



# Malaria Surveillance Bulletin - 2017

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The **MALARIA SURVEILLANCE BULLETIN** is produced by the National Malaria Control Programme (NMCP) and is a bi-annual production.

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## Message from the Programme Manager

The Malaria surveillance bulletin for Tanzania mainland has been designed by the National Malaria Control Programme (NMCP) to provide regular updates regarding the current malaria situation and malaria control interventions.

The bulletin targets health care providers and various malaria stakeholders/partners at all levels. This is the fourth issue of the bulletin and covers annual indicators for the period 2014 – 2017.

The NMCP is currently implementing the malaria strategic plan (2015 – 2020) that aims to prepare the foundations of a malaria-free Tanzania with three core interventions: Integrated malaria vector control; malaria diagnosis & treatment and malaria surveillance, evaluation & response. Other cross cutting interventions include: Social behavior change communication and partnership development & resource mobilization. In August 2017, NMCP conducted a malaria performance mid-term review (MTR), which came up with implementation successes, challenges and recommendations. Following this, NMCP is planning to review the strategic plan for better performance to reach the intended goal in 2020.

The production of this bulletin would not have been possible without the collaborative efforts and support from U.S. President’s Malaria initiative (PMI), Swiss TPH, WHO and MEASURE Evaluation. The NMCP is confident that this bulletin will provide the necessary information on the status of malaria and its interventions in the country. The programme encourages all stakeholders to provide feedback and inputs to enable evidence-based decision making for implementation of malaria interventions geared towards the vision of a “Malaria Free Tanzania”.

Dr. Ally Mohamed



## The National Malaria Strategic Plan 2015-2020, Mission Statement:

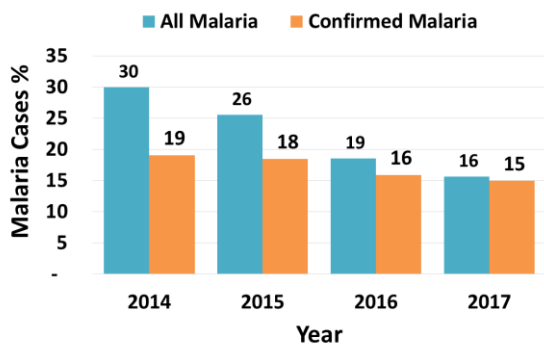
*Ensure all Tanzanians have access to quality, effective, safe and affordable malaria preventive and curative interventions through timely and sustainable collaborative efforts with partners and stakeholders at all levels.*

## The Burden of Malaria in Mainland Tanzania and its Regions

### Malaria morbidity rates in health facilities

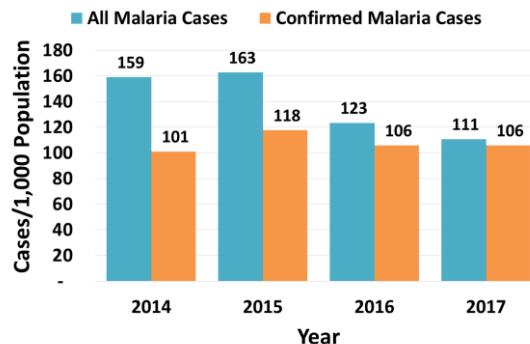
The proportion of malaria cases out of all visits in OPD; There is a decrease in the proportion of both overall and confirmed cases over the years (Figure 1).

Figure 1: Annual proportion of malaria cases in OPD, 2014-2017



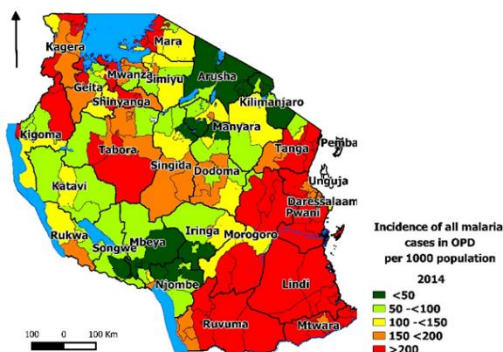
Annual malaria incidence rate; The overall rate per every 1000 at-risk population is decreasing from 2014/5 to 2017 while the incidence of confirmed cases remain quite unchanged over the years (Figure 2a).

