

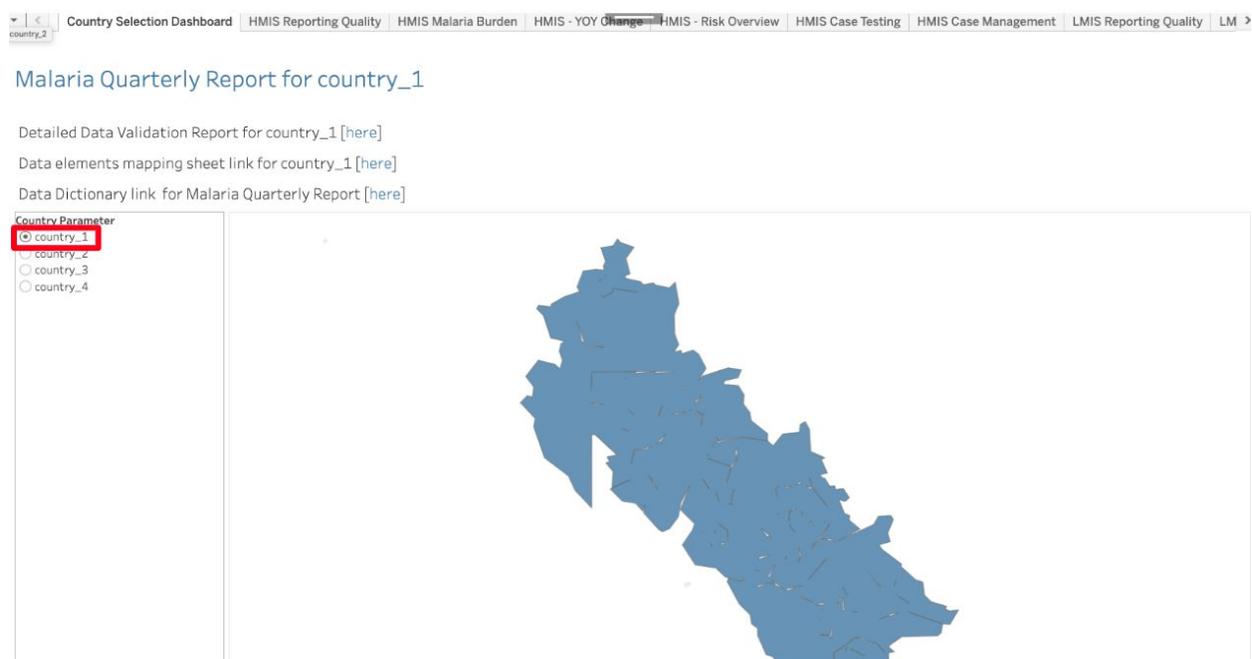
Below you will find use cases, or example questions, that you can answer using some of the dashboards in M-DIVE. You can find the dashboards that you have access to by clicking 'Reports' in your M-DIVE menu bar. Note that not every user will have access to all M-DIVE dashboards due to data security and governance requirements.

1a. Quarterly Reporting Dashboard Workflow 1: Data Completeness

"Which areas have health facilities submitting reports for malaria health indicators?"

Step 1: Navigate to the Malaria Quarterly Report by clicking 'Reports' in your menu bar

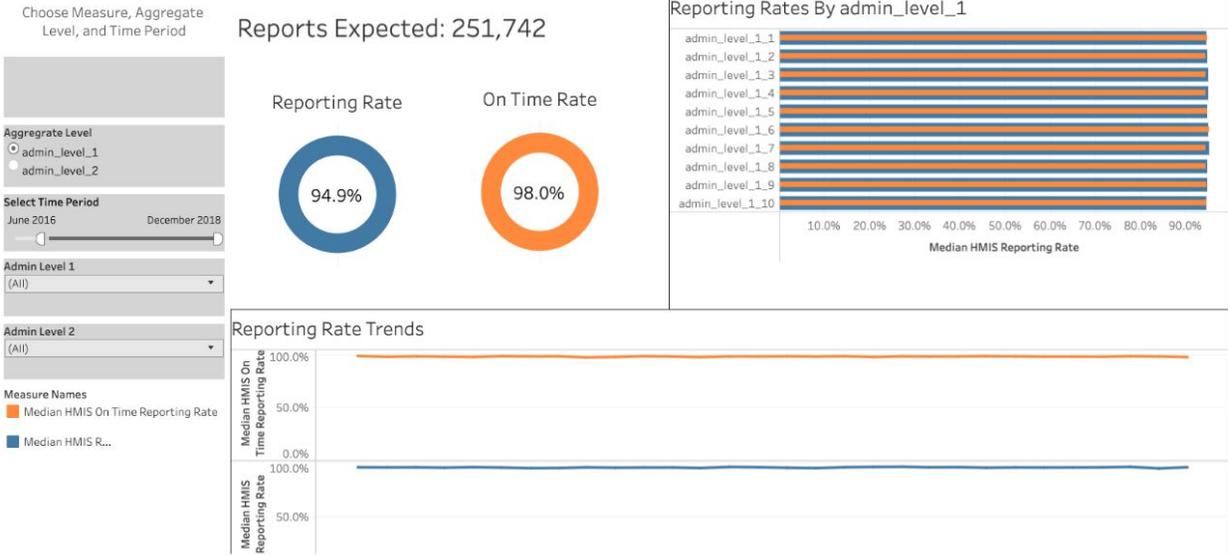
Step 2: Select your country on the 'Country Selection Dashboard' tab



The screenshot shows a web interface for the 'Country Selection Dashboard'. At the top, there is a navigation bar with tabs: 'Country Selection Dashboard', 'HMIS Reporting Quality', 'HMIS Malaria Burden', 'HMIS - YOY Change', 'HMIS - Risk Overview', 'HMIS Case Testing', 'HMIS Case Management', 'LMIS Reporting Quality', and 'LM'. Below the navigation bar, the page title is 'Malaria Quarterly Report for country_1'. There are three links: 'Detailed Data Validation Report for country_1 [here]', 'Data elements mapping sheet link for country_1 [here]', and 'Data Dictionary link for Malaria Quarterly Report [here]'. On the left side, there is a 'Country Parameter' section with four radio buttons: 'country_1' (selected), 'country_2', 'country_3', and 'country_4'. The 'country_1' radio button is highlighted with a red box. To the right of the radio buttons is a map of a country, colored in blue, showing its geographical outline and internal administrative boundaries.

