



Government of Nepal  
Ministry of Health and Population  
Department of Health Services  
**EPIDEMIOLOGY AND DISEASE CONTROL DIVISION**

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Ref. No:



Pachali, Teku  
Kathmandu, Nepal

# Updated Interim guidance on Continuing malaria services during COVID-19 pandemic

May 2021

EDCD

Dinesh

Director





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**Background**

Globally, 229 million malaria case and 409,000 malaria attributed deaths were estimated in 2019. Nepal reported 427 malaria cases in 2020, the imported cases constituted 83 % and *P. vivax* constituted 90% of the total case. Since the onset of COVID-19 pandemic last year, 149,368,127 COVID -19 cases and 3,149,698 deaths have been reported globally and 307,925 COVID -19 cases and 3,194 deaths has been reported in the country as of Apr 28,2021.

The first case of COVID-19 in Nepal was reported on January 2020 and EDCD released the interim malaria guidelines on continuing malaria services on April 2020 at the onset of the lock down which prohibited personnel and vehicle movement. Nepal slowed down the first wave of the COVID-19 pandemic during 2020 but by Apr, 2021, the Covid -19 situation in Nepal has worsened and the second wave of Covid -19 has started and it is likely to be much more complex than the first wave. In response to the worsening second wave of Covid -19 pandemic in Nepal, more and more local bodies and districts have recommended lock down in their areas, which is likely to cause disruptions in malaria testing & treatment, surveillance and continuing malaria services for some considerable time in the days ahead. This limitation in mobility will impact people access to health care, people will be fearful to seek care in health facility, and health care system will be overburdened due to Covid -19 cases.

Even prior to the COVID-19 pandemic, global targets to achieve reduction in the number of malaria cases and decrease the malaria deaths were off-track. The service disruption caused by the COVID -19 pandemic is further expected to impact the malaria program globally based on service disruptions of malaria interventions. Thus, it is essential that malaria services are continued even during the COVID-19 pandemic. The NMSP envisions of malaria elimination in the country in 2025. The National Malaria Program is committed to continue malaria services and respond to the COVID-19 pandemic.

**Malaria and COVID-19**

The similarities between the malaria illness and COVID-19 illness (fever, headache, body aches and weakness) possess a challenge in case finding and testing. Malaria can coexist with many other infections. Consequently, confirming malaria infection with a diagnostic test does not rule out the possibility that the patient might also be suffering from COVID-19; similarly, testing positive for COVID-19 does not mean that the individual does not also have malaria infection. The table below highlights the similarities and differences in clinical presentation of both illnesses.

**Table 1: Salient Features of COVID-19 and Malaria**

Features	COVID – 19	Malaria
Disease	Respiratory	Vector Borne
Pathogen	Virus	Parasite
Transmission	Person to person through Respiratory droplets, sometimes direct contact	Bites of infected female anopheles mosquitoes
Extrinsic Incubation Period	NA	10 days - 30 days (time for development in mosquitoes)
Incubation Period	2 – 14 days	7 days – 15 days or longer
Onset of disease	Acute	Acute
Symptoms – Fever	Usual	Usual, may be chills & rigor
Cough	Common, sore throat	Sometimes
Others	Tiredness (common), (GIT): diarrhea, vomiting & abdominal Pain – may be seen Loss of taste & smell, conjunctivitis, skin rashes, discoloration of fingers and toes	Tiredness (febrile period), (GIT): diarrhea, vomiting & abdominal Pain - may be seen

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*[Official stamp and signature of Director, Department of Health Services, Government of Nepal, Ministry of Health & Population, Teku, Kathmandu]*



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Features	COVID – 19	Malaria
Severe cases - Respiratory	Difficulty in breathing: Pneumonia, ARDS	Difficulty in breathing: Acute Pulmonary Oedema, ARDS
Severe Cases - Shock, acute kidney injury, hypercoagulable state, DIC, multiorgan failure.	Seen; hypercoagulable state	Seen; Bleeding disorder
Prevention	Vaccines available. Maintain at least 2 m distance, mask and frequent hand washing.	Vaccines for <i>P. falciparum</i> in few African countries. Use of LLINs (bed nets) and indoor residual sprays. Full clothing during outdoor work, stays
Treatment	Mostly Supportive. Effective drugs being explored in trails.	Effective anti- malarial drugs: Chloroquine (3 days) and primaquine (14 days) for <i>P. vivax</i> ACT (3days) and primaquine (1 day) for <i>P. falciparum</i>
Sequelae	Course of disease evolving – long term effects - neurological, etc. seen	Neurological sequelae and cognitive and behavioral difficulties may be seen in children recovering from severe malaria.