Figure 2a: Annual malaria incidence rate per 1,000 population, 2014-2017

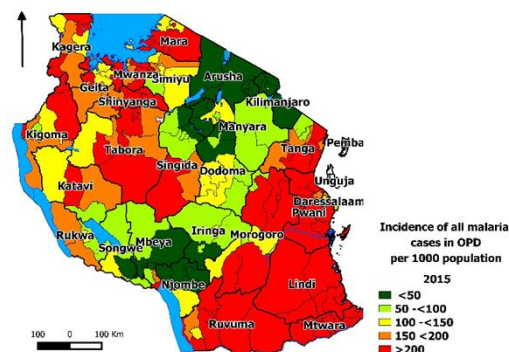


The geographical variation of the incidence rate of malaria cases (Figure 2b) demonstrates an increasing trend of relatively low transmission (less than 50 cases per 1000 population) areas in central, northeast and southwest zones over the period 2014 – 2017.

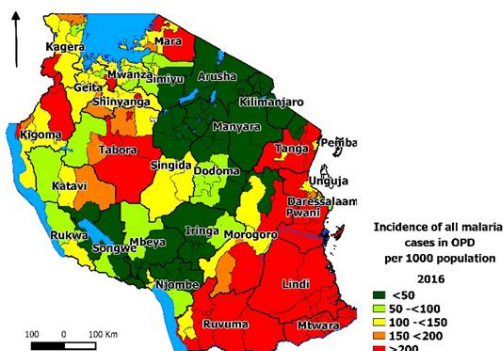
Figure 2b: Annual malaria incidence by district per 1,000 population 2014



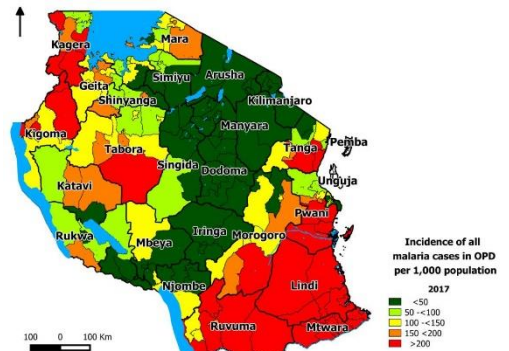
2015



2016



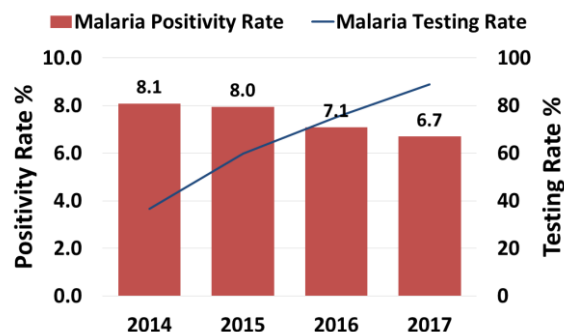
2017



### Malaria testing and positivity rate in pregnant women

The pattern for malaria transmission intensity in pregnant women attending ante-natal clinic demonstrates a trend of decreasing positivity rate from 8.1% in 2014 to 6.7% in 2017 and an increase in adherence to testing practices as reflected from the testing rate trends (Figure 3).

Figure 3: Testing and positivity rate in pregnant women, 2014-2017



## Malaria Services in Out-Patient Department (OPD)

### Uncomplicated malaria diagnosis

The indicators in Figure 4a and 4b shows the annual numbers and proportions of malaria cases reported in OPD by type of diagnosis. There is a marked decrease in the numbers of malaria diagnosis from 2015 to 2017 that is largely contributed by the decrease in clinical cases (figure 4a). The annual proportion of clinical malaria cases (Figure 4b) decreased from approximately 36% in 2014 to approximately 4% in 2017. This indicates a gradual increase in adherence to national guidelines of testing all suspected malaria cases.

