



Malaria Surveillance Bulletin



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Message from the Programme Manager

It is my pleasure to welcome you to our second issue of the National Malaria Control Programme's Malaria Surveillance bulletin. This issue focuses on the first and second quarter of 2017, i.e. July 2016 – June 2017; with key malaria indicators demonstrated using nine surveillance graphs with data drawn from the DHIS2 and projected 2012 Census.

During the period under review, the NCMP supported by partners rolled out a comprehensive malaria surveillance guideline for the Mainland. Surveillance is an essential tool for monitoring the epidemiological transition and guiding informed decision-making, thus require the commitment of all stakeholders. Surveillance may also function most intensively as an intervention in situations close to malaria elimination. The objectives of the guidelines are to describe the surveillance system so that it can be operationalized at all levels; describe minimum standards for surveillance systems and provide guidance for the interpretation of surveillance of data and for preparedness and response. The guidelines introduce a comprehensive framework that includes several aspects of malaria situation and its control; disease, programmatic, transmission and quality services surveillance.

The guidelines are intended for use primarily by the technical staff of the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDEG) in particular NMCP, HMIS and IDSR, partners and other stakeholders such as members of the SME technical working team and task forces; members of vector control and case management technical teams and task forces; the President's Office Regional Administration and Local Government (PORALG); Malaria Development Agencies Partners; and the technical teams of malaria implementing partner agencies.

To date, 1,363 health workers have been trained in the use of these guidelines across all regions of the Mainland since May 2017. Timely recording, analysis, interpretation and sharing of data, as well as the testing, treatment, and tracking of malaria, are among the skills that participants learn during trainings.

Despite the significant decrease in prevalence, malaria remains a major public health problem in Mainland Tanzania. It is hoped this kind of investment in malaria surveillance training of health workers, together with other key interventions – including public education on the uptake of interventions, distribution of nets, procurement of commodities, and diagnostic kits – will help Tanzania meet its vision of having a malaria-free generation.

Dr. Ally Mohamed

The Burden of Malaria in Tanzania and its Regions

Malaria morbidity rates in health facilities

The proportion of malaria cases in OPD – is measured by dividing the number of malaria cases out of all visits done in the OPD. This indicator is less affected by accessibility to care and provides information about the burden of the disease among health services. There is a seasonal variation of the proportion of confirmed cases with high proportions in July and August 2016. This is seen to decrease in the following months and rises again in December 2016 and January 2017. Thereafter, proportions decrease in February, March and April and rise again in the 2nd quarter of 2017 (Figure 1a). The proportions of clinical malaria are seen to decrease in the first and second quarter of 2017 when compared to 2016. There is a pattern of heterogeneity and geographical variation of the proportion of malaria cases reported by HF in the first

and second quarter of 2017 (Figure 1b) There is an increasing trend in the number of districts with low transmission (<5% & 5-<10) in a consistent part of the country especially in central,

Figure 1a: Quarterly proportions of malaria cases in OPD, July 2016 - June 2017

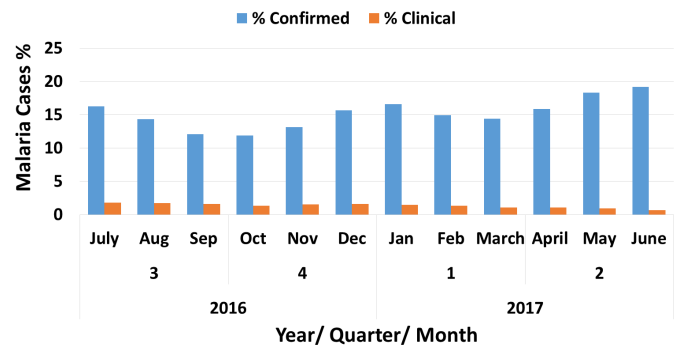
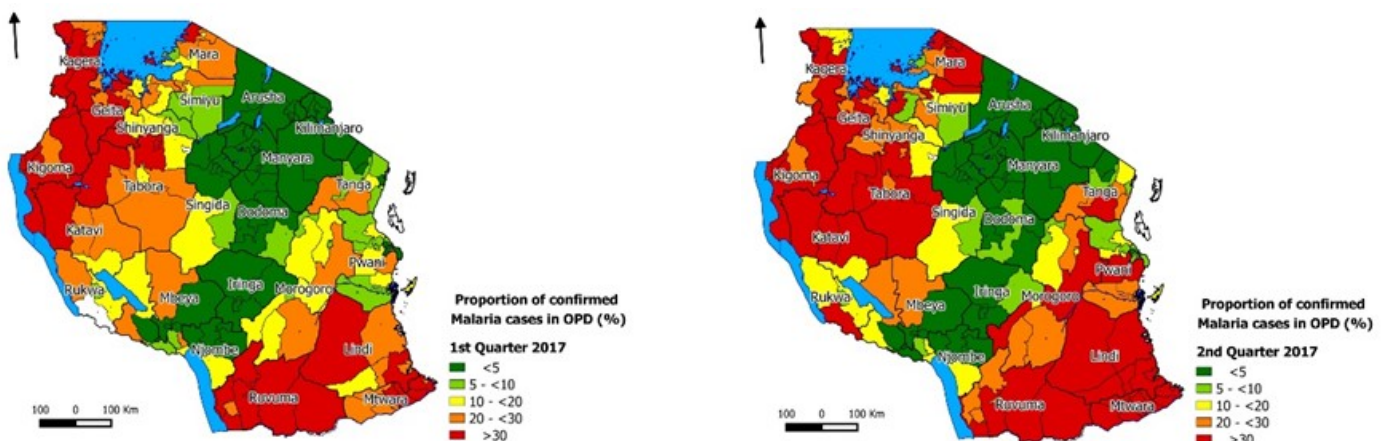


