

different mosquito behaviours.

- Determine the impact (prevalence and incidence of malaria infection at the community level) of reactive IRS in areas where *P. vivax* is transmitted.
- Investigate the optimal approach to delimiting the target area for implementation of reactive IRS around an index case.
- Determine the optimal time interval between case detection and reactive IRS.
- Determine whether additional rounds of reactive IRS should be repeated in the same households to prevent subsequent generations of transmission.
- Determine the benefit and acceptability of switching from IRS to reactive IRS or adding reactive IRS on top of proactive IRS.

7. Surveillance

Surveillance is “the continuous and systematic collection, analysis and interpretation of disease-specific data, and the use of that data in the planning, implementation and evaluation of public health practice” [300].

Pillar 3 of the [Global technical strategy for malaria 2016–2030](#) [4] is to transform malaria surveillance into a key intervention in all malaria-endemic countries and in those countries that have eliminated malaria but remain susceptible to re-establishment of transmission.

Although surveillance guidance is not evaluated using the GRADE framework, surveillance forms is the basis of operational activities in settings at any level of transmission and is therefore included in these Guidelines for reference. The objective of surveillance is to support reduction of the burden of malaria, eliminate the disease and prevent its re-establishment. In settings where transmission remains relatively high and the aim of national programmes is to reduce the burden of morbidity and mortality, malaria surveillance is often integrated into broader routine health information systems to provide data for overall analysis of trends, stratification and planning of resource allocation. In settings where malaria is being eliminated, the objectives of surveillance are to identify, investigate and eliminate foci of continuing transmission, prevent and cure infections, and confirm elimination. After elimination has been achieved, the role of surveillance becomes that of preventing re-establishment of malaria.

A malaria surveillance system comprises the people, procedures, tools and structures necessary to generate information on malaria cases and deaths. The information is used for planning, implementing, monitoring and evaluating malaria programmes. An effective malaria surveillance system enables programme managers to:

- identify and target areas and population groups most severely affected by malaria, to deliver the necessary interventions effectively and to advocate for resources;
- regularly assess the impact of intervention measures and progress in reducing the disease burden and help countries to decide whether adjustments or combinations of interventions are required to further reduce transmission;
 - detect and respond to epidemics in a timely way;
 - provide relevant information for certification of elimination; and
 - monitor whether the re-establishment of transmission has occurred and, if so, guide the response.
- Surveillance systems are increasingly supported by digital platforms, including DHIS2, georeferenced master facility lists, and data quality assessments that strengthen trust in data and decision-making. Integration across clinical, laboratory, entomological, and climate-related systems, enables programmes to design targeted responses, monitor drug and insecticide resistance, and anticipate risks such as urban transmission and climate-driven outbreaks.
- With the [Malaria Surveillance Assessment Toolkit](#), WHO offers standardized tools to evaluate the performance of malaria surveillance systems, highlighting strengths and gaps while identifying areas for improvement to enhance data quality and use for informed decision-making.
- WHO has published an online course, [Malaria: Harnessing the power of routine health facility data](#), to strengthen the capacity of programmes in maintaining and using surveillance data at health facility focusing on the concept of disease surveillance, malaria surveillance processes, data quality, malaria data and interventions analysis, interpretation and use.

Please refer to the WHO [Malaria surveillance, monitoring & evaluation: a reference manual](#) [30].

Subnational stratification

WHO has made guidance available on the strategic use of data to inform subnational stratification (see chapter 2 of [WHO technical brief for countries preparing malaria funding requests for the Global Fund \(2020-2022\)](#)) [301]. This guidance was developed in recognition of the increasing heterogeneity of malaria risk within countries as malaria control improves and the need to use problem-solving approaches to identify appropriate, context-specific packages of interventions to target different sub- populations. For example, case management should be accessible wherever there is a possibility of malaria cases seeking treatment. How case management is delivered will vary according to factors such as health-seeking behaviour, the accessibility and functioning of the public health infrastructure, availability of