Figure 4a: Annual frequency of malaria cases by type of diagnosis in OPD, 2014 – 2017

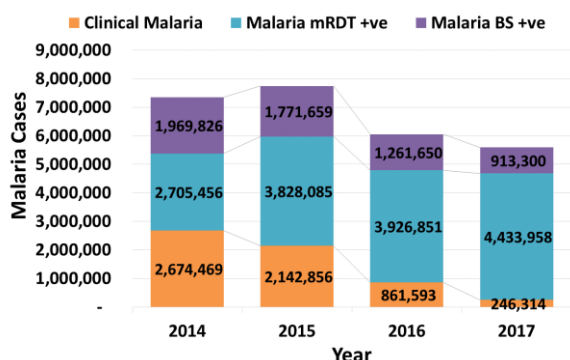
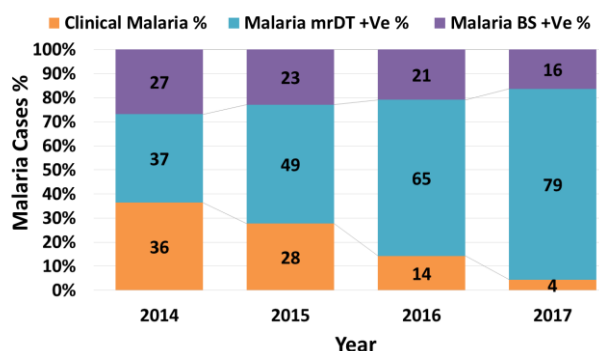


Figure 4b: Annual proportion of malaria cases by type of diagnosis in OPD, 2014 – 2017



## Severe Malaria Management in Inpatient Department (IPD)

### Pattern of severe malaria diagnosis

Figure 5a and 5b shows the annual numbers and proportion of malaria admissions by type of diagnosis. Generally, the findings show that, there is a marked decrease in number of admissions from 2015 to 2017 (Figure 5a). The chart in 5b shows a decrease in proportion of admissions due to suspected malaria and a subsequent increase in testing practices.

Figure 5a: Annual frequency of malaria admissions in IPD, 2014 – 2017

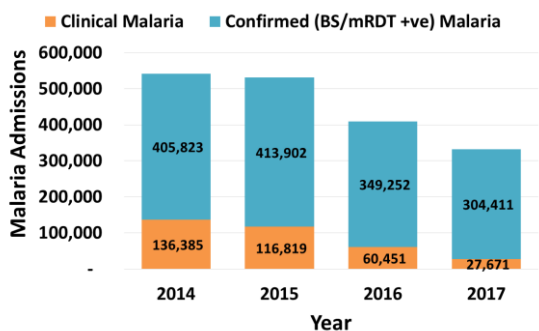
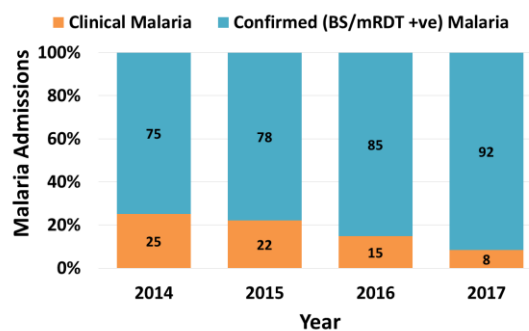


Figure 5b: Annual proportion of malaria admissions in IPD, 2014 - 2017



Source DHIS2, elaborated by NMCP and Swiss TPH

### Malaria Deaths

Figure 6a and 6b shows the total numbers and proportions of malaria related deaths out of all deaths in IPD facilities respectively for 2016 – 2017. There is a decrease in both numbers and proportion of malaria related deaths across the years.

Figure 6a: Number of deaths attributable to malaria, 2016 – 2017

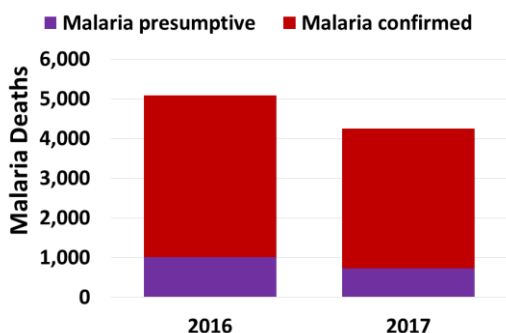
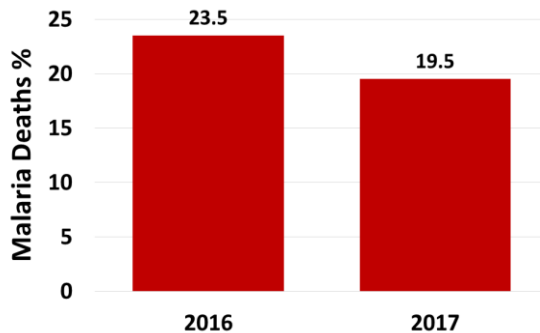


