UNICEF guidance for adaptations to community case management of childhood illness in the context of COVID-19 to ensure uninterrupted provision of life-saving services

Version 1 (5 April 2020)

This document is meant for programme managers at national and subnational level, outlining basic considerations for how guidelines and protocols for community case management of childhood illness might have to be adapted in the context of COVID-19. It should be applied in the context of local epidemiology and transmission patterns as well as national guidelines and protocols for containment of COVID-19.

Key recommendations:

- *The main principle is to maintain as much as possible equitable, quality community case management for childhood illnesses (CCM) while minimizing the risk of COVID-19 transmission in the context of patient care and to protect health workers.*
- *CCM provides essential life-saving services and as mechanisms and protocols are simplified and aligned to the COVID-19 response, this level of the health-care pyramid needs to be given due priority*
- *Local epidemiology and transmission patterns as well as regulations and containment measures by national and local authorities will determine the level of adaptation needed.*
- *Timely care-seeking should be emphasized.* ***The symptoms of COVID-19 are non-specific and similar to those of illnesses addressed in standard CCM protocols, including cough, fever, diarrhea****. Co-infections can occur and double measures (treatment for common childhood illness combined with care advice and containment measures for COVID-19) are recommended.*
- *In settings with no or sporadic (closely localized and contained) cases of COVID-19, existing CCM protocols should be adhered to without changes or modifications, unless containment measures such as physical distancing or lockdowns are put in place. The COVID-19 transmission situation should be actively monitored, infection control measures strengthened and modifications to the protocol prepared.*
- *In settings with clusters or community transmission, risk assessment of all children and caregivers for COVID-19 combined with 'no-touch' or 'low touch' CCM that includes guidance for home care and referral of children with suspected COVID-19 should be initiated.*
- *Additional protective measures for CHWs are recommended including PPE (at a minimum gloves and ideally gloves and a face mask) and increased access to hand sanitation and reminders on good respiratory hygiene*

Background

The global pandemic of COVID-19, a disease caused by a novel coronavirus, SARS-CoV2, requires precautionary measures and adaptations to health service delivery worldwide.

As trusted members of the community, Community Health Workers (CHWs) have an important role to play ensuring equitable access and providing lifesaving treatments for the major causes of illness and death in children, namely malaria, pneumonia, diarrhea and acute malnutrition (Community Case Management,CCM). In addition, a keystone of CHWs' work includes supporting caregivers and families to make decisions on appropriate and timely care-seeking, adhering to public health advice, and limiting direct and indirect mortality.

In the context of the current pandemic, CHWs will likely also be called upon to provide other valuable services at community level to reduce and stop transmission of COVID-19 including surveillance and contact tracing, referral of suspected COVID-19 cases (following national protocols), provision of key messages to communities and families regarding care seeking, infection, prevention and control, and home management for mild cases of COVID-19.[1]

This document provides basic guidance for the adaptation of policies and protocols for community case management of childhood illnesses and conditions with the aim of **a) protecting community health workers, b) maintaining the community's trust in the health system, and c) ensuring uninterrupted continuation of the provision of essential life-saving services**[2] for children through CCM, given that malaria[3],[4], pneumonia[5] and diarrhea[6], as well as under-nutrition[7], will continue to be the leading causes of death among children under five but, in certain settings, COVID-19 might be an important differential diagnosis.

COVID-19 in children

The clinical presentation of COVID-19 in children has to be taken into account when adapting CCM guidelines and protocols in areas with localized clusters or widespread community transmission. According to early and limited data, the majority of children with COVID-19 have asymptomatic, mild or moderate disease with the risk for more severe disease being higher in pre-school children and infants.[8]

- *The symptoms of COVID-19 are unspecific and overlap with symptoms of common childhood illnesses such as malaria, pneumonia, diarrhea.*

[1] DRAFT UNICEF Internal Guidance on Community-based Programme Support in the Context of the COVID-19 Pandemic
[2] COVID-19: Operational guidance for maintaining essential health services during an outbreak
[3] https://www.who.int/news-room/detail/25-03-2020-who-urges-countries-to-ensure-the-continuity-of-malaria-services-in-the-context-of-the-covid-19-pandemic
[4] UNICEF Malaria in Africa
[5] UNICEF.Pneumonia in Children
[6] UNICEF.Diarrhoeal disease
[7] UNICEF.Malnutrition in Children
[8] Epidemiological Characteristics of 2143 Pediatric Patients With 2019 Coronavirus Disease in China

