

Maintaining Essential Services for Malaria in Low-Resource Countries

Accessible version: <https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/maintain-essential-services-malaria.html>

In 2019, more than 229 million persons developed malaria, leading to approximately 409,000 deaths worldwide. Over 95% of these deaths occurred in the World Health Organization (WHO) African Region [1], where malaria is a leading cause of death. While the past decade has seen a reduction in malaria incidence, particularly in sub-Saharan Africa, to maintain these gains, countries must focus on malaria control in addition to addressing the coronavirus disease 2019 (COVID-19) pandemic. [Modelling](#) analysis by WHO and partners suggests that if essential malaria interventions are greatly disrupted due to COVID-19 challenges, the number of malaria cases will significantly increase, and death rates could double [2]. Ministries of Health and National Malaria Control Programs (NMCPs) should implement malaria prevention and treatment activities in a manner that also protects patients, health care providers, and public health officials from COVID-19. Below are key considerations for continuing essential malaria prevention and control activities safely and effectively. These should supplement country Ministry of Health guidance.

Malaria/COVID-19 National Strategy

Because both COVID-19 and malaria may cause fever, planning for continuous availability of rapid diagnostic testing (RDTs) in healthcare settings will help distinguish between the two diseases and allow better understanding of the burden of each and whether there are interactions between them [3]. National COVID-19 Incident Management Teams should include a representative from the National Malaria Control Program to support decision-making that could impact the implementation of malaria prevention and control programs.

Insecticide-Treated Nets (ITNs)

National Malaria Control Programs should ensure continued access to ITNs and proper use of ITNs for populations at risk [4]. If mass ITN distribution campaigns cannot be implemented as planned, consider prioritizing areas with highest malaria burden. In implementing campaigns, avoid bringing together large groups of people, consider daily health checks for distribution teams, and allow for physical distancing of distributors and community members while adhering to local safety protocols [5]. If previously planned ITN mass distribution campaigns are not feasible or may be delayed, consider expanding routine and continuous distribution channels.

Indoor Residual Spraying (IRS)

Countries may continue with planned targeted IRS in communities by maintaining physical distancing with home-owners, performing daily health checks for spray teams, and respecting local protocols for both sprayers and household safety [5]. Adjust spray team operations to reduce the number of staff transported to the field in a single motor vehicle.

Entomological Monitoring

Essential routine entomological monitoring activities, such as vector bionomics, IRS spray quality and residual efficacy after initial quality assessment, and ITN durability monitoring may be conducted with NMCP approval if COVID-19 precautions are followed. This includes minimizing the number of people involved, conducting activities outdoors when possible, maintaining physical distancing, providing [masks](#) for workers, ensuring availability of appropriate personal protective equipment ([PPE](#)) and providing cleaning/ disinfectant supplies for field and laboratory entomological equipment. If the use of mouth aspirators is required, ensure aspirators are fitted with a [HEPA filter](#) [5].



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Case Management

In 2020, a WHO Essential Health Service pulse survey found that approximately half of countries reported partial to moderate disruptions in antenatal care (ANC) services and in malaria diagnosis and treatment [6]. It is therefore important that countries continue to encourage the general population to seek care early for fever and suspected malaria, particularly for children under age 5 and pregnant women, who are most at risk for adverse consequences of malaria, while taking into consideration physical distancing and COVID-19 policies and guidelines:

- Fever and fatigue are symptoms of [malaria](#) and [COVID-19](#). Malaria diagnosis, using RDTs or microscopy, is an essential service for individuals suspected of having malaria.
 - A positive test for malaria does not exclude co-infection with COVID-19, thus healthcare providers should consider testing for both malaria and COVID-19 (or any other relevant illnesses) whenever possible.
 - When testing for both diseases is not possible, healthcare providers should consider recommending that the individual [isolate for possible COVID-19](#) based on the current guidance and level of suspicion.
- Healthcare providers should wear appropriate personal protective equipment (PPE) and adhere to infection prevention and control (IPC) guidelines when caring for each patient [5].
- Healthcare providers should consider having patients wear a [face mask](#) for source control to prevent the spread of COVID-19.
- When treating confirmed malaria cases, healthcare providers should continue to follow national malaria case management guidelines.