Figure 6b: Proportion of malaria deaths out of all deaths in IPD, 2016 – 2017

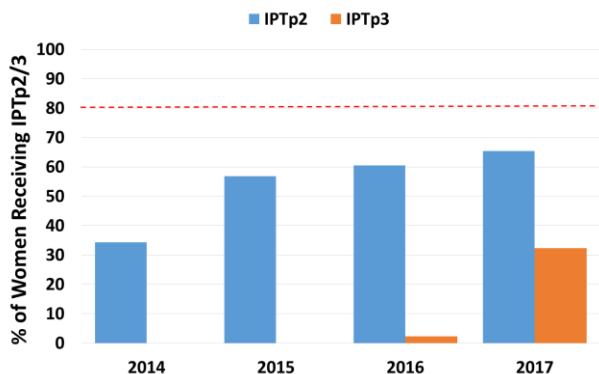


## Malaria Services in RCH Clinic

### Performance of Intermittent Preventive Treatment of Malaria in Pregnancy (IPTp)2/3

Figure 7 shows the annual proportions of women receiving IPTp2/3 during ANC visits for 2014-2017. The results shows that there is an increase in IPTp2 uptake from approximately 34% in 2014 to 65 % in 2017. The reporting tools for the uptake of IPTp3 was recently introduced from December 2016.

Figure 7: Annual IPTp2/3 performance, 2014 – 2017



### LLINs issued to pregnant women and infants

Figure 8a and 8b shows the number and proportion of LLINs issued to pregnant women (PW) and children from 2014 to 2017. In 2014, ITNs were issued as part of the voucher scheme that ran from 2004-2014. This was discontinued in 2015 and a new system for direct delivery of ITNs to pregnant women and infants at health facilities was rolled out in 2016. There is a progressive increase in the number of LLINs issued from 2016.

Figure 8a: Numbers of LLINs issued to pregnant women and infants, 2014– 2017

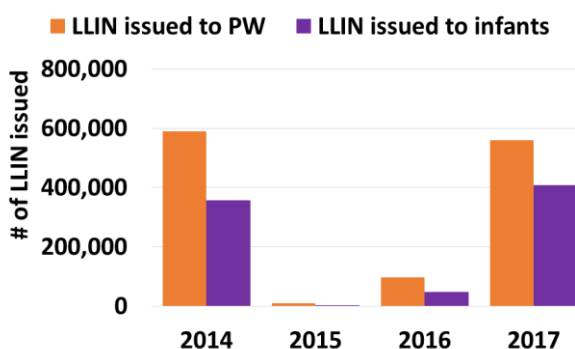
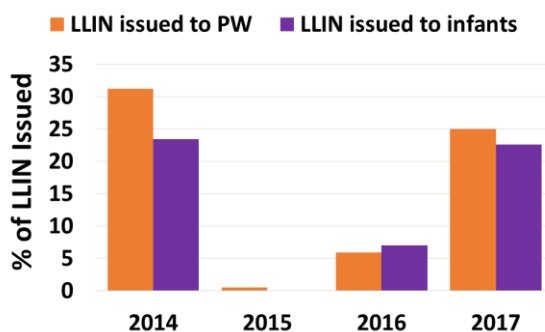