COVID-19 symptoms

Symptoms of mild disease include unspecific signs of upper respiratory tract infection, including fever, fatigue, myalgia, cough, sore throat, runny nose, and sneezing. Some cases may have no fever, or have only digestive symptoms such as nausea, vomiting, abdominal pain and diarrhea.

Children with moderate disease present with pneumonia, frequent fever and cough, mostly dry cough, followed by productive cough , some may have wheezing, but no obvious hypoxemia such as shortness of breath. Respiratory symptoms may be accompanied by gastrointestinal symptoms such as diarrhea. Progression to severe disease with hypoxemia may happen within the course of one week.

- *In areas with community transmission all children with these symptoms might have COVID-19. In the absence of access to rapid diagnostic testing, management and containment measures should be put in place.*
- *However children might still have other illness and care-seeking and treatment of malaria, pneumonia and diarrhea should continue following local protocol*
- *A majority of children are expected to have mild disease and can be managed in the community adhering to guidance for home care of COVID-19 patients.*[9]

Planning CCM in the context of COVID-19

- *Decisions impacting the functionality of community case management should be made in concert with the appropriate Ministry programs, including active engagement from National Malaria Control and Child Health Programmes.*
- *CHWs and frontline workers should be involved in developing emergency response plans and designing and planning activities with local solutions acceptable to the community.*
- *Any changes or modifications to the CCM protocols should be guided by the epidemiological scenario and at the direction and containment measures of national and local authorities.*
- *Where in place, technology/digital solutions for training, supervision, communication/consultations between CHWs and clients should be considered in planning.*

Epidemiological context, local burden and transmission

Each country's health system context, epidemiological context and local burden of COVID-19 and national COVID-19 response plans should inform measures, considering the four epidemiological scenarios below.[10]

1. Countries with no cases (no cases);
2. Countries with one or more cases, imported or locally acquired (sporadic cases);

[9] Home care for patients with COVID-19 presenting with mild symptoms and management of their contacts

[10] Operational considerations for case management of COVID-19 in health facility and community

3. Countries experiencing cases clusters in time, geographic location, or common exposure (clusters of cases);
4. Countries experiencing large-scale outbreaks of local transmission (community transmission).

Assessments at local and regional level should inform when and where shifts or adaptations to policies and protocols may be required as the epidemiology may vary significantly within a country and not all regions may need significant policy and protocol modifications.

Due to limitations in testing capacity it is important to assume more widespread presence of COVID-19 in any decision making.

Infection prevention and control (IPC)

Based on available evidence, COVID-19 is transmitted between people through close contact and droplets (even people, including children, who are asymptomatic and people with mild disease can still spread the disease). Preventive and mitigation measures are therefore key to ensure the health and wellbeing of CHWs and the community. It is therefore important to follow recommended best practices in the prevention and control of COVID-19[11].

It is important that CHWs be included in projections for COVID-19 personal protective equipment (PPE) and CHW are appropriately trained and supported on the use of PPE[12],[13],[14] The need for, and type of, PPE recommended may vary by region, community, and the level of transmission. Although it is strongly recommended that all communities be adequately prepared with sufficient PPE, global availability of PPE is highly limited at present. CHWs will likely have less access to PPE and, as a result, CHWs may be more reluctant to provide services. Ministries of Health and partners should proactively anticipate these concerns and strategize a response empowering and enabling CHWs to continue service provision.