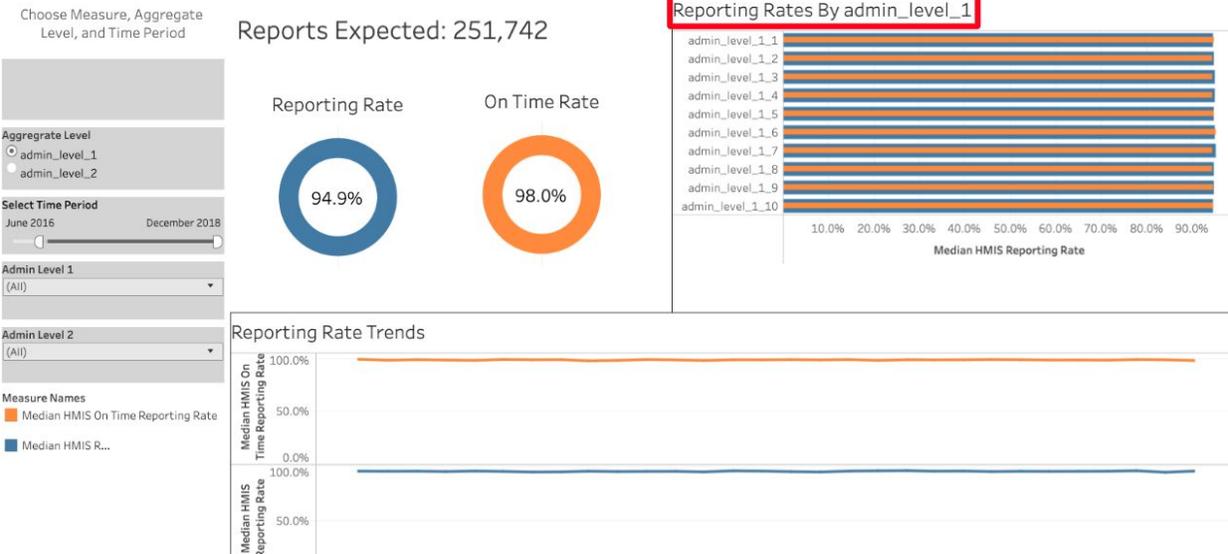
Step 3: Navigate to the 'HMIS Reporting Quality' tab

HMIS Reporting Rate - country_1 [more info]

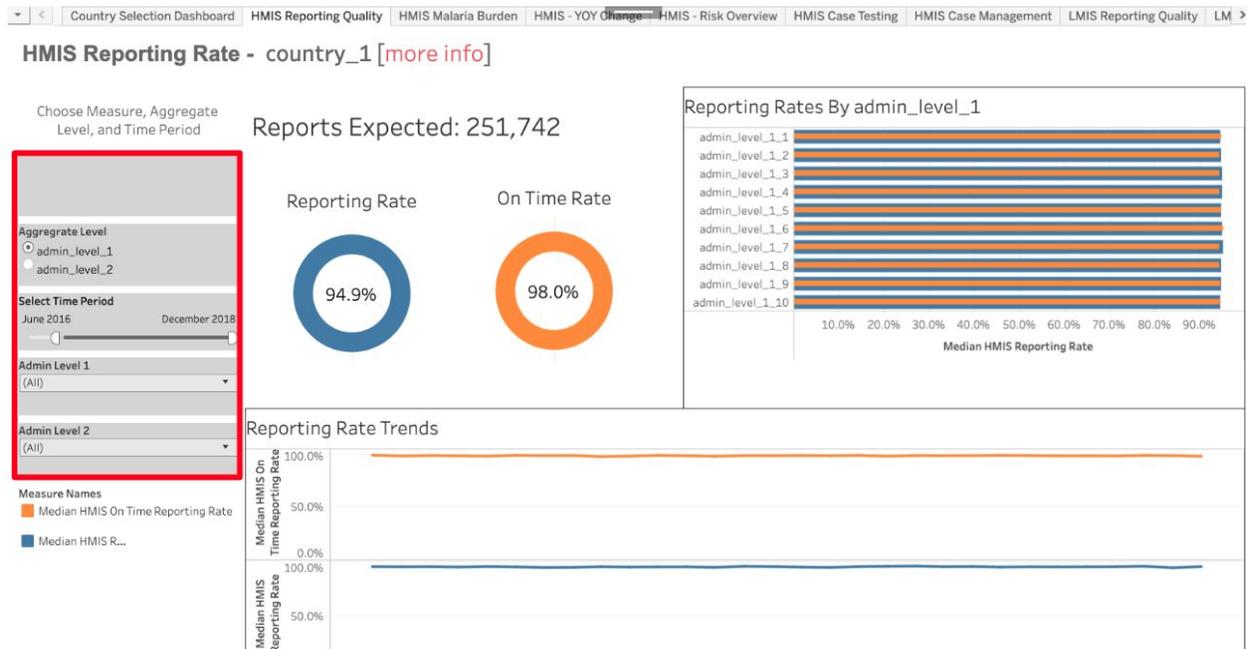


Step 4: View the reporting rate by region to understand reporting rates broken down by region.

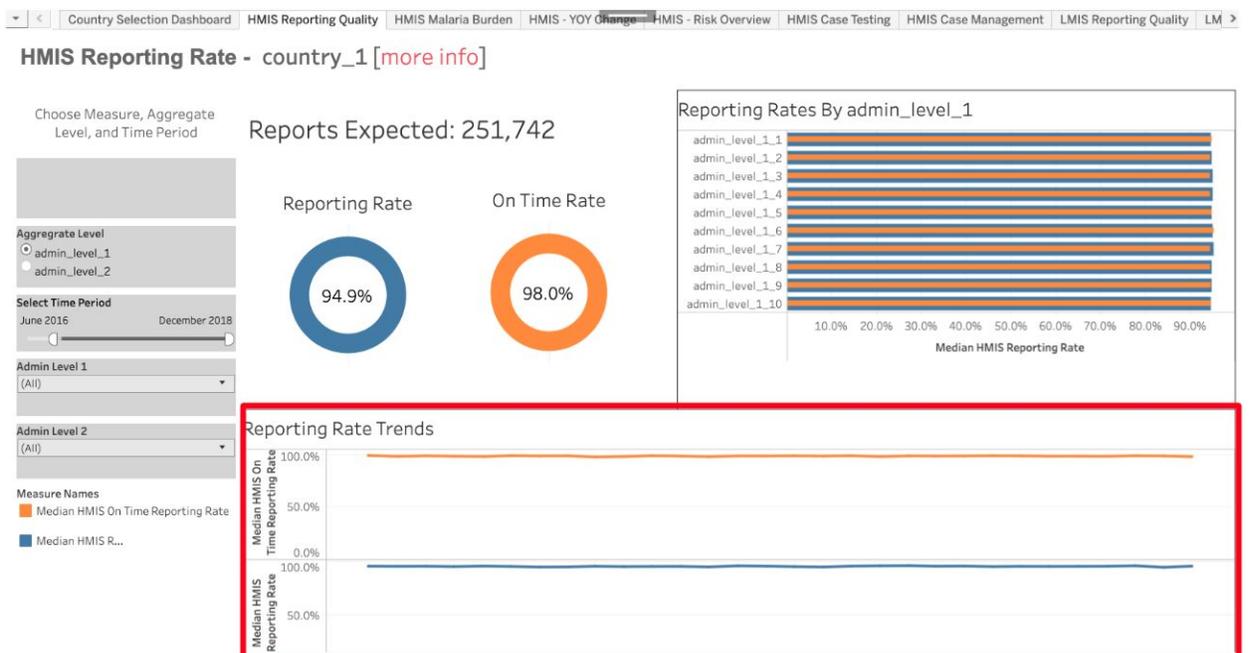
HMIS Reporting Rate - country_1 [more info]



Step 5: Filter based on aggregation levels, time periods, regions, or districts to drill down further into geographic areas.



Step 6: View the 'Reporting Rate Trends' line graph visualization to see the reporting rate over time.



1b. Quarterly Reporting Dashboard Workflow 2: Understanding Mortality Rates

Which areas have reported the highest mortality rate overall? What time periods saw the highest spikes?