Figure 8b: Proportion of LLINs issued to pregnant women and infants, 2014 – 2017

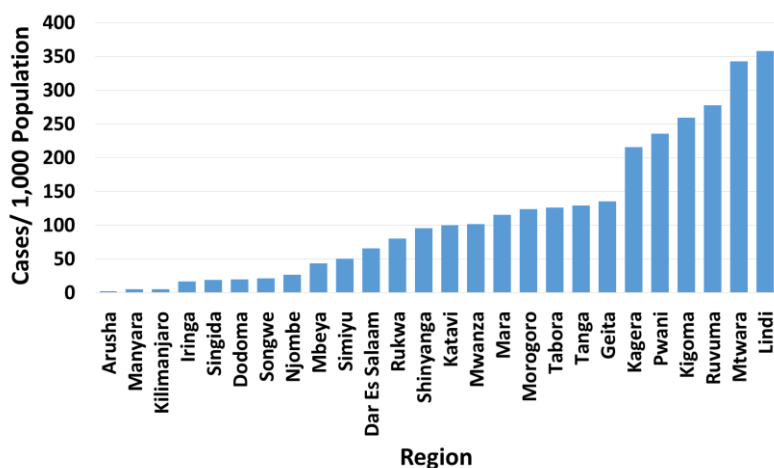




## Appendix

This section provides a general overview of the number, proportion and incidence rate of malaria in OPD for the period 2017 across all the regions and districts of mainland Tanzania.

*Figure A1: Regional comparison of the incidence rate of malaria cases in OPD for the period 2017*



*Table A1: Number, proportion and incidence rate of malaria cases in OPD for the period 2017*

Region	Council	Confirmed Malaria Cases	Clinical Malaria Cases	% of Malaria Cases / OPD Visits	Incidence of All Malaria Cases/ 1,000 population
Arusha	Arusha CC	1,560	11	0.2	3.3
	Arusha DC	766	0	0.4	2.1
	Karatu DC	535	0	0.2	2.0
	Longido DC	69	12	0.1	0.5
	Meru DC	618	1	0.3	2.1
	Monduli DC	379	0	0.3	1.9
	Ngorongoro DC	239	10	0.2	1.2
<b>Total</b>		<b>4,166</b>	<b>34</b>	<b>0.2</b>	<b>2.2</b>
Dar es Salaam	Ilala MC	97,023	5,475	5.3	61.3
	Kigamboni MC	13,290	314	6.1	45.5
	Kinondoni MC	117,073	5,451	6.5	103.8
	Temeke MC	90,158	3,999	6.0	62.1
	Ubungo MC	40,048	3,548	4.3	40.6
<b>Total</b>		<b>357,592</b>	<b>18,787</b>	<b>5.7</b>	<b>65.6</b>
Dodoma	Bahi DC	3,603	27	2.6	14.8
	Chamwino DC	8,317	159	3.4	22.4
	Chemba DC	2,447	107	2.1	9.8
	Dodoma MC	19,044	1,625	3.8	33.3
	Kondoa DC	1,779	79	2.3	7.9
	Kondoa TC	429	0	0.8	6.6
	Kongwa DC	6,112	156	3.5	17.5
	Mpwapwa DC	5,375	21	3.0	15.5
<b>Total</b>		<b>47,106</b>	<b>2,174</b>	<b>3.2</b>	<b>19.6</b>
Geita	Bukombe DC	33,024	54	30.5	143.7
	Chato DC	51,891	194	23.9	123.1
	Geita DC	112,134	1,255	36.1	159.1
	Geita TC	25,635	172	20.1	115.5
	Mbogwe DC	27,887	53	31.3	139.1
	Nyang'hwale DC	11,869	291	18.1	71.8
<b>Total</b>		<b>262,440</b>	<b>2,019</b>	<b>28.6</b>	<b>134.9</b>
Iringa	Iringa DC	2,749	531	1.4	12.7
	Iringa MC	2,050	866	1.3	16.2
	Kilolo DC	6,188	609	3.4	30.1
	Mafinga TC	509	392	0.5	14.0
	Mufindi DC	2,760	4	1.5	10.0
<b>Total</b>		<b>14,256</b>	<b>2,402</b>	<b>1.7</b>	<b>16.6</b>

Source DHIS2, elaborated by NMCP and Swiss TPH

Table A1: Number, proportion and incidence rate of malaria cases in OPD for the period 2017