Exceptional Measures for Malaria Control

In certain situations, [presumptive malaria treatment](#) for febrile illness may be required to minimize increased malaria illness and death while preventing COVID-19 transmission [5, 7]. These situations include 1) ongoing local COVID-19 transmission, 2) RDT stockouts or 3) lack of appropriate personal protective equipment (PPE) to protect healthcare workers.

- Novel strategies, such as plexiglass shields, may be considered to minimize healthcare worker exposure and preserve PPE, allowing malaria testing to continue.
- Presumptive treatment will increase consumption of antimalarials. If RDTs or PPE are limited, health care staff should consider targeting presumptive therapy to children under 5 years old. Children under the age of 5 are at greatest risk of severe malaria and lowest risk of symptomatic COVID-19. Presumptive treatment could be extended to school age children, who have the highest burden of parasitemia with testing for malaria continuing as long as possible for individuals over 15 years of age. These individuals are less likely to develop fever as a result of malaria and more likely to have symptomatic illness with COVID-19.
- In situations where the burden of both malaria and COVID-19 are high, disruptions to the health system could lead to dramatic increases in malaria morbidity and mortality, and programs may want to consider implementing [mass drug administration](#), as was done during the Ebola epidemic, to reduce the burden of malaria as well as the burden on facilities [2, 5]. The effects of mass drug administrations are transient, and for maximum impact, multiple rounds may be required.

These approaches should only be applied after carefully evaluating the public health situation in-country (both with respect to malaria and COVID-19, as well as availability of antimalarial drugs, PPE, and testing) and should always follow national COVID-19 guidance.

Preventive Therapy

Countries should strongly consider [continuing the delivery of planned preventive services](#) that target specific populations. These services can include seasonal malaria chemoprevention (SMC) for young children, intermittent preventive treatment in infants (IPTi), and intermittent preventive treatment during pregnancy (IPTp) in currently recommended areas [7]. Healthcare workers should follow the national guidelines for [prevention](#) and containment of COVID-19 for in-person healthcare service delivery [8].

Commodity Supply Chain

Due to the COVID-19 pandemic, countries have seen delays in the production and supply of malaria commodities, most notably rapid diagnostic tests for malaria (RDTs) and antimalarial treatments. Costs of malaria-related supplies have also increased. Because of these supply chain issues, countries may need to modify the implementation of malaria control activities. Malaria program staff should proactively plan for potential changes in commodity availability, unreliable logistics systems, increased lead time for procurements, and increased demand for RDTs and antimalarial drugs. To avoid facility level stock-outs, countries should consider allowing health care facilities to maintain 1 to 2 month longer supply stock than usual.

Information Systems

High-quality, timely routine health information — such as numbers of outpatient consultations, fevers, and malaria cases — is critical to monitor both malaria and COVID-19 illness in the population. However, reporting to health management information systems could be impacted by COVID-19 due to staff and resource constraints and competing priorities. To help ensure timely availability of surveillance data for decision-making, countries can consider the following:

- Prioritize staff time for surveillance activities.
- Proactively ensure staff have adequate supplies of reporting materials.
- Create contingency plans for data transport and entry.

Countries may consider adapting Integrated Disease Surveillance and Response (IDSR) reporting to include COVID-19 suspect cases, to provide weekly data.

Communications and Community Engagement

Countries should consider continuing efforts to actively engage social and behavior change experts and community leaders to promote community behaviors that will prevent malaria transmission and illness and encourage early treatment-seeking behavior [9]. Community behaviors, especially around care-seeking, may change due to COVID-19 concerns. Ensure that people do not receive potentially contradictory messages regarding care-seeking behavior for febrile illness. For example, some COVID-19 messages encourage people with fever and otherwise mild illness to stay home, but if a person has malaria, it is critical that they seek care early. Therefore, messages to people who may have malaria must be clear and tailored to them:

- In malaria-endemic settings, it is critical to maintain access to malaria testing and to promote testing early in case of fever.
- Messages should address the population's concerns about the safety of visiting a health facility during the pandemic. This can help ensure that community members seek health care for suspected malaria despite concerns about COVID-19.

These recommendations must be evaluated in each individual country's context, but it is important that all countries recognize the need to continue to implement malaria interventions to prevent additional malaria illnesses and deaths during the COVID-19 pandemic.

References

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