Basic principles for IPC by CHWs include:

- Adhere to infection prevention and control measures established by local and national authorities and guided by local epidemiology and transmission. It may not be advisable to implement a 'No Touch' policy at national scale if COVID-19 transmission is limited to certain regions in the country.
- Enable CHWs to communicate IPC measures to community members to reduce fear and stigmatization
- **Avoid any activity that attracts crowds.** Adapt community based services to ensure spatial distancing among clients (minimum 2 m)
- If CHWs conduct household visits or provide services in his/her own house, it is advisable that CHWs identify a well ventilated location outdoors for the consultation instead of entering the house and that they are provided with clear instructions on infection control. In scenarios where lockdowns are ordered CHWs might be among those people that continue to be able to access community members.
- Before, during and after each consultation, the CHWs should practice frequent and appropriate handwashing with soap and clean water or use hand sanitizer (if available and there is no soap or water).

[11] Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected

[12] Priorities for the Global COVID-19 Response: the Role of Community Health, Community Health Impact Coalition (CHIC)

[13] Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19)

[14] Advice on the use of masks in the community, during home care and in healthcare settings in the context of the novel coronavirus (COVID-19) outbreak

- Sanitation of surfaces and equipment (thermometers, respiratory timers, MUAC tape) with alcohol or soap and water. If available, consider handing out MUAC tapes to caregivers/families and instruct them in using them.
- **Triage** (screening of children, no direct contact): in the absence of PPE, maintain spatial distance of at least 2 meters, triage both caregiver and child for symptoms)[15]
- **Physical examination and performance of tests** such as malaria Rapid Diagnostic Tests (RDTs) requires PPE (at a minimum gloves, ideally gloves & mask and if available a medical mask).[16] Consult WHO guidance on the indication for use of masks to inform the decision[17].
- In the absence of PPE, consider a **'No touch policy**' (at minimum of 1 m, ideally 2m distance) that focuses on history of symptoms and clinical observation of the sick child may be considered.
- Depending on the local context, certain tasks routinely conducted by CHWs, may be shifted to the caregiver with supervision and guidance from the CHW to minimize direct contact with sick patients.
- CHWs are at increased risk of COVID-19 and therefore transmission to community members which is important in the considerations of IPC measures.

Adaptation of CCM

Settings with no cases or sporadic cases: (see flowchart Annex I)

In settings with no or sporadic (closely localized and contained) cases of COVID-19, existing CCM protocols should be adhered to without changes or modifications, unless containment measures such as physical distancing or lockdowns are put in place that may require low- or no-touch protocols. The COVID-19 transmission situation should be actively monitored and modifications to the protocol prepared. :Limited access to testing especially in rural areas and unknown cases/transmission need to be taken into account.

- ❖ CHWs, other community actors and frontline volunteers should reinforce and support early, prompt and appropriate care seeking for sick children.
- ❖ Community efforts should be intensified for adherence to IPC protocols, especially increased frequency of handwashing with soap and clean water, with priority being given to CHWs providing CCM should supplies be limited.
- ❖ CHWs should be trained on and equipped with key messages on COVID-19 to mitigate the spread of misinformation and stigmatization in their communities that might negatively impact care seeking, and to effectively communicate information on prevention measures.
- ❖ CHWs should be prepared for service delivery modifications, and receive resources to enact those modifications.
- ❖ Encourage provision of CHW services outside of the CHWs or community-member's home in a space where physical distancing is easy to enact.
- ❖ Surveillance mechanisms should be established and CHWs trained on COVID-19 case detection and reporting, early recognition of case clusters and contact tracing.

[15] Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19). Please consult WHO guidance on the indication for use of masks to inform the decision..
[16] Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19)
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Communities with localized clusters (e.g. urban centers or regional transportation hubs) or community transmission