Region	Council	Confirmed Malaria Cases	Clinical Malaria Cases	% of Malaria Cases / OPD Visits	Incidence of All Malaria Cases/ 1,000 population
Kagera	Biharamulo DC	90,169	1,387	40.6	200.9
	Bukoba DC	29,245	100	17.7	92.7
	Bukoba MC	9,634	69	3.3	59.9
	Karagwe DC	80,840	3,349	39.1	198.7
	Kyerwa DC	105,219	752	42.6	258.6
	Missenyi DC	19,576	174	14.0	84.9
	Muleba DC	156,144	159	42.8	244.7
	Ngara DC	140,178	810	39.0	449.4
<b>Total</b>		<b>631,005</b>	<b>6,800</b>	<b>31.6</b>	<b>216.0</b>
Katavi	Mlele DC	7,214	28	27.4	193.7
	Mpanda DC	18,288	19	30.7	76.4
	Mpanda MC	8,786	1,131	11.8	73.4
	Mpimbwe DC	3,447	162	12.4	32.3
	Nsimbo DC	27,419	900	35.9	191.8
<b>Total</b>		<b>65,154</b>	<b>2,240</b>	<b>24.6</b>	<b>100.3</b>
Kigoma	Buhigwe DC	48,951	2,695	35.9	176.0
	Kakonko DC	78,738	5,288	44.5	501.5
	Kasulu DC	194,843	2,810	42.5	355.2
	Kasulu TC	26,973	3,357	22.1	111.4
	Kibondo DC	117,272	1,249	40.6	406.8
	Kigoma DC	65,132	1,119	39.7	308.5
	Kigoma MC	46,462	1,280	27.0	182.1
	Uvinza DC	51,505	1,053	34.2	118.2
<b>Total</b>		<b>629,876</b>	<b>18,851</b>	<b>37.7</b>	<b>259.2</b>
Kilimanjaro	Hai DC	431	0	0.2	1.8
	Moshi DC	917	24	0.3	1.9
	Moshi MC	3,175	0	0.7	15.2
	Mwanga DC	1,359	20	1.2	9.8
	Rombo DC	422	0	0.2	1.6
	Same DC	2,652	7	1.4	8.8
	Siha DC	181	0	0.2	1.4
<b>Total</b>		<b>9,137</b>	<b>51</b>	<b>0.6</b>	<b>5.1</b>
Lindi	Kilwa DC	70,503	6,063	41.2	380.0
	Lindi DC	74,536	6,196	33.1	437.3
	Lindi MC	39,445	568	32.5	370.4
	Liwale DC	42,383	683	28.8	426.9
	Nachingwea DC	38,411	85	26.7	205.2
	Ruangwa DC	48,835	801	30.3	367.5
<b>Total</b>		<b>314,113</b>	<b>14,396</b>	<b>32.4</b>	<b>358.0</b>
Manyara	Babati DC	1,377	223	0.7	4.3
	Babati TC	358	9	0.4	3.8
	Hanang DC	194	1	0.2	0.6
	Kiteto DC	2,800	87	2.0	9.4
	Mbulu DC	240	35	0.1	1.2
	Mbulu TC	152	0	0.3	1.0
	Simanjiro DC	2,744	53	2.7	13.9
<b>Total</b>		<b>7,865</b>	<b>408</b>	<b>0.9</b>	<b>5.0</b>
Mara	Bunda DC	24,189	986	23.8	110.1
	Bunda TC	15,119	537	18.1	102.8
	Butiama DC	20,024	76	20.4	74.6
	Musoma DC	8,265	10	6.1	40.6
	Musoma MC	25,777	77	15.3	172.6
	Rorya DC	33,098	987	30.3	116.4
	Serengeti DC	50,621	64	32.4	171.1
	Tarime DC	31,662	313	25.8	109.6
	Tarime TC	15,414	93	22.8	178.2
<b>Total</b>		<b>224,169</b>	<b>3,143</b>	<b>21.5</b>	<b>115.3</b>

Table A1: Number, proportion and incidence rate of malaria cases in OPD for the period 2017