Step 1: Navigate to the Malaria Quarterly Report by clicking 'Reports' in your menu bar

Step 2: Select your country on the 'Country Selection Dashboard' tab

Country Selection Dashboard | HMIS Reporting Quality | HMIS Malaria Burden | HMIS - YOY Change | **HMIS - Risk Overview** | HMIS Case Testing | HMIS Case Management | LMIS Reporting Quality | LM

Malaria Quarterly Report for country_1

Detailed Data Validation Report for country_1 [here]
Data elements mapping sheet link for country_1 [here]
Data Dictionary link for Malaria Quarterly Report [here]

Country Parameter

- country_1
- country_2
- country_3
- country_4



Step 3: Navigate to the 'HMIS Malaria Burden' tab

Country Selection Dashboard | HMIS Reporting Quality | **HMIS Malaria Burden** | HMIS - YOY Change | HMIS - Risk Overview | HMIS Case Testing | HMIS Case Management | LMIS Reporting Quality | LM

HMIS Malaria Burden by admin_level_2 in country_1 [more info]

Choose Measure, Aggregate Level, and Time Period

Measure Selector: Suspected Cases

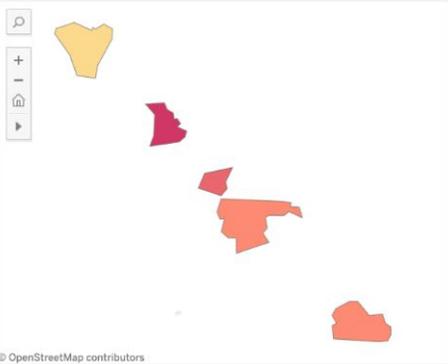
Aggregate Level: admin_level_1, admin_level_2

Select Time Period: June 2016 - December 2018

Admin Level 1: admin_level_1_6

Admin Level 2: (All)

Suspected Cases by admin_level_2



© OpenStreetMap contributors

Top 10 admin_level_2 by Suspected Cases

admin_level_2	Suspected Cases
admin_level_2_29	1,374,878
admin_level_2_27	1,164,186
admin_level_2_30	1,113,449
admin_level_2_26	1,063,435
admin_level_2_28	787,098

Trend in Suspected Cases for All



Step 4: Select the following filters

- Measure Selector: Malaria Death per 100,000
- Aggregate Level: District/Municipality/Admin Level

HMIS Malaria Burden by admin_level_2 in country_1 [\[more info\]](#)

Choose Measure, Aggregate Level, and Time Period

Measure Selector
 Malaria Deaths Per 100,000
 Suspected Cases
 Confirmed Cases
 Malaria Deaths
 Suspected Cases Per 1000
 Confirmed Cases Per 1000
Malaria Deaths Per 100,000

Select Time Period
 June 2016 - December 2018

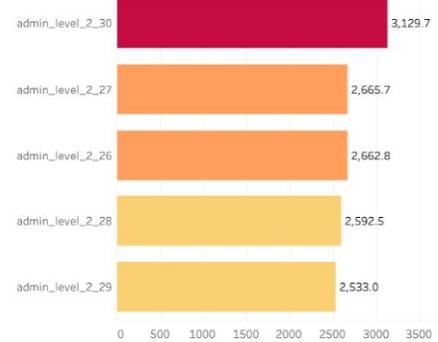
Admin Level 1
admin_level_1_6

Admin Level 2
 (All)

Malaria Deaths Per 100,000 by admin_level_2



Top 10 admin_level_2 by Malaria Deaths Per 100,000



Trend in Malaria Deaths Per 100,000 for All



Step 5: Navigate to the 'Top 10 Districts by Malaria Deaths per 100,000' visualization to identify the districts with the highest reported mortality rate.

HMIS Malaria Burden by admin_level_2 in country_1 [\[more info\]](#)

Choose Measure, Aggregate Level, and Time Period

Measure Selector
 Malaria Deaths Per 100,000

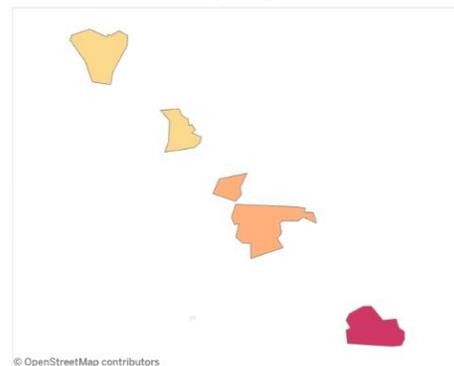
Aggregate Level
 admin_level_1
 admin_level_2

Select Time Period
 June 2016 - December 2018

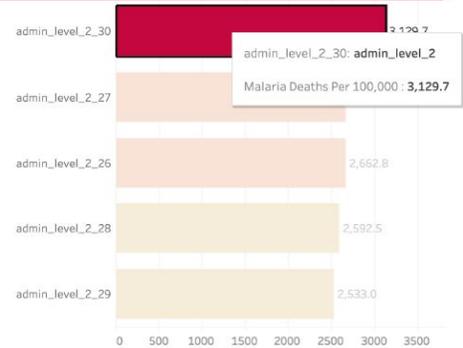
Admin Level 1
 admin_level_1_6

Admin Level 2
 (All)

Malaria Deaths Per 100,000 by admin_level_2



Top 10 admin_level_2 by Malaria Deaths Per 100,000



Trend in Malaria Deaths Per 100,000 for admin_level_2_30



Step 6: Select any district within the Top 10 bar chart to filter the dashboard to only visualize data from that district. Scroll down to see a chart demonstrating reported mortality rate over time within the district you selected.

HMIS Malaria Burden by admin_level_2 in country_1 [\[more info\]](#)

Choose Measure, Aggregate Level, and Time Period

Measure Selector
Malaria Deaths Per 100,000

Aggregate Level
 admin_level_1
 admin_level_2

Select Time Period
 June 2015 - December 2018

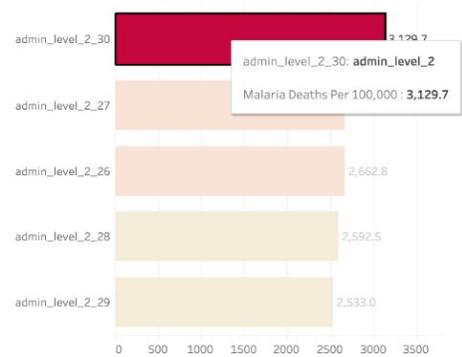
Admin Level 1
admin_level_1_6

Admin Level 2
(All)

Malaria Deaths Per 100,000 by admin_level_2



Top 10 admin_level_2 by Malaria Deaths Per 100,000



Trend in Malaria Deaths Per 100,000 for admin_level_2_30



1c. Quarterly Reporting Dashboard Workflow 3: Stockouts

Which areas have the most stockouts? Which areas have the least stockouts?