- ***The symptoms of COVID-19 are non-specific and similar to those of illnesses addressed in standard CCM protocols****. Especially in areas with high transmission, any child presenting with cough, fever, diarrhea might have COVID-19 and/or any of the common childhood illnesses. Co-infections can occur and double measures (treatment for common childhood illness combined with care advice and containment measures for COVID-19) have to be considered.*
- *The main principle is to maintain equitable, quality case management for childhood illness while identifying children with possible COVID-19 as much as possible, and minimizing the risk of COVID-19 transmission in the context of patient care.*
- *CHWs are encouraged to work with other community actors to **maintain and encourage timely care-seeking practices** for childhood illness and maintain community trust in the CHWs ability to provide care for their children. This may also help to ease demand on health facility resources.*
- *Risk assessment/triage for COVID-19, of the child and accompanying caregiver should be added to each patient interaction.[18] (ref to flowchart in Annex)*
- *Use standard approach for diagnosis and treatment with adherence to country specific guidance on IPC and the use of PPE.*
  - *Focus on symptom history and observation with physical distancing (at least 2 m)*
  - *Reduce touching patients and consider no-touch policies only if PPE is not available*
  - *In the case of no-touch guidance: Engage the caregiver in the assessment of the child to maintain distance.*
  - *Presumptive treatment e.,g. for malaria without use of RDTs is a last resort option when the safety of patients and CHWs cannot be assured.*
- *Children with signs and symptoms of severe disease continue to require referral, some for presumed severe COVID-19. Provide CHWs with information on COVID-19 designated facilities, if established.*
- *CHWs should be enabled to initiate measures such as notification and referral if the caregiver expresses signs of illness him/herself or of other household members. The safety and care of the child needs to be secured and the child protected from stigmatization.*
- *In the event of very high COVID-19 patient loads health facilities have the potential to be overwhelmed therefore clear actions and context must be communicated for the continuation (and limits) of community- based services, including referrals, and CHWs equipped with sufficient test kits and medicines.*
- CHWs should be capacitated to reduce stigmatization of people with signs of any illness due to fear of COVID-19
- Follow up of children is encouraged as per standard protocol. If done via home visitation this should be adapted as per national protocols, adhering to containment and infection control measures. It is advisable that CHWs identify a well ventilated location outdoors for the consultation instead of entering the house and maintaining distance, wearing PPE if available.

[18] Operational considerations for case management of COVID-19 in health facility and community

Proposed CCM protocol adaptations in settings with clusters/community transmission (see flowchart - will become an Annex)

The flowcharts in Annex I propose a revised flow for assessment, observation and actions taking into account the need for COVID-19 risk assessment, IPC including no-touch measures. The level of measures needs to be adapted based on local transmission and national guidelines and containment measures.

Disease-specific considerations:

Management of fever/Malaria[19]

- Fever is a symptom of COVID-19, in some cases combined with cough.
- Confirming malaria infection with a diagnostic test does not rule out that the patient could also be suffering from COVID-19; similarly, having presumed or confirmed COVID-19 does not mean that the individual does not also have malaria infection
- Standard malaria diagnosis and treatment protocols at all levels should be maintained as long as possible including the continued use of rapid diagnostic tests (RDTs) for malaria by CHWs (gloves are required in standard protocols due to handling of blood products; in situations of increased risk of COVID-19 transmission, add a face-mask for protection (see WHO recommendations on grade, level of face-mask recommended[20]).
- Pre-referral treatment with rectal artesunate (RAS) using gloves for severe malaria is still recommended as part of CCM modalities in areas where it is being administered. In the absence of PPE, the mother should be guided through providing the RAS.
- At this time, neither mass drug administration nor presumptive treatment of malaria is recommended. As the situation evolves, recommendations may be updated
- In the event that national and local authorities mandate a 'No-Touch Policy,' in highly malaria endemic areas, CHWs should classify suspected malaria cases based on a history of fever, and provide presumptive treatment of malaria with the appropriate antimalarial treatment.
- A clinical response to treatment with ACTs (if infected with malaria) is expected within 48hrs. No response to ACT treatment (absence of fever clearance within 48hrs) virtually excludes malaria as the cause of fever and strengthens the likelihood of other febrile illnesses, including Covid19 and/or other bacterial/virological agents. Therefore, active follow-up of fever cases will be required, and if symptoms have not resolved by 48 hours and the child shows danger signs, referral to the nearest health facility for further investigation is required.

Management of respiratory illness/pneumonia

- Cough is a hallmark of COVID-19 in adults, often in combination with fever but can be caused by other viral/bacterial agents. It also occurs in some - but not all - COVID-19 positive children.
- In settings with COVID-19 transmission any child presenting with cough might have COVID-19 and/or acute respiratory infection of another origin.
- CHWs should continue to classify and treat suspected pneumonia as per national protocol based on fast breathing.
- Respiratory rate counting, using age specific cutoffs and respiratory rate timers will be impacted by distancing rules if no PPE available. Ensure a well lit location for better visibility and ask the caregiver to lift the child's clothing and count the respiratory rate.
- Amoxicillin (in dispersible tablet form) is the WHO-UNICEF recommended treatment for childhood pneumonia and should be given as per standard CCM protocol.