Region	Council	Confirmed Malaria Cases	Clinical Malaria Cases	% of Malaria Cases / OPD Visits	Incidence of All Malaria Cases/ 1,000 population
<b>Mbeya</b>	Busokelo DC	12,134	120	15.5	116.5
	Chunya DC	19,511	49	18.8	105.6
	Kyela DC	25,795	497	15.6	105.4
	Mbarali DC	2,331	482	1.6	8.3
	Mbeya CC	5,962	2,491	2.0	18.3
	Mbeya DC	2,141	780	1.7	8.8
	Rungwe DC	8,975	2,629	8.6	46.2
<b>Total</b>		<b>76,849</b>	<b>7,048</b>	<b>7.5</b>	<b>43.5</b>
<b>Morogoro</b>	Gairo DC	3,897	0	5.6	17.3
	Ifakara TC	10,988	5,343	11.2	136.3
	Kilombero DC	47,074	1,037	18.9	141.7
	Kilosa DC	54,181	675	17.4	111.2
	Malinyi DC	21,811	10	21.2	163.2
	Morogoro DC	54,591	1,793	30.6	189.3
	Morogoro MC	51,340	1,771	9.8	142.9
	Mvomero DC	14,370	899	18.2	44.5
	Ulanga DC	40,371	127	27.7	229.1
<b>Total</b>		<b>298,623</b>	<b>11,655</b>	<b>17.0</b>	<b>124.1</b>
<b>Mtwara</b>	Masasi DC	64,419	4,608	30.4	262.2
	Masasi TC	37,873	647	25.3	348.2
	Mtwara DC	50,358	432	40.9	360.7
	Mtwara MC	39,944	762	21.8	347.2
	Nanyamba TC	35,428	9,649	33.6	450.7
	Nanyumbu DC	45,417	11,440	34.7	351.6
	Newala DC	50,141	45	46.0	370.1
	Newala TC	30,673	343	24.7	380.8
	Tandahimba DC	78,373	2,223	40.2	335.4
<b>Total</b>		<b>432,626</b>	<b>30,149</b>	<b>32.5</b>	<b>342.5</b>
<b>Mwanza</b>	Buchosa DC	48,819	10	32.2	129.8
	Ilemela MC	32,239	33	17.8	82.8
	Kwimba DC	12,564	42	9.1	27.3
	Magu DC	41,519	16	20.9	125.5
	Misungwi DC	57,613	388	28.9	140.9
	Nyamagana MC	37,764	397	9.6	80.3
	Sengerema DC	22,945	77	10.3	59.8
	Ukerewe DC	72,779	101	40.2	183.9
<b>Total</b>		<b>326,242</b>	<b>1,064</b>	<b>19.6</b>	<b>101.4</b>
<b>Njombe</b>	Ludewa DC	12,026	2,190	10.9	104.6
	Makambako TC	1,321	0	1.5	12.1
	Makete DC	799	127	0.6	9.9
	Njombe DC	1,180	27	2.4	13.9
	Njombe TC	1,175	151	1.1	9.5
	Wanging'ombe DC	662	5	0.7	4.0
<b>Total</b>		<b>17,163</b>	<b>2,500</b>	<b>2.9</b>	<b>26.9</b>
<b>Pwani</b>	Bagamoyo DC	7,787	75	6.3	69.1
	Chalinze DC	49,509	5,316	22.9	219.8
	Kibaha DC	15,630	276	14.0	198.3
	Kibaha TC	19,249	2,666	7.4	133.6
	Kibiti DC	42,033	34	25.9	331.2
	Kisarawe DC	38,464	1,405	27.5	380.9
	Mafia DC	11,835	2,272	16.1	283.4
	Mkuranga DC	59,460	2,252	31.5	253.2
	Rufiji DC	30,913	551	16.9	321.1
<b>Total</b>		<b>274,880</b>	<b>14,847</b>	<b>18.9</b>	<b>235.5</b>
<b>Rukwa</b>	Kalambo DC	30,209	2,789	39.1	160.5
	Nkasi DC	28,388	2,384	18.6	94.4
	Sumbawanga DC	18,503	4,148	13.8	54.1
	Sumbawanga MC	8,386	1,397	5.7	39.1
<b>Total</b>		<b>85,486</b>	<b>10,718</b>	<b>16.8</b>	<b>80.1</b>

Source DHIS2, elaborated by NMCP and Swiss TPH

Table A1: Number, proportion and incidence rate of malaria cases in OPD for the period 2017