Step 1: Navigate to the [Malaria Quarterly Report](#) by clicking 'Reports' in your menu bar

Step 2: Select your country on the 'Country Selection Dashboard' tab

Malaria Quarterly Report for country_1

Detailed Data Validation Report for country_1 [\[here\]](#)

Data elements mapping sheet link for country_1 [\[here\]](#)

Data Dictionary link for Malaria Quarterly Report [\[here\]](#)



Step 3: Navigate to the 'LMIS Stockout Report' tab

LMIS AL Stockout Rate by admin_level_2 in country_1 [more info]

Choose Type of Commodity and Administrative Level

Measure Selector (Stockout Rate)
AL

Aggregate Level

admin_level_1

admin_level_2

Select Time Period

June 2016

December 2018

Admin Level 1

admin_level_1_6

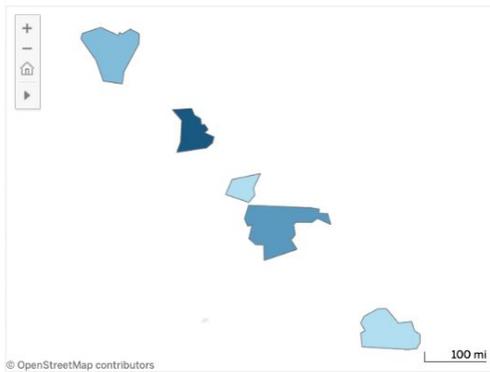
Admin Level 2

(All)

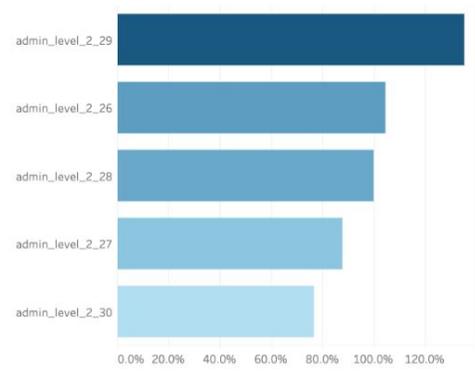
Stockout Rate of Selected Measure

76.7% 135.6%

AL Stockout Rates by admin_level_2



Top 10 admin_level_2 by AL Stockout Rates



	July 2016	August 2016	September 2016	July 2017	August 2017	September 2017	July 2018	August 2018	September 2018
admin_level_2_26	60.0%	350.0%	175.0%	83.3%	83.3%	125.0%	71.4%	80.0%	100.0%
admin_level_2_27	600.0%	100.0%	85.7%	62.5%	57.1%		16.7%	71.4%	42.9%
admin_level_2_28	66.7%	100.0%	75.0%	80.0%	400.0%	100.0%	250.0%	66.7%	50.0%
admin_level_2_29	150.0%	350.0%	66.7%	160.0%	85.7%		28.6%	160.0%	200.0%
admin_level_2_30	80.0%	25.0%	100.0%	200.0%	20.0%	85.7%	50.0%	125.0%	66.7%

Step 4: Choose the measure selector you wish to visualize data for (ACT, SP, RDT, ASAQ, AL, ITN)

LMIS AL Stockout Rate by admin_level_2 in country_1 [more info]

Choose Type of Commodity and Administrative Level

Measure Selector (Stockout Rate)
AL

Aggregate Level

admin_level_1

admin_level_2

Select Time Period

June 2016

December 2018

Admin Level 1

admin_level_1_6

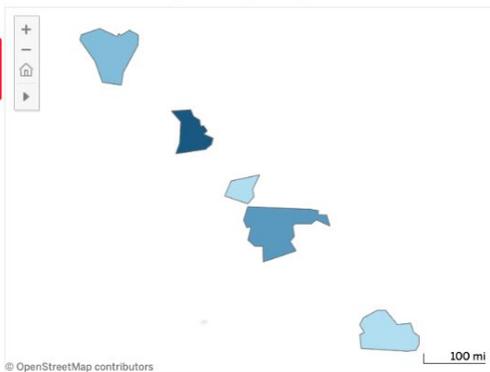
Admin Level 2

(All)