Figure 1b: Proportion of confirmed malaria cases in quarter 1 and 2 of 2017 by region

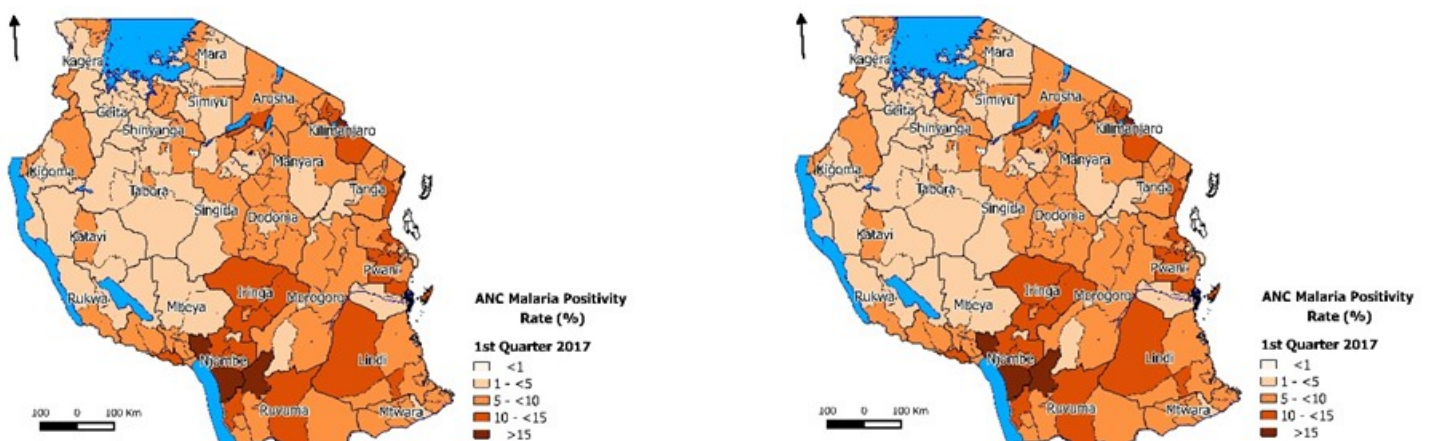


Malaria positivity rate in pregnant women

Malaria test positivity rate in pregnant women attending antenatal clinic (ANC) - provides the measurement of the prevalence of malaria among a selected sentinel population. All pregnant women attending an ANC for the first time are eligible to be tested for malaria and to receive appropriate treatment according to the national guidelines. Positivity rate

is calculated as a proportion of pregnant women tested for malaria at ANCs who were positive for malaria parasites. The pattern for malaria transmission intensity for pregnant women is similar to what has been shown in Figure 1b above with relatively low malaria transmission in the belt running from north-east to south-west regions and councils (Figure 2).

