

## ***0.a. Goal***

3 GUARANTEE ACCESS TO QUALITY HEALTH AND PROMOTE WELFARE FOR ALL

## ***0.b. Target***

3.3 By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases, and combat hepatitis, waterborne diseases, and other communicable diseases

## ***0.c. Indicator***

3.3.3 Incidence of malaria per 1,000 inhabitants

## ***0.d. Series***

New cases of malaria per 1,000 people at risk each year in number

## ***0.e. Metadata update***

7/10/2020

## ***0.f. Related indicators***

No indicators related to 0679c9a6a6d43z0

## ***1.a. Organisation***

Ministry of Health

## ***1.b. Contact person(s)***

Cesarino Tivane and Nelita Nassone

## ***1.c. Contact organisation unit***

Monitoring and Evaluation Department, Planning and Cooperation Directorate

## ***1.d. Contact person function***

Monitoring and Evaluation Technicians

## ***1.e. Contact phone***

+258 849007628; +258 846630589; +258847144676

### ***1.f. Contact mail***

[tivanecesarino@gmail.com](mailto:tivanecesarino@gmail.com); [nelianasson@gmail.com](mailto:nelianasson@gmail.com); muluana2002 @gmail.com

### ***1.g. Contact email***

[tivanecesarino@gmail.com](mailto:tivanecesarino@gmail.com); [nelianasson@gmail.com](mailto:nelianasson@gmail.com); muluana2002 @gmail.com

## ***2.a. Definition and concepts***

The incidence of malaria is defined as the number of new cases of malaria per 1,000 people at risk each year.

Case of malaria is defined as the occurrence of malaria infection in a person whose presence of malaria parasites in the blood has been confirmed by a diagnostic test. The population considered is the population at risk for the disease.

## ***2.b. Unit of measure***

Number

## ***3.a. Data sources***

MISAU, administrative records

## ***3.b. Data collection method***

Data collected from the daily record books of consultations in health facilities in the country

## ***3.c. Data collection calendar***

Data collected, daily throughout the year

## ***3.d. Data release calendar***

Monthly information is published at MISAU level, until the 20th of each month

## ***3.e. Data providers***

Ministry of Health

## ***3.f. Data compilers***

### ***3.g. Institutional mandate***

Under Law 7/96, which defines the general bases of the National Statistical System, the National Statistics Institute (INE), according to the Order published in the Boletim da República No. 39/2000, Series I, of 27 September 2000, officially delegates the Directorate of Planning and Cooperation (DPC), of the Ministry of Health, the publication and dissemination of the official statistical information of the Health Sector, in Mozambique.

### ***4.a. Rationale***

Measure trends in malaria morbidity and identify places where the risk of disease is greatest. With this information, the Malaria program can respond to unusual trends, such as epidemics, and direct resources to the most needy populations

### ***4.b. Comment and limitations***

Estimated incidence may differ from reported incidence

### ***4.c. Method of computation***

The incidence of malaria (1) is expressed as the number of new cases per 100,000 inhabitants per year, the total risk proportion being estimated by the country's National Malaria Control Program

### ***4.d. Validation***

The Health Units fill out, approve the monthly summaries to the district Health services, which in turn, review, analyze, approve and launch the Health Information, Monitoring and Evaluation System (SISMA).

The Provincial Directorate of Health monitors the launch, analyzes and discusses the data released at SISMA.

The Planning and Cooperation Department analyzes and uses the data to produce the indicators.

### ***4.h. Methods and guidance available to countries for the compilation of the data at the national level***

The incidence of malaria (1) is expressed as the number of new cases per 100,000 inhabitants per year, the population of a country being derived from projections made by the UN Population Division and the total proportion of risk estimated by the National Control Program of a country's Malaria. More specifically, the country estimates what is the high-risk ratio (H) and what is the low-risk ratio (L) and the total population at risk is estimated as Population x (H + L).

The total number of new cases, T, is estimated based on the number of malaria cases reported by the Ministry of Health, which is adjusted to take into account (i) lack of coverage of notification systems (ii) patients seeking treatment in the private sector, those who do self-medication or who do not seek

treatment; and (iii) excessive diagnostic potential due to the lack of laboratory confirmation of the cases.

The procedure, described in the 2009 World Malaria Report (2), combines data reported by NMCPs (reported cases, reporting perfection / integrity and probability that cases are positive parasites) with data obtained from representative household surveys at national level on the use of health services. Briefly,

Where:

a = are confirmed cases of malaria in the public sector

b = suspected cases tested

c = are presumed cases (not tested, but treated as malaria)

d = reflects perfection / integrity of reporting

e = is the positivity rate of the test (positive fraction of malaria) =  $a / b$

f = are cases in the public sector, calculated by  $(a + (c \times e)) / d$

g = is the fraction that seeks treatment in the public sector

h = is the fraction that seeks treatment in the private sector

i = is the fraction that does not seek treatment, calculated by  $(1 - g - h) / 2$

j = are cases in the private sector, calculated by  $f \times h / g$

k = are non-private and non-public cases, calculated by  $f \times i / g$

T = is the total of cases, calculated by  $f + j + k$ .

To estimate the uncertainty around the number of cases, the test positivity rate was assumed to have a normal distribution centered on the value of the test positivity rate and the standard deviation defined as  $0.244 \times \text{Test positivity rate}^{0.5547}$  and truncated to be in the range 0-1. The perfection / integrity of the reports was assumed to have one of three distributions, depending on the range or value reported by the NMCP.

If the range was greater than 80%, it was assumed that the distribution was triangular, with limits of 0.8 and 1 and the peak at 0.8. If the interval is greater than 50%, the distribution was assumed to be rectangular, with limits of 0.5 and 0.8. Finally, if the interval was less than 50%, the distribution is assumed to be triangular, with limits of 0 and 0.5 and the peak at 0.5 (3).

If the perfection / integrity of the report was reported with a value greater than 80%, a beta distribution is assumed with an average value of the reported value (maximum 95%) and confidence intervals (CIs) of 5% around the average value. It was assumed that the proportions of children for whom care was sought in the private and public sectors had a beta distribution, with the mean value being the estimated value in the survey and the standard deviation calculated in the estimated 95% confidence interval range (IC) divided by 4.

It was assumed that the proportion of children for whom they did not seek care has a rectangular distribution, with the lower limit 0 and the upper limit calculated at 1 minus the proportion that sought care in the public or private sector.

## 4.i. Quality management

Indicators from various national and global guiding documents have been mapped and incorporated into a single framework of sector indicators to facilitate monitoring and evaluation of the performance and commitments of government and cooperation partners. At the same time, in the scope of strengthening the information system, the process of establishing interoperability between information systems in the sector is underway with a view to maximizing production, fluidity, availability, accessibility, visibility, analysis of global information data for the decision making.

#### ***4.j. Quality assurance***

To ensure quality assurance, the application “OMS Data Quality Framework” of the Information System for Health, Monitoring and Evaluation (SIS-MA) is used to assess data quality in 4 dimensions: Integrity and completeness of reports, Internal data consistency, External data consistency and Consistency of population estimates.

#### ***4.k. Quality assessment***

External data quality assessments are routinely performed, integrating mixed teams (program, monitoring and evaluation department, health information department and external evaluators) where data consistency is observed from the health unit level to the central level . In these evaluations, there are standard quality measuring instruments with established scores.

### ***5. Data availability and disaggregation***

Data available from 2015 to 2019. Data disaggregated by Province

### ***6. Comparability/deviation from international standards***

There is no difference, the calculation methodology and definitions used are global

### ***7. References and Documentation***

MISAU, Annual Health Sector Balance Sheet Reports