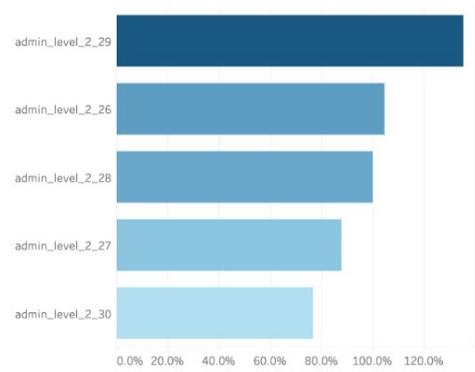
Stockout Rate of Selected Measure

76.7% 135.6%

AL Stockout Rates by admin_level_2

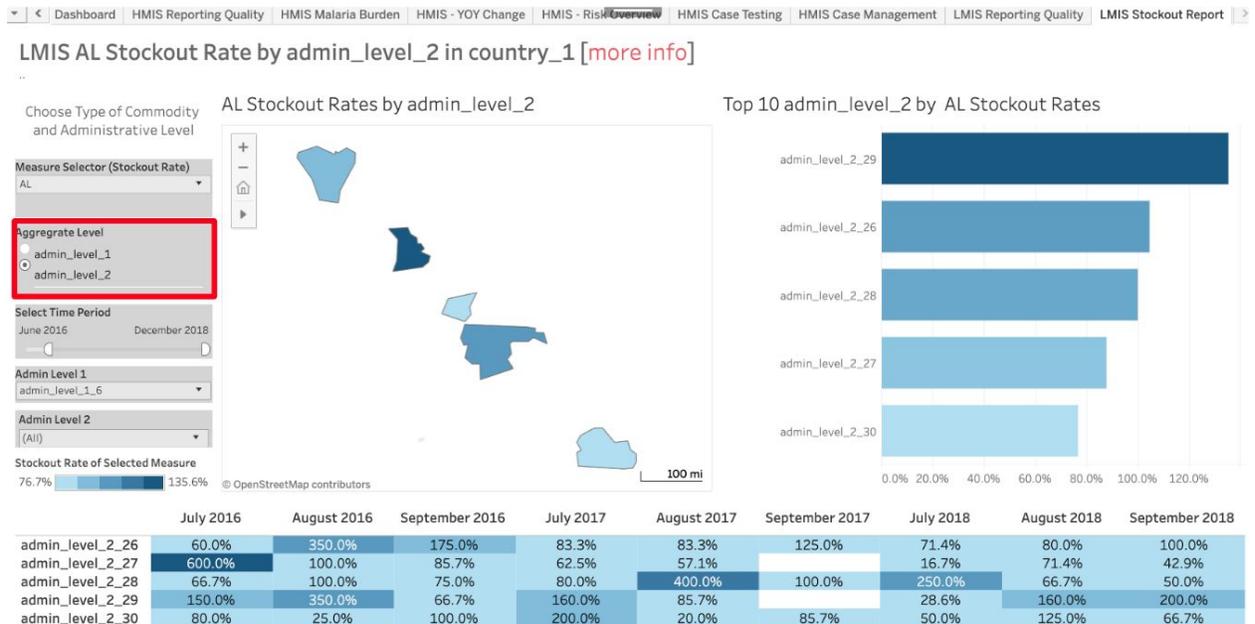


Top 10 admin_level_2 by AL Stockout Rates

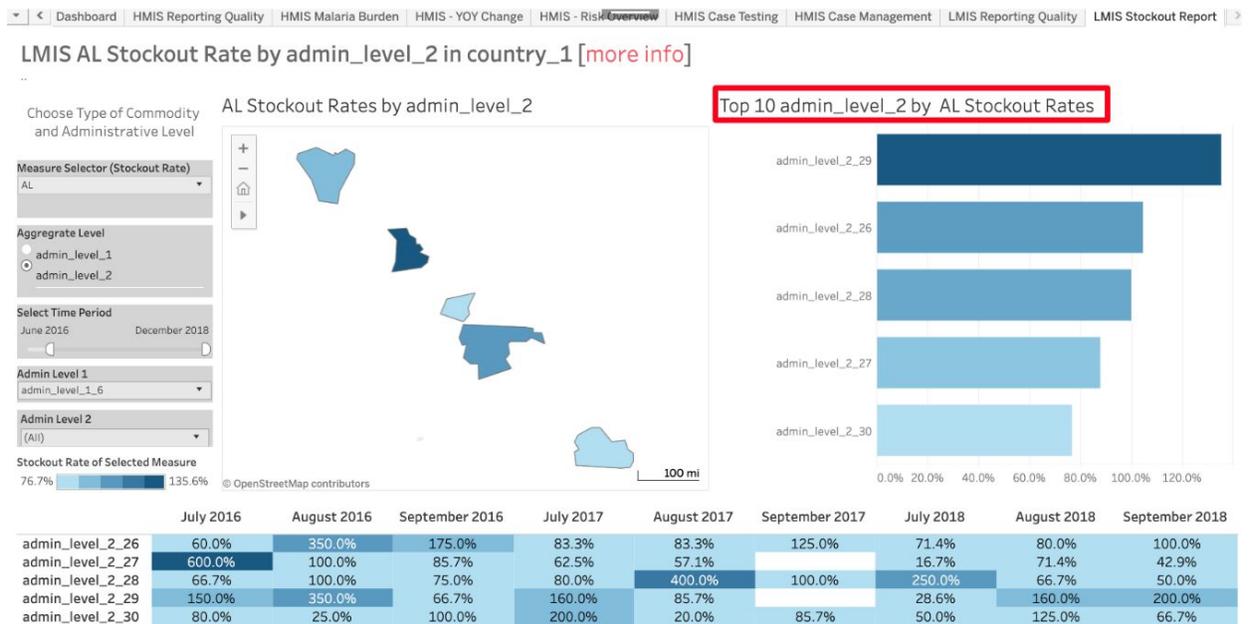


	July 2016	August 2016	September 2016	July 2017	August 2017	September 2017	July 2018	August 2018	September 2018
admin_level_2_26	60.0%	350.0%	175.0%	83.3%	83.3%	125.0%	71.4%	80.0%	100.0%
admin_level_2_27	600.0%	100.0%	85.7%	62.5%	57.1%		16.7%	71.4%	42.9%
admin_level_2_28	66.7%	100.0%	75.0%	80.0%	400.0%	100.0%	250.0%	66.7%	50.0%
admin_level_2_29	150.0%	350.0%	66.7%	160.0%	85.7%		28.6%	160.0%	200.0%
admin_level_2_30	80.0%	25.0%	100.0%	200.0%	20.0%	85.7%	50.0%	125.0%	66.7%

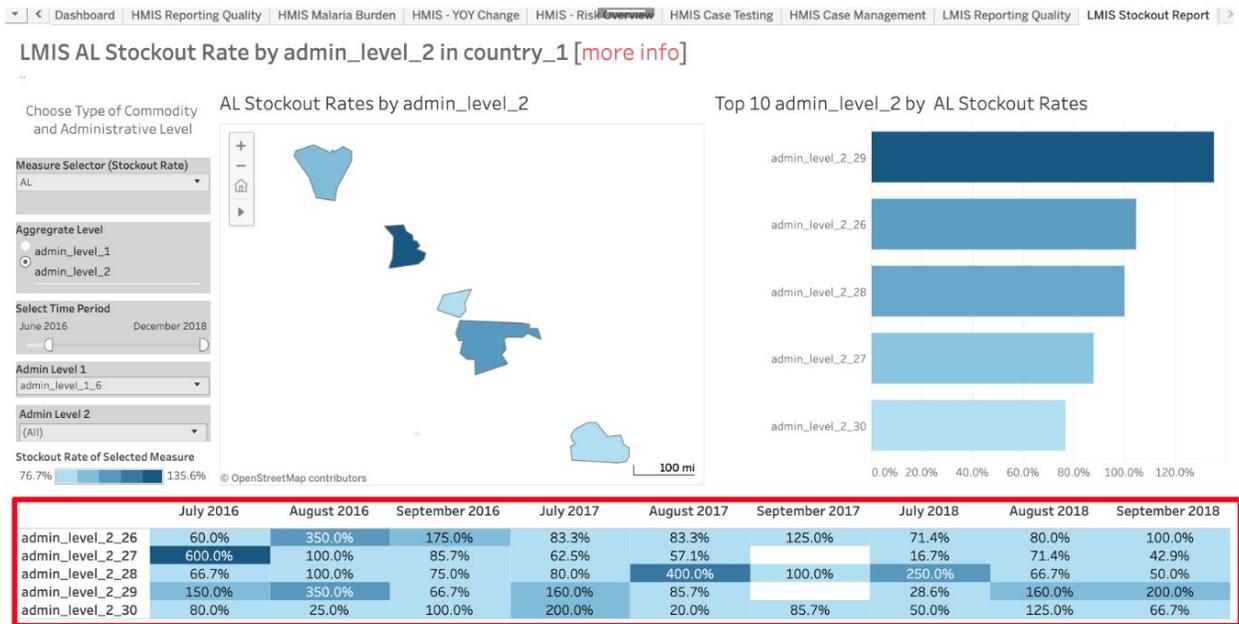
Step 5: Select the appropriate aggregate level to define the geography for which you wish to visualize data.



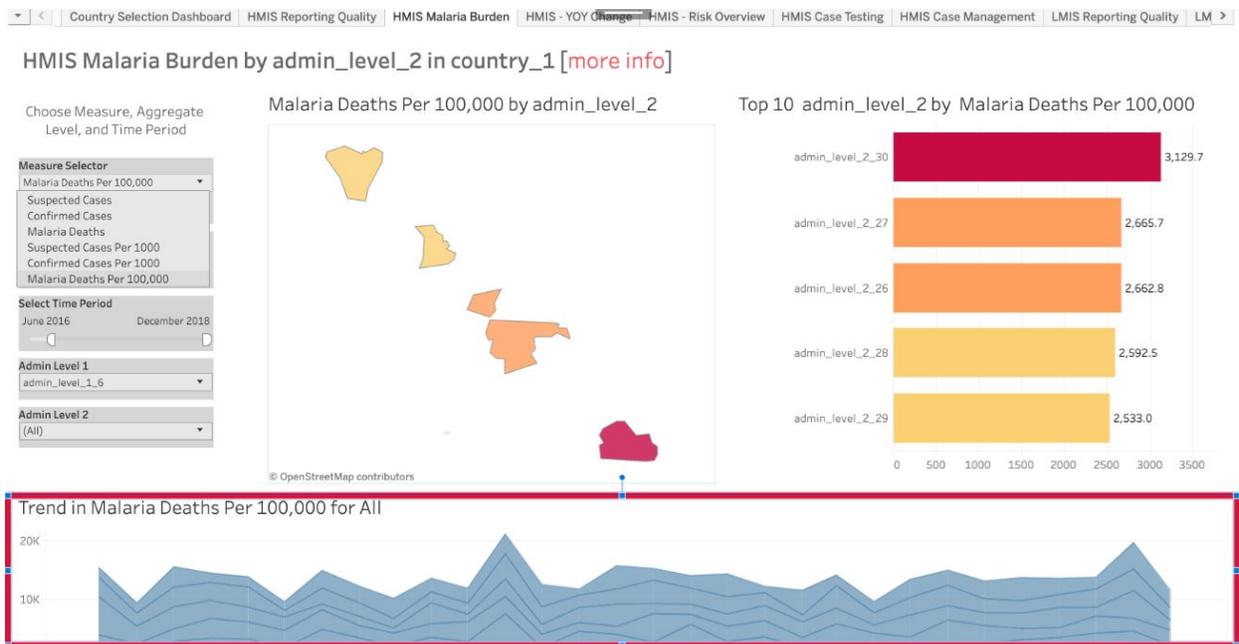
Step 6: View the top 10 areas where stockout rates were highest within a specific time period.