**Rationale for updating the Interim Malaria Guidelines**

An assessment of COVID -19 pandemic on malaria program suggests a significant impact on malaria diagnosis, treatment, and continuing malaria services. There was around 40 % mean reduction in malaria testing during the 10 months period between Apr 2020 – Jan 2021 and the testing percentage reduction was more pronounced during the peak malaria season with around 23 % reduction in May 2020 to over 71% reduction in August 2020 as compared to the same months last year. Case based investigations and foci investigations and response and distribution of long-lasting insecticidal nets (LLINs) had to be rescheduled.

The “catch-up plan” was also conducted in the high-risk districts to mitigate the low testing at the health facility and for the early detection of malaria cases at the community.

Building on the experience and the lessons learnt during the first wave of COVID -19 pandemic in 2020, an updated Interim Malaria Guidelines is prepared to mitigate the impacts on malaria diagnosis, treatment, and continuing malaria services while maintaining safe environment for patients, clients and staff, especially in the current context of lock down and COVID-19 pandemic.

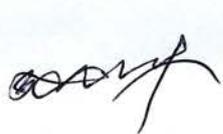
This document will be updated as the situation changes.

**Malaria Service Delivery during COVID-19**

This section will guide the health-workers to take preventive measures while providing malaria service at the health facility and the community and to make changes in the malaria interventions during the current COVID-19 pandemic.

  
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**Table 2: Malaria Service modality during COVID-19 Pandemic**

Services	Setting	Service Delivery and protective measures
<ul style="list-style-type: none"> <li>▪ Screening fever cases or suspected malaria cases.</li> <li>▪ Screening returnees who are tested for COVID-19.</li> </ul>	Point of Entry/Holding Center/quarantine	<ul style="list-style-type: none"> <li>▪ Use Personal protection during the procedure (Mask, gloves, gowns).</li> <li>▪ Patient must wear mask.</li> <li>▪ Avoid close face to face contact as far as possible- ask patient to look to other side while pricking.</li> <li>▪ Maintain safe distance (at least 2 m) as far as possible.</li> <li>▪ Malaria RDTs and designated health-worker for malaria testing needs to be ensured.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Screening Fever cases</li> </ul>	Health facility	<ul style="list-style-type: none"> <li>▪ Conduct fever clinic.</li> <li>▪ Use Personal protection (Mask, gloves, gowns).</li> <li>▪ Patient must wear mask.</li> <li>▪ Avoid close face to face contact as far as possible- ask patient to look to other side while pricking.</li> <li>▪ Maintain safe distance (at least 2 m) as far as possible.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Physical examinations and history taking/ finger prick for RDTs/ microscopy/ and providing counselling, medical supplies.</li> </ul>	Health facility	<ul style="list-style-type: none"> <li>▪ Use Personal protection during the procedure (Mask, gloves, gowns).</li> <li>▪ Patient must wear mask.</li> <li>▪ Avoid close face to face contact as far as possible- ask patient to look to other side while pricking.</li> <li>▪ Maintain safe distance (at least 2 m) as far as possible.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Case Investigation – Household visits and community ACD</li> </ul>	Community	<ul style="list-style-type: none"> <li>▪ House-hold screening/interview can be done in open well-ventilated space or outside whenever possible.</li> <li>▪ ACD for household members to be conducted for all cases.</li> <li>▪ House to house visit and ACD in the surrounding houses to be conducted when feasible.</li> <li>▪ Provide service to individual not in group.</li> <li>▪ All should wear mask health-workers and community members).</li> <li>▪ Personal protection (Mask, gloves, gowns).</li> <li>▪ Maintain distance of at least 2 m during the activity.</li> <li>▪ Avoid close face to face contact as far as possible- ask patient to look to other side while finger pricking.</li> <li>▪ Avoid and refrain from collecting people in a place.</li> </ul>
<ul style="list-style-type: none"> <li>▪ New focus or foci investigation</li> </ul>	Community	<ul style="list-style-type: none"> <li>▪ Extrapolate data from similar eco-environment and use it to classify the focus – further confirmation when situation stabilizes.</li> <li>▪ If eco-environment extrapolation not possible then conduct minimal focus investigation – vector collection and identification &amp; finding breeding sites.</li> <li>▪ Investigation team to be deployed based on local situation.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Vector Control Response for local transmission/ outbreak</li> </ul>	Community	<ul style="list-style-type: none"> <li>▪ LLINs distribution in groups of 10 HHs at a time following national safety protocol for COVID 19 (1 HH = 1 member to collect the nets)</li> <li>▪ Provide sanitizers at the distribution sites.</li> </ul>