Figure 2: Malaria positivity rate in quarter 1 and 2 of 2017 by region



Malaria Services in Out-Patient Departments (OPD)

Uncomplicated malaria diagnosis

The HMIS provides three types of malaria diagnosis: **malaria confirmed** through a positive **rapid diagnostic test** (mRDT) or blood slide (BS), and clinical malaria for patients not tested. The indicators in **Figure 3a** and **3b** shows the monthly numbers and proportions of malaria cases reported in OPD by type of diagnosis for the period July 2016 – June 2017. The chart in **Figure 3a** shows a slight increase in overall malaria cases in the first and second quarter of 2017 and a decreasing trend of clinical cases. The monthly proportion of clinical malaria cases in **Figure 3b** decreased from approximately 10% in July 2016 to approximately 3% in June 2017. This indicates a gradual increase in adherence to national guidelines of testing all suspected malaria cases.

Figure 3a: Monthly frequency of malaria cases by type of diagnosis July 2016 – June 2017

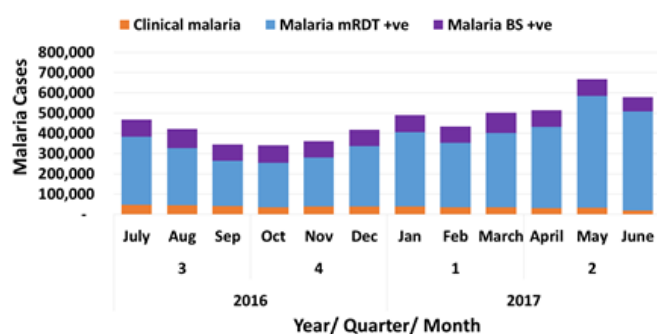
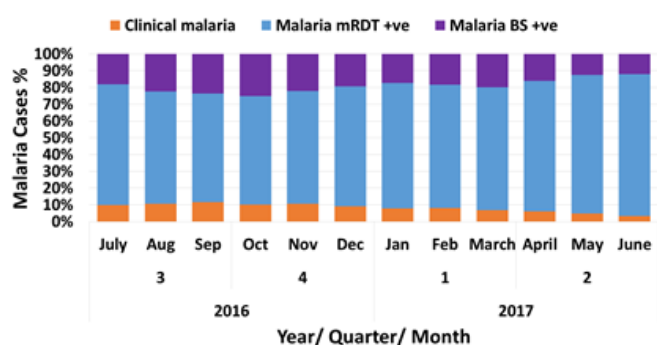


Figure 3a: Monthly frequency of malaria cases by type of diagnosis July 2016 – June 201



Weekly malaria morbidity and reporting rate in health facilities

Malaria surveillance, epidemic detection and response system has been established in 10 regions of Tanzania to ensure that malaria epidemics are detected and addressed within two weeks of onset. NMCP monitors malaria cases reported weekly via the e-IDSR system. Assigned eIDSR focal persons at each health facility compile and submit data every Monday for each epidemiological week (Monday to Sunday) via a mobile phone..

The submitted report goes directly into the District Health Information System (DHIS 2) and can be accessed by officials at district, regional, and national levels. **Figure 4a** shows the weekly numbers and proportion of confirmed malaria cases reported weekly by HF in the first and second quarters of 2017 while **Figure 4b** shows the weekly positivity rate in 2017. There is a trend of increasing reporting rate with the overall reporting rate reaching 70% in week 26. The numbers of confirmed cases and positivity rate follow a similar trend seen in **Figure 3a** with increasing numbers in the first two quarters of 2017.

Figure 4a: Weekly numbers and reporting rate of malaria cases from January – June 2017

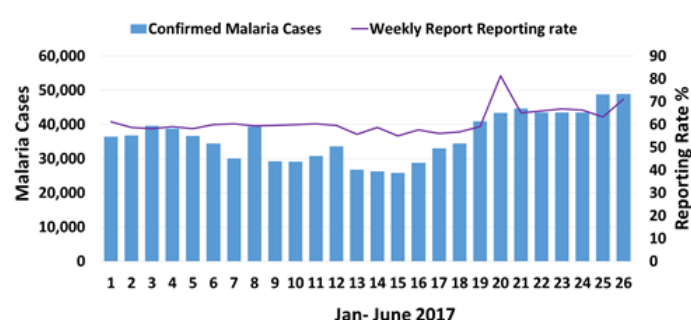
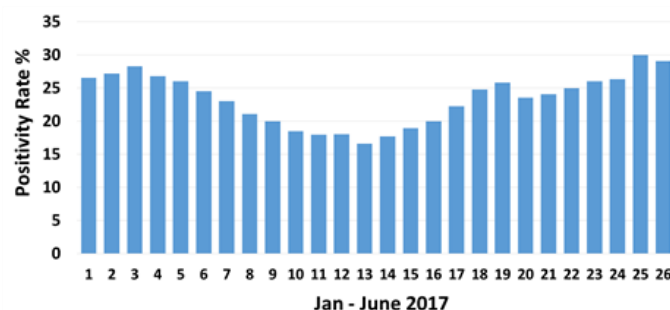


