, refers to the data, metadata, and all the components in the IM Data Hub.

There are two ways of manage and set up the access model:

User roles: Setting roles and the access level for the objects in the IM Data Hub, User groups: Defining groups for sharing access to objects in the IM Data Hub.

#### 5.3.1 User roles

User roles defines the level of access to different objects in the IM Data Hub. You can set and assign roles to different objects in from the user app.

The following are the most relevant user roles in the IM Data Hub:

Name	Details
__Admin - Category Option Group (Private) and Group Set (Private) Management	Administration of private Category options group and Group set
__Admin - Country User Management	Administration of new users and user groups
__Admin - Data Elements (Private)	Administration of DEs, DE Groups and Group sets
__Admin - Data Set management (Private)	Administration of private data sets
__Admin - Import / Export MetaData	Import and export of metadata and data
__Admin - Import/Export aggregate data	Import and export of aggregated data
__Admin - Org Unit admin advanced	Edit OU levels
__Admin - Org Units (Basic)	Create, edit, and delete OUs
__Admin - User Management advanced	Replicate and disable users
__Admin - Programs (Private)	Add and update programs
__Analytics - Services (all)	Full access to all of DHIS2 analytical tools
__App - Browser cache cleaner	Clear DHIS2 browser cache
__User - Data Entry Aggregated	Data entry for data sets (Data Entry, Data Capture for DHIS2)
__User - Data Entry Tracker	Data entry for programs (Event capture, DHIS2 Android Capture)

### 5.3.2 User Groups

There are two main types of user groups.

1. Country User group - consists of [country ISO code] - Admin and [country ISO code] - Users
2. Global User group - consists of IM - Admin and IM - Users

All metadata are shared accordingly to the level of access each user group should have.

The Admin User groups can edit and view metadata; capture and view data. The Users User groups can only view metadata; capture and/or view data based on user's user roles.

CORE Cat options are shared publicly with access to view the metadata; and publicly with access to capture and view data. IM - Admin can edit and view the metadata; and capture and view data.

[country ISO code] Cat options are shared publicly with access to view metadata; and publicly with access to capture and view data. [country ISO code] Admin can edit and view metadata; and capture and view data. IM - Admin can edit and view the metadata; and capture and view data.

CORE Categories and CORE Cat combos are shared publicly with access to view metadata. IM - Admin can edit and view the metadata.

[country ISO code] Categories, Cat combos, DEs, DE Groups, Indicators, Indicator Groups, OU Groups and OU Group sets are shared to the country specific user groups. [country ISO code] - Admin can edit and view metadata, while [country ISO code] - Users can only view the metadata.

IM DEs, DE Groups, Indicators, Indicator Groups and OU Group sets are shared to the global groups. IM - Admin can edit and view metadata, while IM - Users can view metadata.

[country ISO code] Data sets are shared to the country user groups. [country ISO code] - Admin can edit and view the metadata; and capture and view data. [country ISO code] - Users can view metadata; and capture and view data.

IM Data sets are shared to the global user groups. IM - Admin can edit and view metadata; and capture and view data. IM - Users can view metadata; and capture and view data.

### 5.3.3 User Management

Correct user management is critical to ensure that the IM Data Hub users have the right access to the right information based on their level of rights. All metadata are shared accordingly to the level of access each user group should have. The Admin User groups can edit and view metadata; capture and view data. The Users User groups can only view metadata; capture and/or view data based on user's user roles.

If a user has [Admin] rights to the IM Data Hub: - Add the user to the relevant [country ISO code] - Admin group - Give the user the relevant User roles to admin users, OUs, DEs, Data sets, etc, like: *Admin - Data Elements (Private)* - to manage DEs *Admin - Data Set management (Private)* - to manage Data sets *Admin - Country User Management* - to admin users *Admin - Org Units (Basic)* - to admin OUs *Analytics - Services (all)* - to view analytics tables *App*

- *Browser cache cleaner* - to clean the cache *User - Data Entry Aggregated* - to do data entry for Data sets

If a user has **[Data entry]** rights to the IM Data Hub: - Add the user to the relevant **[country ISO code]** - **Users** group - Give the user the relevant User roles to conduct data entry, like: *User - Data Entry Aggregated* - to do data entry for Data set *App - Browser cache cleaner* - to clean the cache

If a user has **[Analytics]** rights to the IM Data Hub: - Add the user to the relevant **[country ISO code]** - **Users** group - Give the user the relevant User roles to view analytics tables, like: *Analytics - Services (all)* - to view analytics tables *App - Browser cache cleaner* - to clean the cache

## 5.4 Important Best Practices for the Access Model

If a user is an Admin, you want to assign the user to the **[country ISO code]** - **Admin** group.

If a user does Data entry or Analytics, you want to assign the user to the **[country ISO code]** - **Users** group.

### 5.4.1 Access from country to global level access:

In case you want a country user to have access to global metadata and/or data, **[do not]** share global metadata with the country User group the user is part of (ie do not share the Data set IM Case Reporting with GH – Admin), but rather include the user in one of the IM User groups (ie include Amos into IM – **Users** User group in case you want to give him access to data reported at global level).