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Services	Setting	Service Delivery and protective measures
		<ul style="list-style-type: none"> <li>▪ Personal protection (Mask, gloves, gowns).</li> <li>▪ IRS can be conducted following national safety protocol for COVID 19.</li> <li>▪ Face mask (N95) during IRS operation</li> <li>▪ Avoid and refrain from collecting people in a place.</li> <li>▪ Request support from local security agency.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Monitor patient for compliance or adverse events</li> </ul>	Mobile device	<ul style="list-style-type: none"> <li>▪ Follow up via mobile contact on stipulated days of treatment as per NMTP (days 3, 7, &amp; 14 of treatment)</li> </ul>
<ul style="list-style-type: none"> <li>▪ Continuous LLINs distribution</li> </ul>		<ul style="list-style-type: none"> <li>▪ LLINs through ANC should be continued.</li> <li>▪ Mask, 2 m distance, and hand washing to be prioritized at all time.</li> </ul>

**Key priorities areas of focus during the COVID-19 pandemic**

The following key structures should be strengthened especially during the COVID-19 pandemic and lockdown.

**1. Malaria Case Surveillance**

- Local Body and SMCs identify hot spots ( active foci) and potential hot spots due to influx of returnees from malaria endemic country, or across the border due to COVID-19 pandemic.
- The focal person of the local HF & the local body, and SMCs will closely monitor the situation in the identified wards by keeping in mobile contact with the FCHVs of the ward.
- FCHVs in coordination with local leaders will advocate for early health care seeking behaviors and monitor treatment adherence.
- National Malaria Program (NMP) will conduct monthly virtual meeting with provincial team to review the status of malaria situation, critical issues and continuing services.
- NMP, Provincial and local level health authority will monitor any unusual changes in malaria incidence, timeliness of reporting from health facilities, testing and treatment for malaria and trends in febrile illness and hospitalization.

**2. Communication, community engagement and advocacy:**

- Deliver and support good public health practices among communities, households and individuals.
- The use of social networking platforms, e.g., SMS messages, virtual meeting should be prioritized and explored.
- Highlight the policy makers at all level why the malaria needs special attention. The malaria is at the historically low level with target of elimination by 2025. Scale back of malaria interventions or failure to mitigate the impact of COVID-19 on the malaria program could offset the progress that the country has achieved.

**3. Malaria commodities:**

- Availability of malaria commodities (RDT, drugs, logistics) needs to be ensured at all levels.
- EDCD will also supply malaria RDTs to the all the quarantine and holding centers for malaria testing of the suspected cases.

**4. Coordination**

Technical and administrative collaboration are key to providing quality malaria service especially during the covid-19 pandemic. Following activities will be prioritized:

- Central Malaria coordination team (ANNEX 1) meeting every 2 weeks to discuss the current situation.
- Recommend weekly meetings at provincial and local level to discuss the malaria services.
- Technical supervision, monitoring and capacity building program should be conducted when possible following national/local rule and maintaining standard COVID-19 precaution and prevention.
- **EDCD focal point** for malaria to be notified of any issues in malaria at the earliest.

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**ANNEX 1: Central Malaria coordination team**

Chair, Director, EDCCD	
Focal Person to coordinate with MOHP, HEOC and NEOC and partners	Section Chief/NTDs & VBDs
Focal person to coordinate with province and local level	Section Chief/NTDs & VBDs
Focal person to coordinate with media	Section Chief/NTDs & VBDs)/ Health Administrator & VCI
Data management focal person	Health Administrator & VCI & M & E (SCI)
Logistic focal person	Health Administrator & VCI & PSM (SCI)
Laboratory focal person	Lab Officer & Lab Specialist (SCI)
Technical expert	SCI & WHO

**ANNEX 2: Provincial contact person for malaria**

Province	Focal Person	Supporting
Province 1	Mr. Aditya Shakya	Dr. Nitesh Mishra (9869416401)
Province 2	Dr. Sanjaya Yadav (9844310329)	Dr. Sanjaya Acharya (9869416402)
Bagmati Province	Mr. Ratneshore Sah (9814867038)	
Gandaki	Mr. Laxman Basyaula (9856027166)	Dr. Neema lama (9869416406)
Lumbini Province (except Banke, Bardiya, Dang)	Mr. Diwakar Maharjan (9857030270)	Dr. Sanjeev Raj Roy (9869416404)
Lumbini Province (Banke, Bardiya, Dang)		Dr. Madan Koirala (9869416404)
Karnali Province	Mr. Shyam Acharya (9858047476)	Dr. Madan Koirala (9869416404)
Sudharpachim Province	Mr. Hem Raj Joshi (9848720998)	Dr. Manoj Pandey (9869416405)