Step 7: Moreover, by selecting the geographic area on the barchart you can investigate temporal trends in the bottom visualization.



Step 8 (optional): Use the 'HMIS Malaria Burden' tab to see if stockouts contributed to or made the selected measure worse by setting up the same filters and viewing the measure over time.



2. Quarterly Reporting Data Validation Report

Which data elements are missing? Which records failed a quality check? Which quality check did the record fail?

Step 1: Navigate to your country's Data Validation report through the following steps: .

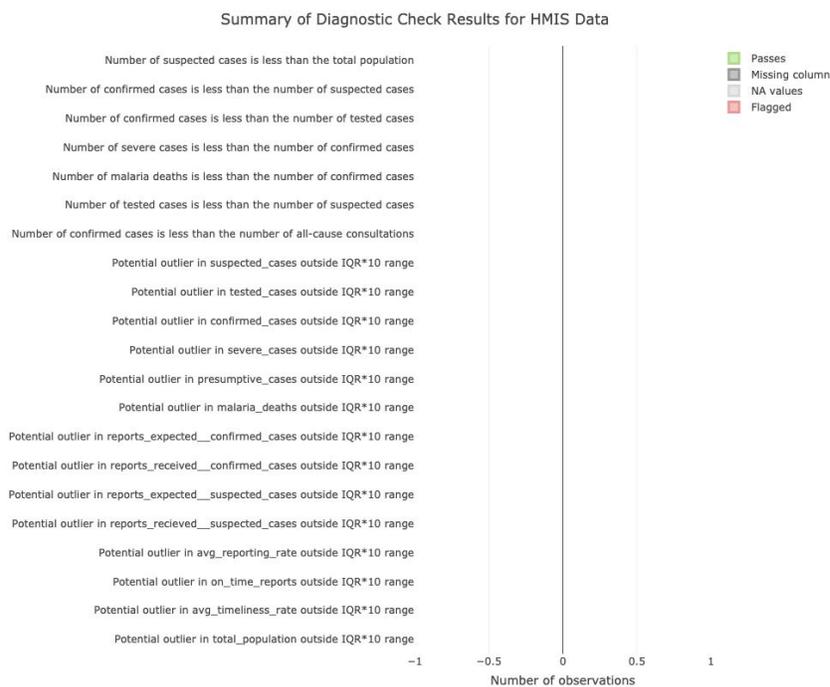
- Click the 'Reports' pane in your menu bar
- The name of this report is labeled [Country Name] [Quarter:Year] In-Development Validation Report (For example, Uganda's report for Q3 of 2019 is 'Uganda Q32019 In-Development Validation Report').

Step 2: Scroll down to 'How to interpret the report' and read what each color on the color key means.

How to interpret the report

- Green indicates the proportion of records that "passed" the data check and no anomaly is found.
- Red indicates the proportion of records that did not pass. For example, a red bar next to the second check below would mean that there are some records where there were more confirmed cases than suspect cases.
- NA values indicate either that data points were missing or represent different geographic areas than other indicators.
- Missing column means that no data were submitted in one of the indicators involved in this check.

Step 3: HMIS and LMIS summaries will indicate missing (dark grey), failed/flagged (red), passed (green), or NA (light grey) records based on color of the visualization. Each row indicates the type of quality check test conducted.



Step 4: Scroll down to 'Summary of Validation Checks' to view the more detailed description of quality checks, and how many records were flagged/failed, passed, missing, or NA.

- Download this in Excel by clicking the 'Excel' button.



Summary of Validation Checks

Description and Summary of Validation Checks Run on HMIS Data

Excel Search:

name	description	flagged	passes	nNA	n	
validation_avg_reporting_rate_iqr	Potential outlier in avg_reporting_rate outside IQR*10 range	0	0	0	0	(avg. (qual 0.25, IQR(i = TR (avg. (qual 0.75, IQR(i = TR
validation_avg_timeliness_rate_iqr	Potential outlier in avg_timeliness_rate outside IQR*10 range	0	0	0	0	(avg. (qual 0.25, IQR(i na.m (avg. (qual

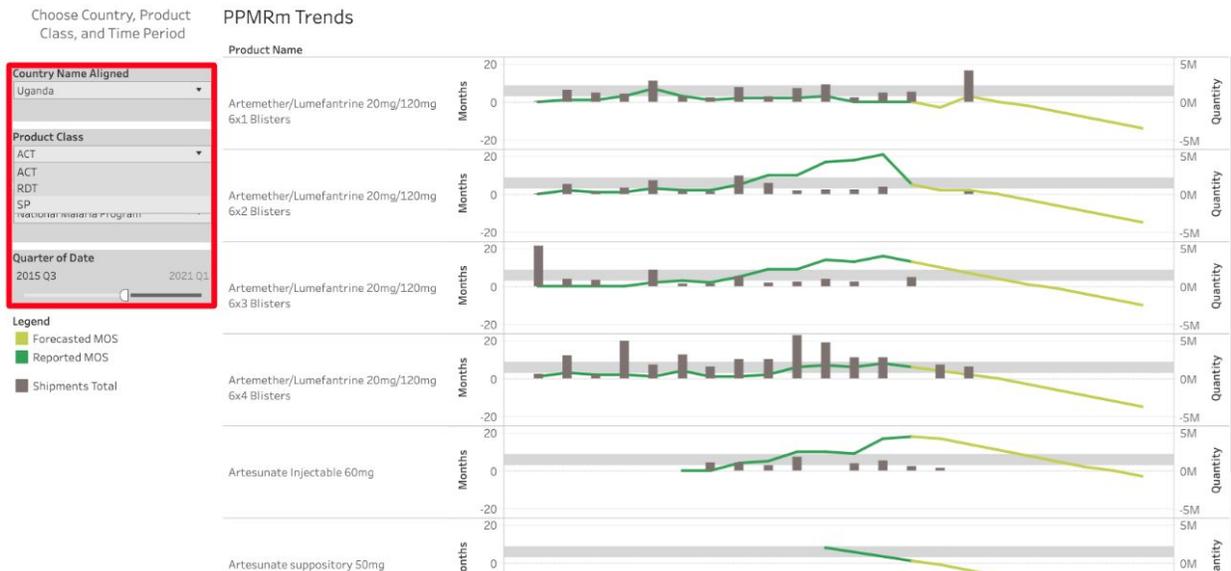
3. Supply Chain Logistics (PPMRm) Dashboard

When were orders made? When are they expected to arrive in country? How many months of supply are left? When will we need to order more?