[19] Malaria Program Guidance in the Context of COVID-19 Pandemic. WHO

[20] Advice on the use of masks in the community, during home care and in healthcare settings in the context of the novel coronavirus (COVID-19) outbreak

- Children with chest indrawing should receive urgent referral to the nearest health facility.

Management of diarrhea

- Children with diarrhea and vomiting, especially in combination with respiratory symptoms, might have COVID-19.
- CHWs should continue to provide oral rehydration therapy (ORS) and zinc to all children with a history of frequent stools, defined as three or more loose stools in the past 24 hours.

Management of acute malnutrition

Treatment of acute malnutrition by CHWs is not part of the 'traditional' integrated CCM (iCCM) package. However, growing evidence has demonstrated that with minimal training, CHWs are able to appropriately treat acute malnutrition in the community and that this approach can lead to early admissions and improved discharge outcomes[21]. A number of countries have already adopted this into their national iCCM protocols. In light of COVID-19, country teams should initiate necessary discussion with Ministries of Health and national coordination platforms/nutrition clusters on context-specific simplifications of treatment protocols for child wasting, including treatment of acute malnutrition by CHWs.

- As a result, and in light of COVID-19 implications, efforts should be initiated to build the capacity of CHWs to provide treatment for uncomplicated wasting at the community level where it is not already part of standard CCM protocol. This will require conversations with MOH at national level and on-the job training for CHWs in simplified treatment protocols and approaches for wasting.
- During assessment, in order to adhere to distancing guidelines and in the absence of PPE, caregivers should be actively included in the assessment and guided by the CHW to perform MUAC.
- If MUAC tapes have to be re-used, they should be sanitized after each use with alcohol or soap and water. If possible consider providing each family with a MUAC tape.
- Reduce exposure by shifting to MUAC only for anthropometric measurements and encourage caregivers to carry out MUAC and oedema assessments under the supervision of a CHW.[22]
- Use simplified (e.g., MUAC and oedema only) or expanded admission criteria (<120mm or <125mm MUAC and/or oedema)
- Adopt simplified RUF dosage (e.g., 1 sachet/day for uncomplicated moderate wasting, and 2 sachets/day for uncomplicated severe wasting)
- Reduce the frequency of follow-up visits to once per month for children with uncomplicated severe or moderate wasting by increasing the take-home ration of RUFs and other nutrition commodities. If all services are temporarily suspended, distribute RUFs/nutrition commodities for up-to 8 weeks. Whenever possible, establish links between these households and existing social protection systems.

[21]Lopez-Ejeda N, Charle-Cuellar P, G. B. Ale´ F, Alvarez JL, Vargas A, Guerrero S (2020) Bringing severe acute malnutrition treatment close to households through community health workers can lead to early admissions and improved discharge outcomes. PLoS ONE 15(2): e0227939. https://doi.org/10.1371/journal.pone.0227939

[22] Blackwell, N. et.al. (2015) Mothers Understand And Can do it (MUAC): a comparison of mothers and community health workers determining mid-upper arm circumference in 103 children aged from 6 months to 5 years. (Arch Public Health. 2015 May 18;73(1):26. https://pubmed.ncbi.nlm.nih.gov/25992287/

- Maintain frequency of provision of specialised nutrition foods or other preventative supplementation to children and PLW to 1 per month adhering to recommended hygiene and safety measures, avoiding any mass groupings of people.

Additional guidance on the management of child wasting in the context of COVID-19 can be found here.