Region	Council	Confirmed Malaria Cases	Clinical Malaria Cases	% of Malaria Cases / OPD Visits	Incidence of All Malaria Cases/ 1,000 population
Ruvuma	Madaba DC	16,345	1,120	24.6	347.8
	Mbinga DC	27,895	5,922	19.5	130.4
	Mbinga TC	13,590	123	17.3	106.0
	Namtumbo DC	98,609	14,852	48.8	524.9
	Nyasa DC	38,144	172	49.8	229.5
	Songea DC	45,364	2,561	33.2	361.8
	Songea MC	40,985	7,161	26.2	190.9
	Tundururu DC	97,249	15,326	34.7	343.5
<b>Total</b>		<b>378,181</b>	<b>47,237</b>	<b>33.2</b>	<b>277.3</b>
Shinyanga	Kahama TC	27,819	20	16.4	94.0
	Kishapu DC	9,863	413	6.2	35.3
	Msalala DC	20,237	569	16.5	75.5
	Shinyanga DC	21,669	0	15.1	59.0
	Shinyanga MC	32,062	543	8.3	184.8
	Ushetu DC	50,073	8	24.8	166.9
<b>Total</b>		<b>161,723</b>	<b>1,553</b>	<b>13.6</b>	<b>95.7</b>
Simiyu	Bariadi DC	30,414	225	21.8	98.7
	Bariadi TC	8,887	168	10.5	56.3
	Busega DC	16,914	210	10.3	76.9
	Itilima DC	9,238	446	9.1	28.4
	Maswa DC	15,481	6	10.9	42.4
	Meatu DC	5,488	48	5.1	16.8
	<b>Total</b>		<b>86,422</b>	<b>1,103</b>	<b>11.7</b>
Singida	Ikungi DC	5,014	122	2.9	16.5
	Iramba DC	2,986	0	1.8	8.8
	Itigi DC	9,300	387	9.5	71.8
	Manyoni DC	8,158	3	5.7	36.9
	Mkalama DC	1,345	5	1.1	8.3
	Singida DC	349	53	0.3	1.6
	Singida MC	2,706	0	1.8	15.8
<b>Total</b>		<b>29,858</b>	<b>570</b>	<b>3.0</b>	<b>19.2</b>
Songwe	Ileje DC	1,271	4	1.5	9.7
	Mbozi DC	1,535	79	0.9	3.2
	Momba DC	12,234	407	16.2	48.9
	Songwe DC	8,261	756	16.0	57.1
	Tunduma TC	869	77	2.0	7.1
<b>Total</b>		<b>24,170</b>	<b>1,323</b>	<b>5.7</b>	<b>21.5</b>
Tabora	Igunga DC	21,189	1,702	9.5	51.6
	Kaliua DC	50,952	4,428	29.7	109.3
	Nzega DC	39,092	7,252	26.5	98.6
	Nzega TC	9,862	339	33.0	124.6
	Sikonge DC	49,664	2,588	27.6	250.6
	Tabora MC	47,879	1,544	18.2	198.2
	Urambo DC	37,613	1,500	26.3	170.0
	Uyui DC	46,882	13,520	29.2	128.8
	<b>Total</b>		<b>303,133</b>	<b>32,873</b>	<b>23.0</b>
Tanga	Bumbuli DC	2,621	0	2.3	15.1
	Handeni DC	91,733	5,420	39.8	294.3
	Handeni TC	12,820	1,764	21.2	154.6
	Kilindi DC	39,705	1,230	26.2	135.4
	Korogwe DC	14,147	767	8.6	57.2
	Korogwe TC	7,150	4	8.3	92.1
	Lushoto DC	2,848	448	2.1	9.2
	Mkinga DC	18,583	673	15.5	147.0
	Muheza DC	55,823	650	21.5	261.5
	Pangani DC	14,265	72	16.8	239.2
	Tanga CC	25,328	1,341	4.7	91.9
<b>Total</b>		<b>285,023</b>	<b>12,369</b>	<b>14.6</b>	<b>129.6</b>
<b>Grand Total</b>		<b>5,347,258</b>	<b>246,314</b>	<b>14.9</b>	<b>110.8</b>