Figure 4b: Weekly malaria positivity rate from January – June 2017



Malaria Testing and positivity rate

This indicator shows the laboratory testing and positivity rates of malaria tests performed in HFs in the defined period. Testing rate is calculated by dividing the number of malaria tests performed by BS and mRDT in the laboratory out of the total OPD visits for the defined period. Positivity rate is calculated by dividing the number of -positive malaria tests out of the total malaria tests performed. The national guidelines recommends to test all patients presenting to an OPD with fever for malaria. Test is performed by using microscopy or by using rapid diagnostic tests. **Figure 5a** shows an increase of testing rate from approximately 40% in 2016 to approximately 50% in the first two quarters of 2017.

The maps in **Figure 5c** demonstrate the regional variation in BS and mRDT positivity rate in the first and second quarter of 2017.

Figure 5a: Monthly malaria testing rate in June 2016 to July 2017

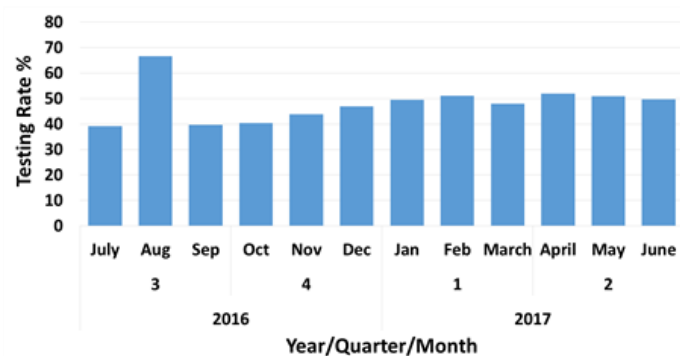
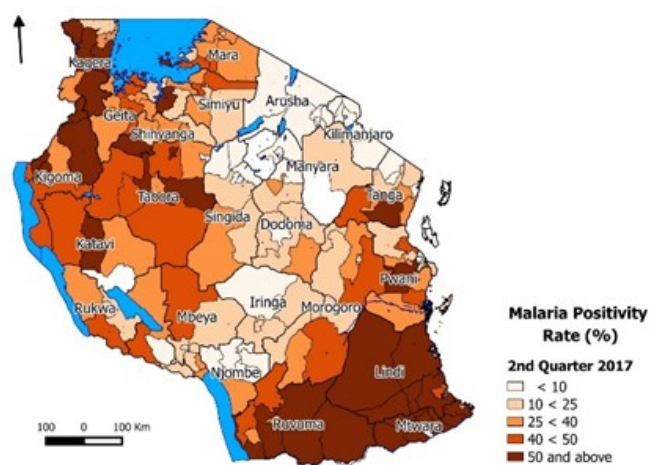
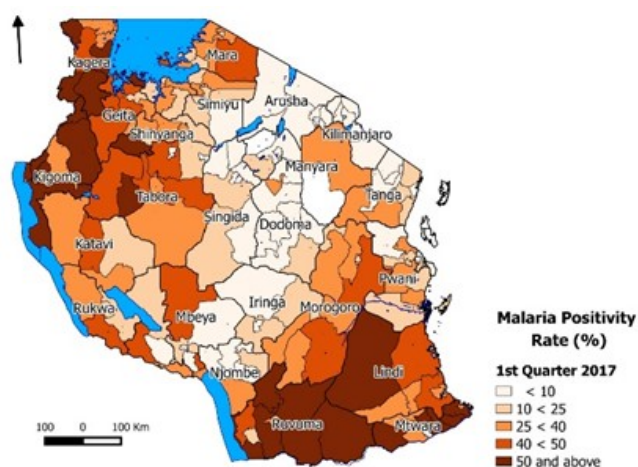