### 5.4.2 Access from global to country level access:

In case you want a global user to have access to country metadata and/or data, **[do not]** share country metadata with the IM User group the user is part of (ie do not share the Data set GH Case Reporting with IM – Admin), but rather include the user into one of the relevant **[country ISO code]** User groups (ie include Keith into the DC – **Users** User group if you want to give him access to data from DRC).



## Chapter 6

# Health Network Quality Improvement System



Figure 6.1: HNQIS

### 6.1 Background

Poor quality of care results in poor health outcomes. Improving and monitoring the quality of care in lower- and middle-income countries presents both unique challenges and opportunities to increase efficiencies in resource allocation based on standardized evaluations. Key constraints include the lack of enforced standards, delayed performance feedback, and poor use of monitoring data to allocate resources.

### 6.1.1 Challenges

1. Growing scale and scope of the network.
2. Limited quality assessment tools.
3. Poor quality feedback and coaching.
4. Poor use of monitoring data.

## 6.2 Introduction

Health Network Quality Improvement System (HNQIS) is an electronic tablet-based application used to improve quality of health services in health care networks and effectively manage and reach health impact at scale.

The HNQIS is composed of four modules that support healthcare supervisors to: 1. Plan supervision visits using a prioritization matrix that presents facility-specific quality scores and patient volume. 2. Assess providers' quality of care against clinical standards. 3. Improve providers' quality of care through tailored feedback. 4. Monitor quality improvements over time.

HNQIS is an Android application that is fully functional without internet connectivity. It is linked with the information management system Demographic Health Information Software 2 (DHIS2), an open source technology adopted by many ministries of health across the world. It assists teams to assess quality of care of providers' services to measure provider proficiencies in respective skills, and to highlight and monitor identified areas for improvement.

HNQIS is now active in 23 countries and has conducted more than 18,000 assessments at 8,000 outlets across 13 health areas.

## 6.3 Modules

HNQIS has 4 modules discussed below:

### 6.3.1 Plan Module

This module automatically schedules future assessments based on where support is needed most (quality score), and where it will have most impact (client load). Furthermore, the planning module prioritizes planning of support visits by segmenting all outlets into the following categories:

1. Never been assessed.
2. Assessments overdue.
3. Scheduled to be assessed in the current month.
4. Scheduled to be assessed in future months.

Each health area has independent planning variables (quality score/client load) but the planning report is integrated across all areas the Quality Assurance Officer (QAO) is responsible for supporting.



### 6.3.2 Assess Module

This module enables QAOs to assess clinical procedures in each health area catered for by network providers through case observation or simulation. The assessment checklist is aligned with national supervision checklists. An assessment score is automatically generated on-site and performance benchmarked (e.g. Good/ Satisfactory/Poor). The module contains a consistent approach to scoring and benchmarking all health areas to allow comparability within and across network providers.

### 6.3.3 Improve Module

This module ensures that provider feedback following a quality assessment is undertaken in a robust and consistent manner, rather than based on the subjectivity of the QAO. The Improve Module:

1. Highlights the key areas of weakness identified during the assessment.
2. Displays tailored feedback scripts that take into account both how the procedure should be undertaken (as per protocols), as well as why it is important to do so.

This places all the relevant information required to improve the performance of the provider in one place. The module facilitates a consistent approach to provision of feedback, eliminating subjectivity regarding the areas of focus or the actual feedback provided.

### 6.3.4 Monitor Module

This module consists of a performance monitoring dashboard tailored to meet the needs of the QAO. The dashboard contains a range of charts, graphs, maps and tables highlighting trends and overall performance of all the providers the QAO is responsible for supporting. Dashboards can also be used to visualize data collected through other channels that is relevant to quality improvement, such as availability and sales of health commodities. The main purpose of this module is to facilitate the use of data in decision-making at the QAO level.

It offers the QAO an opportunity to track the return on their support visit efforts over time, so as to give them insight on where they need to apply a different approach. The system also allows to develop tailored interfaces to meet the need in terms of data of different users of HNQIS (i.e. project managers, medical detailers, etc.), and therefore enable mid-course correction e.g. conducting a refresher course in a particular low performing health area.

## 6.4 Getting Started

1. Download the app from the Google Play Store by clicking the link below (or by searching hnqis) <https://play.google.com/store/apps/details?id=>

org.eyesetee.malariacare.hnqis\_ng

## Chapter 7

# Troubleshooting and Getting Help on the IM Data Hub

### 7.1 Introduction

The IM Datahub has various resources for getting help.

1. IM Datahub Help Desk
- 2.



# References

1. DHIS2 Developers guide [https://docs.dhis2.org/master/en/developer/html/dhis2\\_developer\\_manual.html](https://docs.dhis2.org/master/en/developer/html/dhis2_developer_manual.html)
2. DHIS2 Implementers guide [https://docs.dhis2.org/2.30/en/user/html/dhis2\\_user\\_manual\\_en\\_full.html](https://docs.dhis2.org/2.30/en/user/html/dhis2_user_manual_en_full.html)