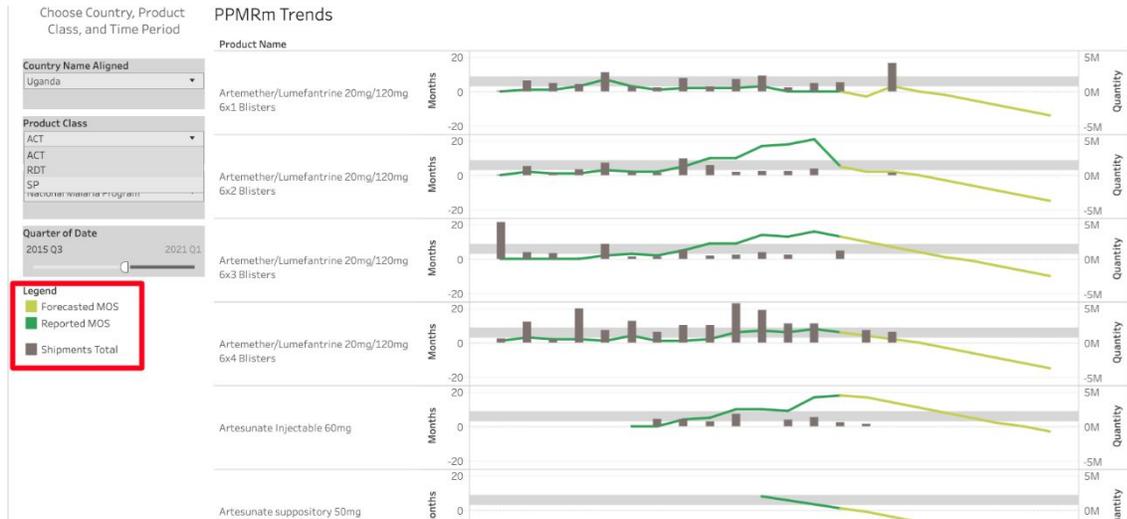
Step 1: Navigate to the [PPMRm Dashboard](#) by clicking 'Reports' in your menu bar

Step 2: Select your country, product class, and time period on the left pane.

Procurement Planning and Monitoring Report for Malaria (PPMRm) Uganda - [\[more info\]](#)



Step 3: Green lines show reported and forecasted months of supply (MOS). Grey vertical bars show reported and expected shipments, and grey horizontal bars show the optimal range for months of supply (3-9).



4. Rainfall Dashboard Prototype

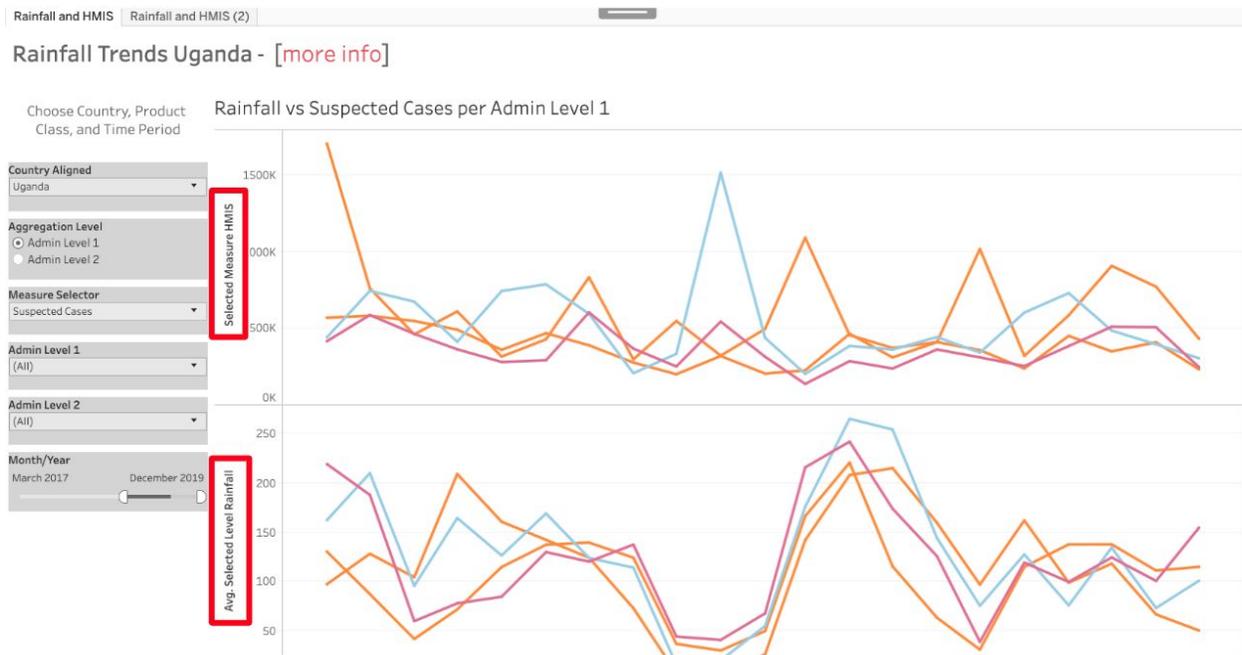
To what extent did increased rainfall contribute to increased malaria incidence? What should the timing of IRS campaigns be? Which provinces to target with an Insecticide-treated bed nets (ITN) campaign and when?

Step 1: Navigate to the [Rainfall Dashboard Prototype](#) by clicking 'Reports' in your menu bar

Step 2: Select your country, aggregation level, selected measure, and any admin level or time filters.



Step 3: On the 'Rainfall and HMIS' tab, you can compare the selected measure over time (top visualization) to average rainfall over time (bottom visualization). Knowing the correlation between rainfall and the selected measure can inform timing of IRS and/or ITN campaigns.



Step 4: Navigate to the 'Rainfall and HMIS (2)' tab to visualize the correlation between malaria incidence and average rainfall over time.