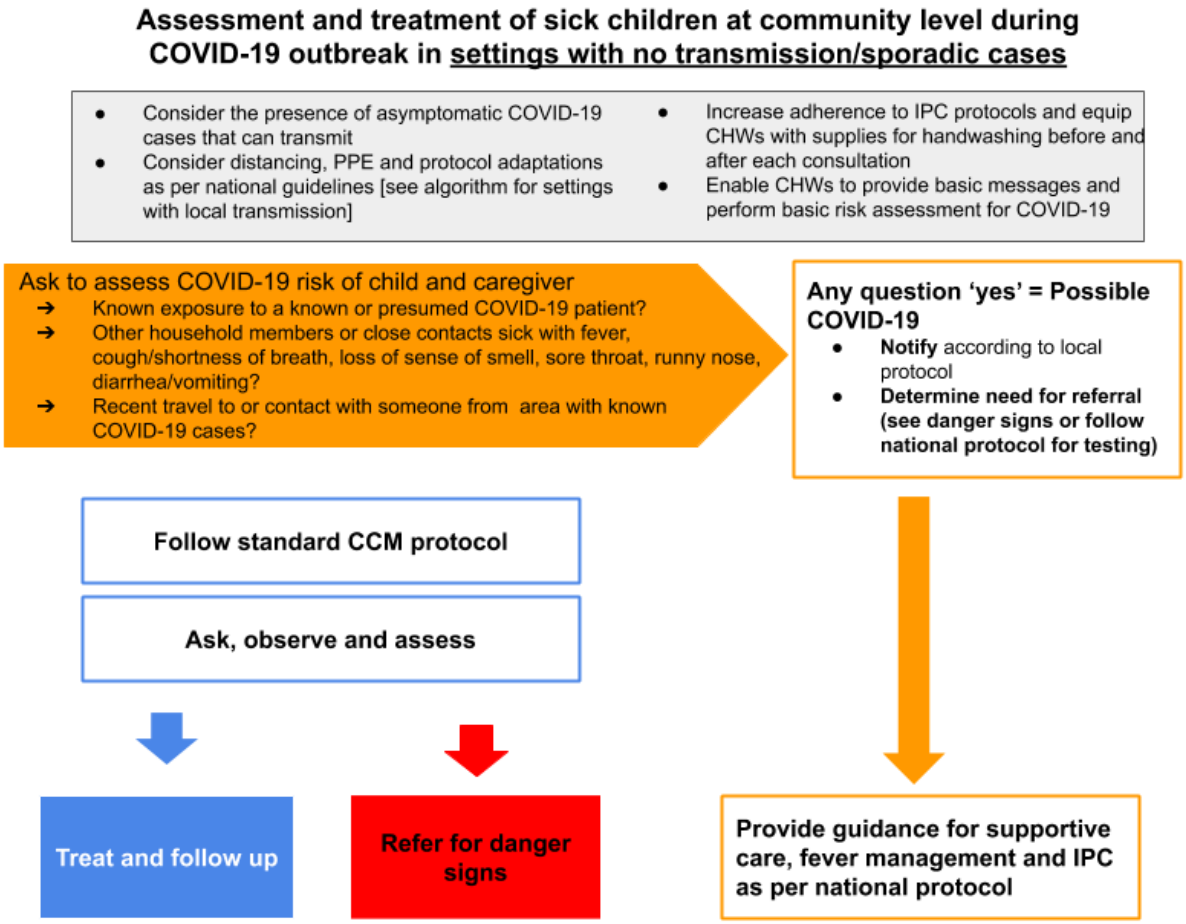
Small and sick newborn care and advise on breastfeeding

- ❖ In the currently proposed flowchart, sick newborns under the age of 2 months should continue to be referred to the health facility for further assessment and management.