Figure 5b: Monthly malaria positivity rate, June 2016 to July 2017



Figure 5c: BS and mRDT positivity rate by region for quarter 1 and 2 of 2017

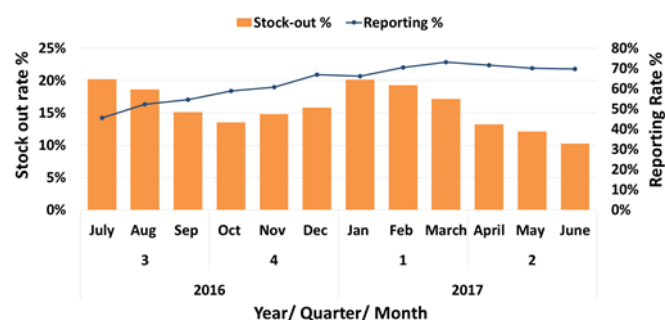


Malaria Commodities

This indicator reflects the proportion of HFs experiencing stock-outs of ALU, mRDT and SP on monthly basis. **Figure 6** shows an increasing trend of the reporting rate of stock-outs from health facilities and a decreasing trend in the stock-out rate of the commodities.

Figure 6: Stock out rate and reporting rate of malaria commodities, July 2016 – June 2017

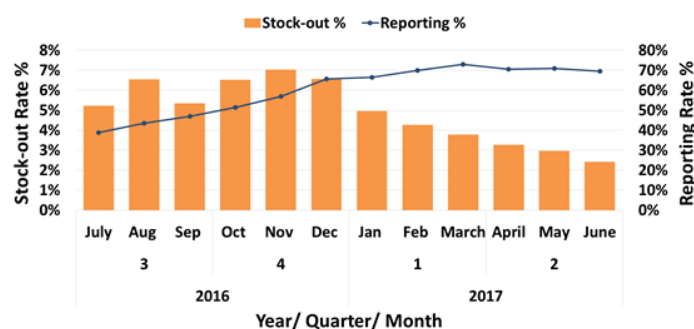
SP



ALU



mRDT



Severe Malaria Management in Inpatient Department

Pattern of severe malaria diagnosis

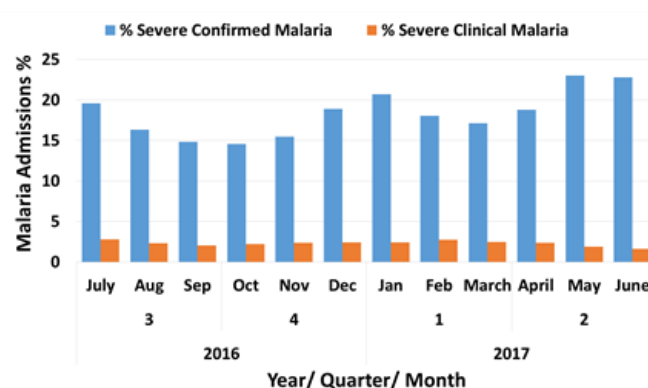
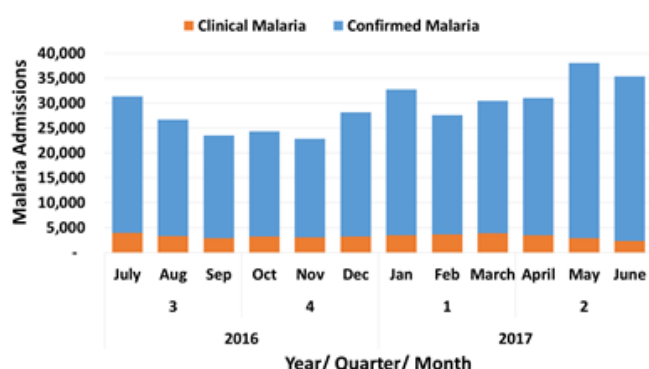
Figure 7a shows the monthly numbers of malaria admissions by type of diagnosis for June 2016 to July 2017.

Generally, the findings show that there is a decrease in clinical cases from 2016 to June 2017 and a relative increase in malaria admissions in the second quarter of 2017.

Figure 7a: Monthly frequency of malaria admissions, June 2016 – July 2017

Figure 7b shows the proportion of malaria admissions out of total admissions.