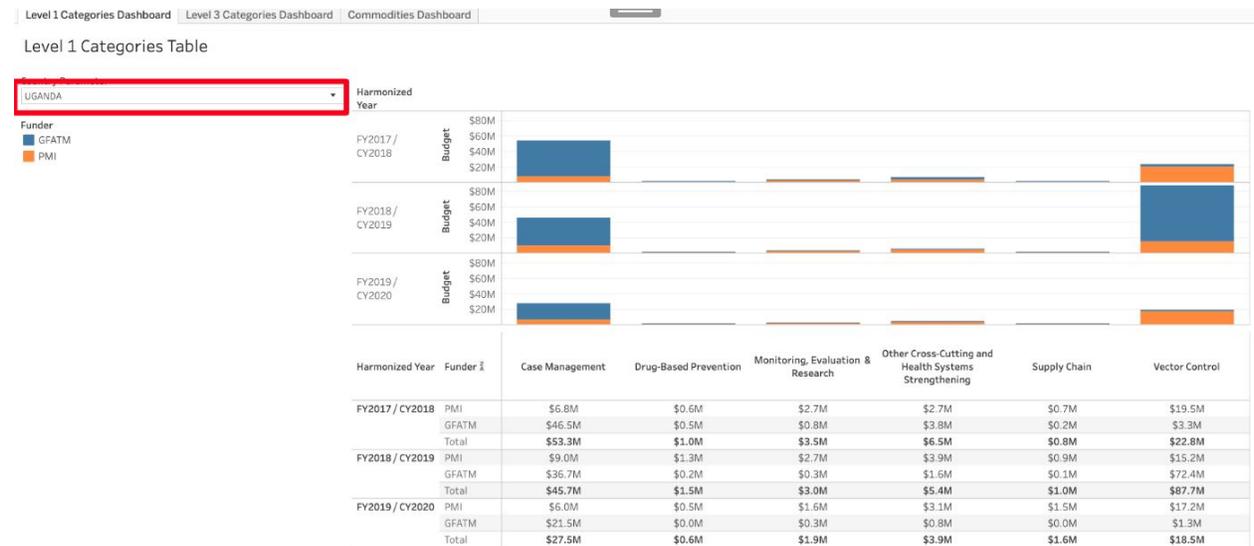


5. Harmonized Financial Dashboard

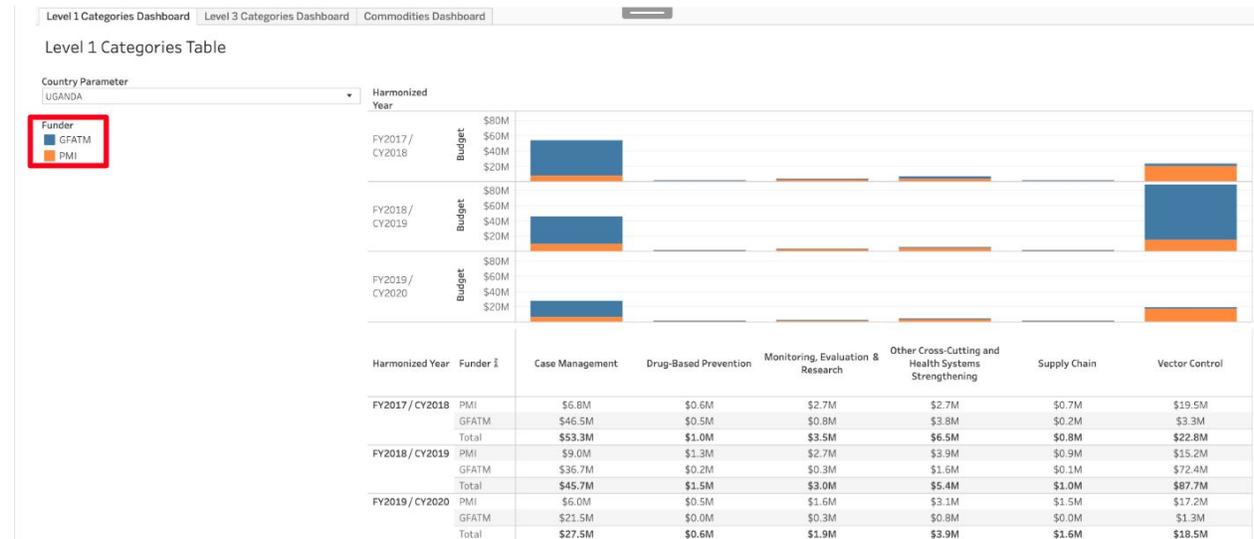
How has PMI prioritized spending money in country X in recent years? Where are PMI and Global Fund in agreement about spending priorities in country X? Where are there possibly overlapping efforts? Where are there gaps? Does this record reflect the most recent planning figures that have been agreed upon?

Step 1: Navigate to the Harmonized Financial Dashboard.

Step 2: Select your country on the 'country parameter' filter.



Step 3: The 'Level 1 Categories Table' tab provides budget information for both PMI and GF broken down by year and categories to indicate overlap and/or differences.



Step 4: The 'Level 3 Categories Table' tab drills down further into categorical spending and the 'Commodities Table' tab solely focuses on commodity spend.

Level 1 Categories Dashboard | **Level 3 Categories Dashboard** | Commodities Dashboard

Level 3 Categories Table

Country Parameter
UGANDA

Harmonized Level 1	Harmonized Level 3	Harmonized Year / Funder					
		FY2017 / CY2018		FY2018 / CY2019		FY2019 / CY2020	
		PMI	GFATM	PMI	GFATM	PMI	GFATM
Case Management	Community-based case management		\$4.1M		\$2.7M		\$1.5M
	Facility-based case management		\$0.2M		\$0.1M		\$0.1M
	GFATM procurement & supply chain management costs		\$7.6M		\$6.3M		\$3.7M
	Other Case Management	\$3.6M	\$1.5M	\$4.2M	\$0.5M	\$2.7M	\$0.1M
	Private-sector case management		\$0.5M		\$0.2M		\$0.2M
	Procure ACTs	\$2.0M	\$18.4M	\$3.0M	\$16.6M	\$1.4M	\$9.7M
	Procure Drugs for Severe Malaria		\$7.2M	\$0.1M	\$5.5M	\$0.3M	\$1.0M
	Procure Other Treatment-Related Commodities		\$1.4M		\$0.2M		\$0.2M
	Procure RDTs	\$1.0M	\$5.6M	\$1.5M	\$4.8M	\$1.5M	\$5.0M
	Therapeutic Efficacy	\$0.3M		\$0.3M		\$0.2M	
Drug-Based Prevention	Prevention of Malaria in Pregnancy Implementation	\$0.6M	\$0.1M	\$1.3M	\$0.2M	\$0.5M	
	Procure IPTp-Related Commodities		\$0.4M		\$0.0M		\$0.0M
Monitoring, Evaluation & Research	Other Data Sources		\$0.1M		\$0.1M		\$0.1M
	Program and data quality, analysis and operations research	\$0.3M	\$0.1M				
	Reporting, Monitoring, and Evaluation	\$1.5M	\$0.6M	\$2.6M	\$0.2M	\$1.3M	\$0.2M
	Support for FETP	\$0.3M		\$0.2M		\$0.3M	
	Surveys	\$0.6M	\$0.0M				
Other Cross-Cutting and Health Systems Strengthening	Central and Regional Program management	\$0.3M	\$0.1M	\$0.2M	\$0.2M	\$0.2M	\$0.4M
	Community responses and systems		\$0.1M		\$0.1M		\$0.1M
	Cross-Cutting Human Resources for Health		\$0.3M		\$0.3M		\$0.3M
	Financial management systems		\$0.0M		\$0.0M		\$0.0M
	In-Country Staffing and Administration	\$1.2M		\$1.9M		\$1.8M	
	Integrated service delivery, quality improvement, and nation...		\$2.1M				
	Other Program Management		\$1.2M		\$1.0M		
	SBCC Unspecified	\$1.2M		\$1.8M		\$1.1M	
Supply Chain	Support for PCV and SPAs	\$0.0M		\$0.0M		\$0.0M	
	Ensuring Quality		\$0.2M		\$0.0M		\$0.0M