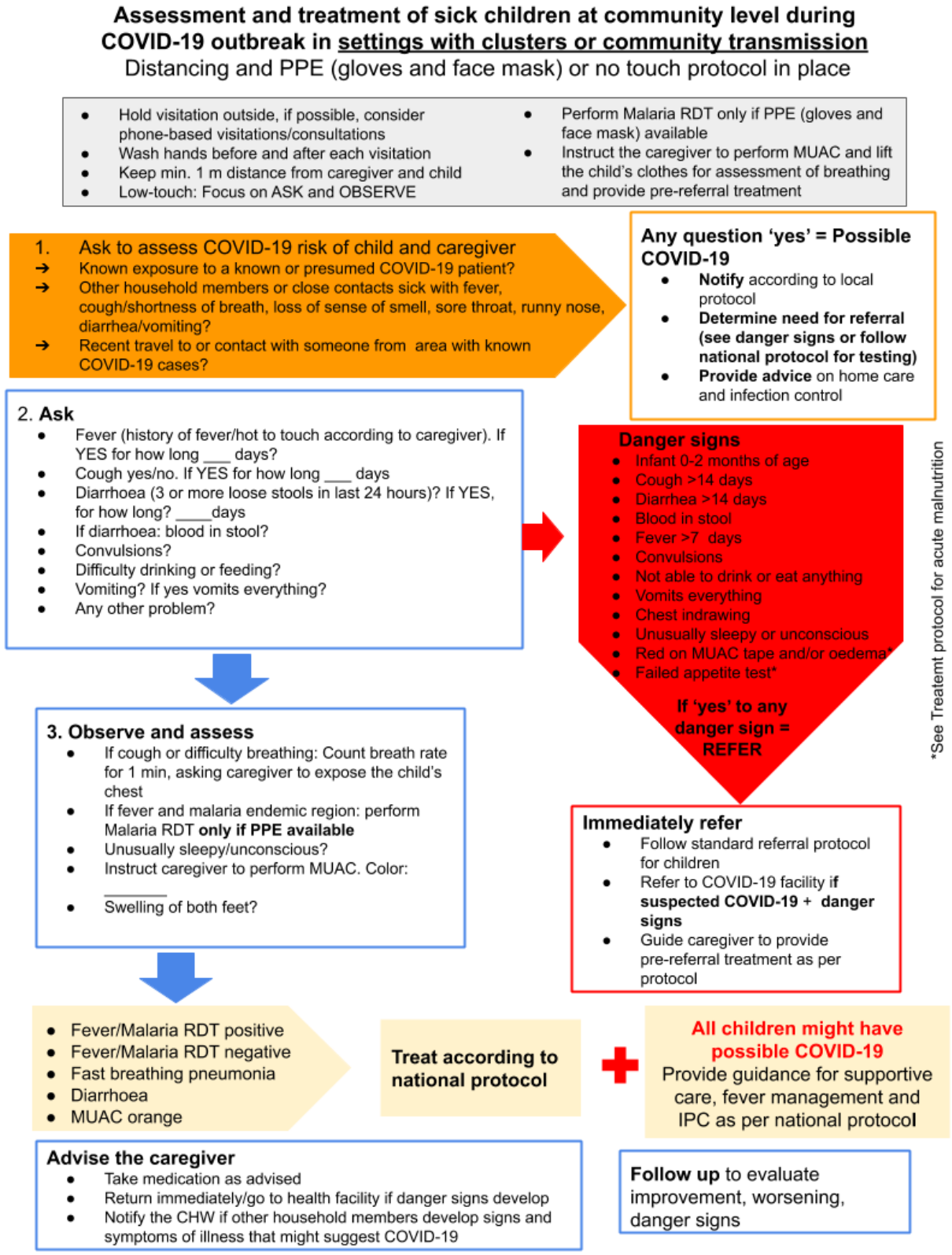
CHWs should use the opportunity of home visits to provide important information on breastfeeding to mothers with presumed or confirmed COVID-19 (e.g. identified during risk assessment when presenting their child for CCM or during home visits)

- ❖ Infants born to mothers with suspected, probable or confirmed COVID-19 infection, should be fed according to standard infant feeding guidelines, while applying necessary precautions for IPC.
  - ➢ Breastfeeding should be initiated within 1 hour of birth.
  - ➢ Exclusive breastfeeding should continue for 6 months with timely introduction of adequate, safe and properly fed complementary foods at age 6 months, while continuing breastfeeding up to 2 years of age or beyond.
- ❖ As with all confirmed or suspected COVID-19 cases, symptomatic mothers who are breastfeeding or practising skin-to-skin contact or kangaroo mother care should practise respiratory hygiene, including during feeding (for example, use of a medical mask when near a child if with respiratory symptoms), perform hand hygiene before and after contact with the child, and routinely clean and disinfect surfaces which the symptomatic mother has been in contact with.
- ❖ Breastfeeding counselling, basic psychosocial support and practical feeding support should be provided to all pregnant women and mothers with infants and young children, whether they or their infants and young children have suspected or confirmed COVID-19.