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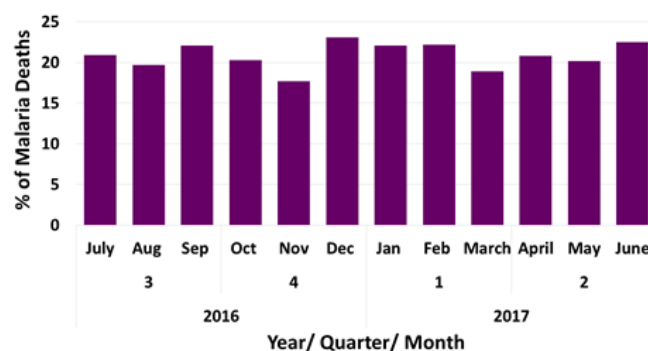
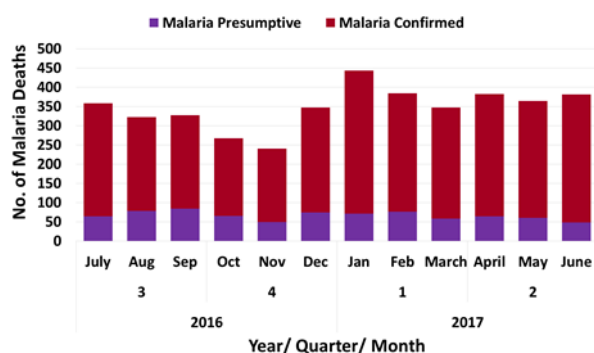


Malaria deaths

Figure 8a and **8b** shows the total numbers and proportions of malaria related deaths out of all deaths in IPD facilities respectively.

Figure 8a: Number of deaths attributable to malaria, July 2016 – June 2017

Figure 8b: Proportion of monthly malaria deaths out of all deaths in IPD, July 2016 – June 2017



Malaria Services in RCH Clinic

IPTp2/3 performance

Uptake of intermittent preventive treatment in pregnancy (IPTp) with Sulfadoxine-Pyrimethamine (SP) continues to be the major malaria prevention intervention among pregnant women together with the use of long lasting insecticide treated nets (LLIN).

Pregnant women attending ANC services are eligible to receive a complete dose of SP as preventive therapy as soon as they reach the second trimester of their pregnancy (12 weeks of gestational age).

Other SP doses are administered in the subsequent scheduled attendances provided there is an interval of 4 weeks between one administration and the other. **Figure 9a** shows the monthly proportions of women receiving IPTp2 and IPTp3 during ANC visits for July 2016 to June 2017.

The proportion is measured by dividing the number of pregnant women receiving the second dose of SP by the number of pregnant women that attended the facility for the first time.

The results shows that there is an increase in IPTp2 uptake from approximately 57% in July 2016 to 74% in July 2017 (**Figure 9a**). The reporting tools for the uptake of IPTp3 was recently introduced from December 2016.

The uptake in 2017 is approximately 28%. **Figure 9b** shows the regional variation in the IPTp2 performance in the first and second quarter of 2017.

Figure 9b: IPTp2 performance by region for quarter 1 and 2 of 2017

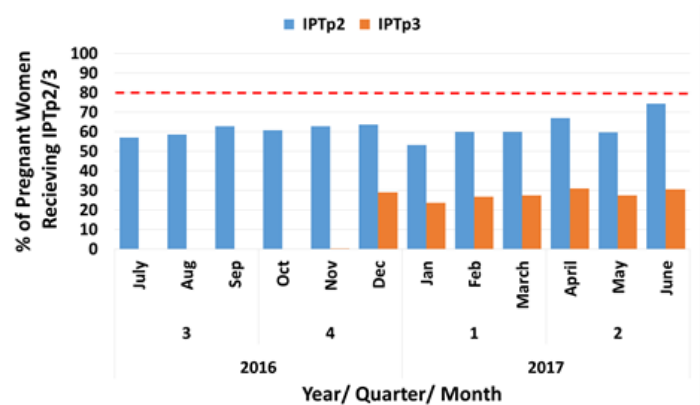
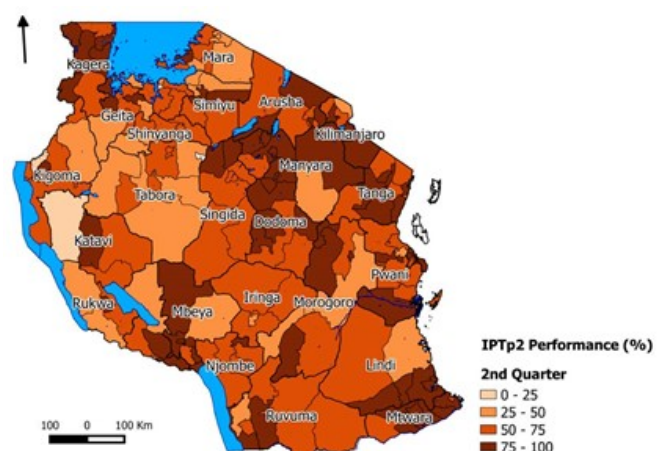
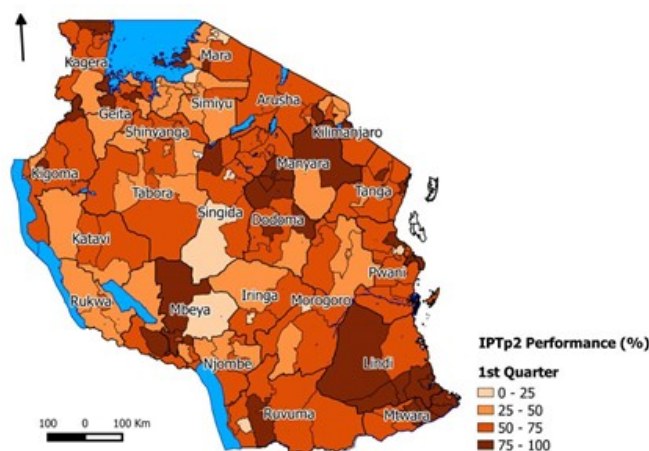


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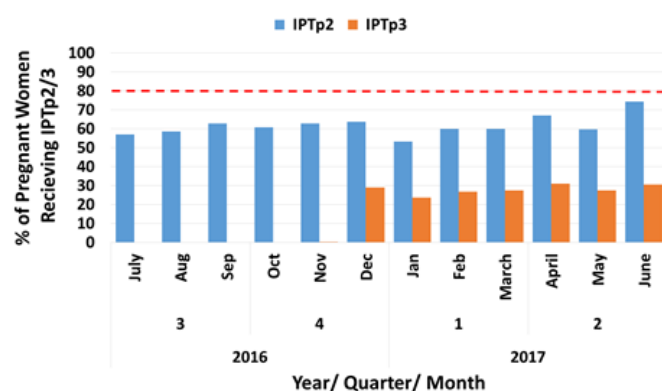
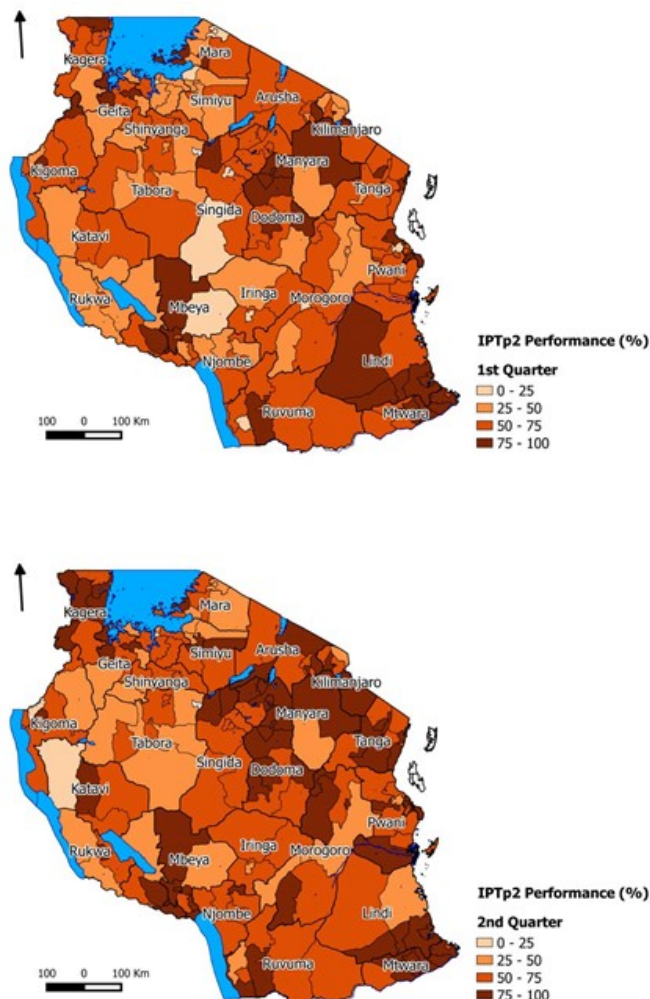


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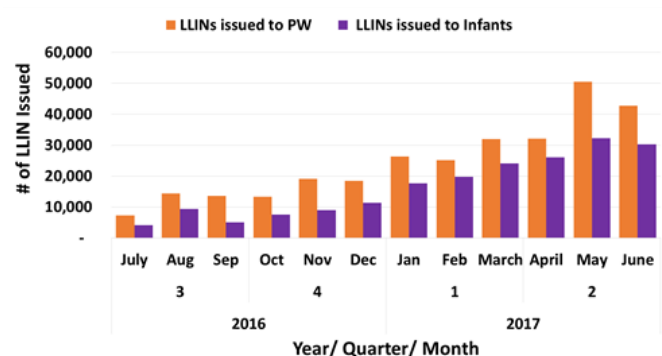


LLIN issued to pregnant women and infants

As part of the LLIN keep-up strategy and to maintain adequate coverage among biologically vulnerable groups, pregnant women and infants are eligible to receive free LLINs during their first ANC attendance and at the time of measles/rubella vaccination, respectively.

Figure 10a and **10b** shows the number and proportion of LLINs issued to pregnant women and children from July 2016 to June 2017. There is a progressive increase in the number of LLINs issued across the year. **Figure 10c** shows the regional variation in the proportion of women receiving LLIN at ANC

Figure 10a: Numbers of LLIN issued to pregnant women and infants, July 2016 – June 2017



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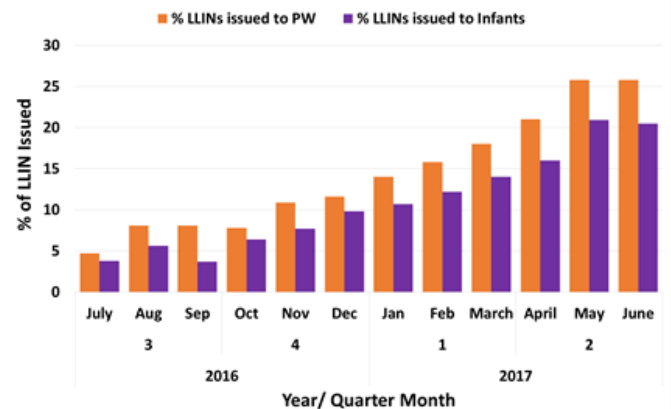
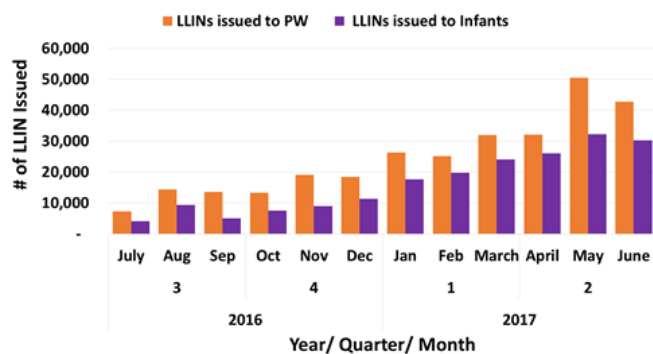
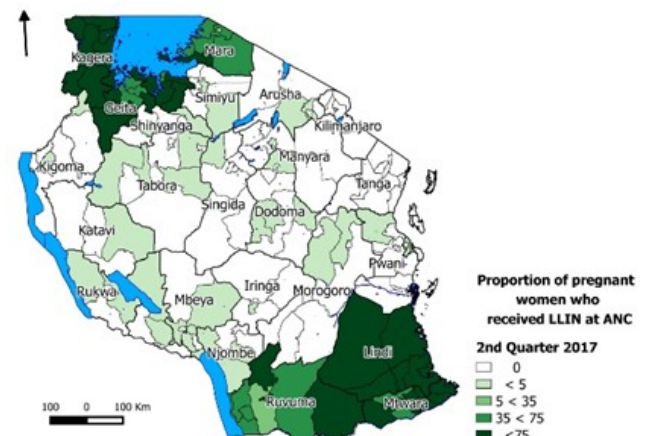
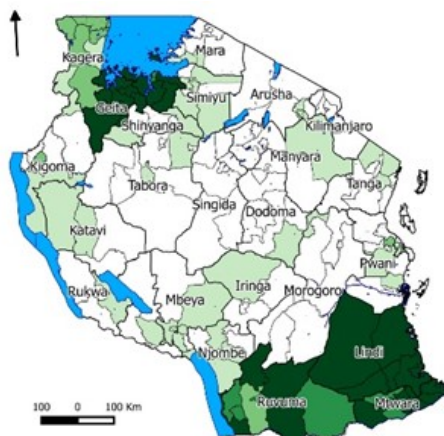


Figure 10c: % of pregnant women receiving LLIN by region for quarter 1 and 2 of 2017



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