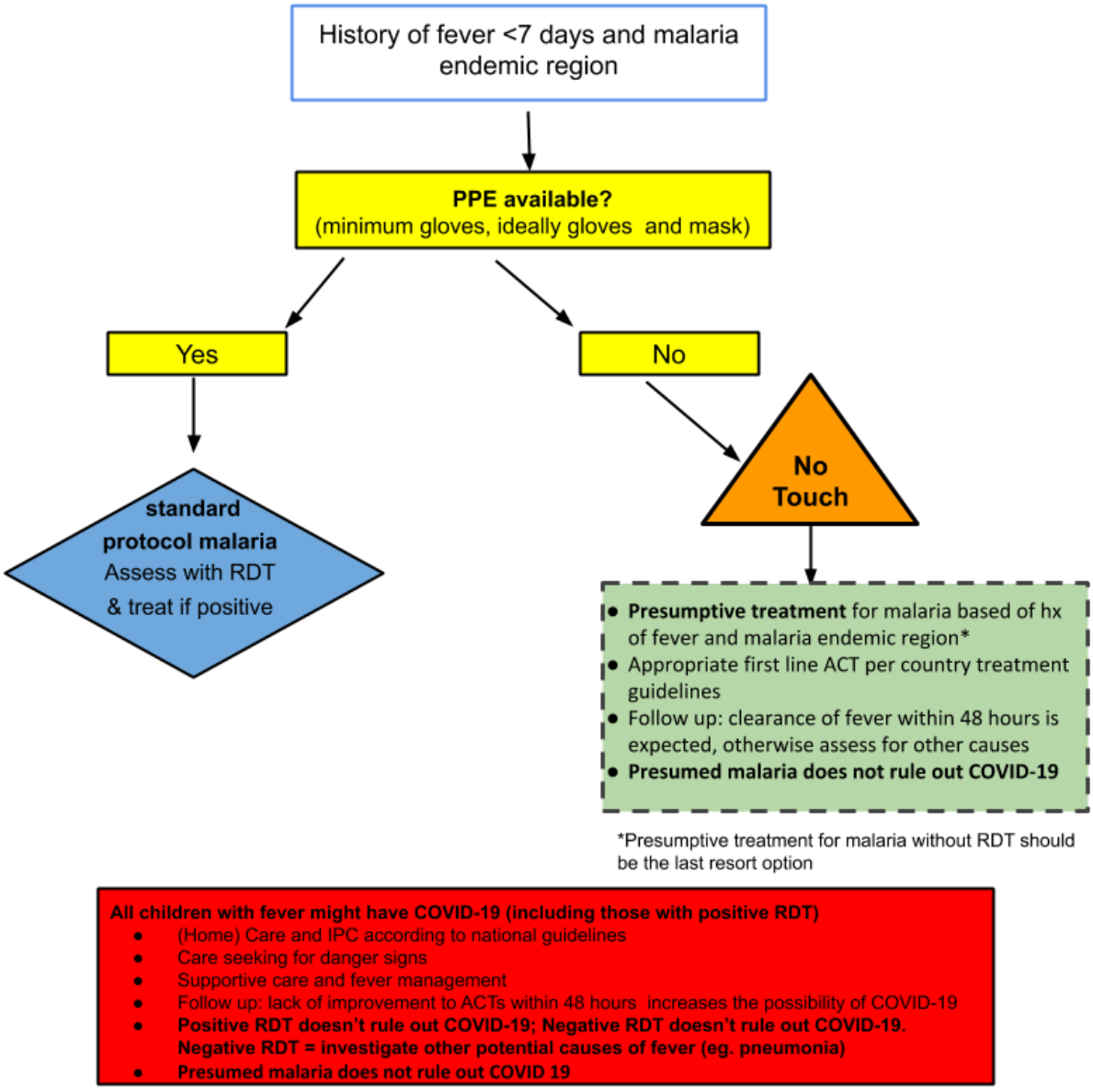
Annex I: Settings with no/sporadic cases [careful consideration of epidemiologic context including asymptomatic and unknown cases]



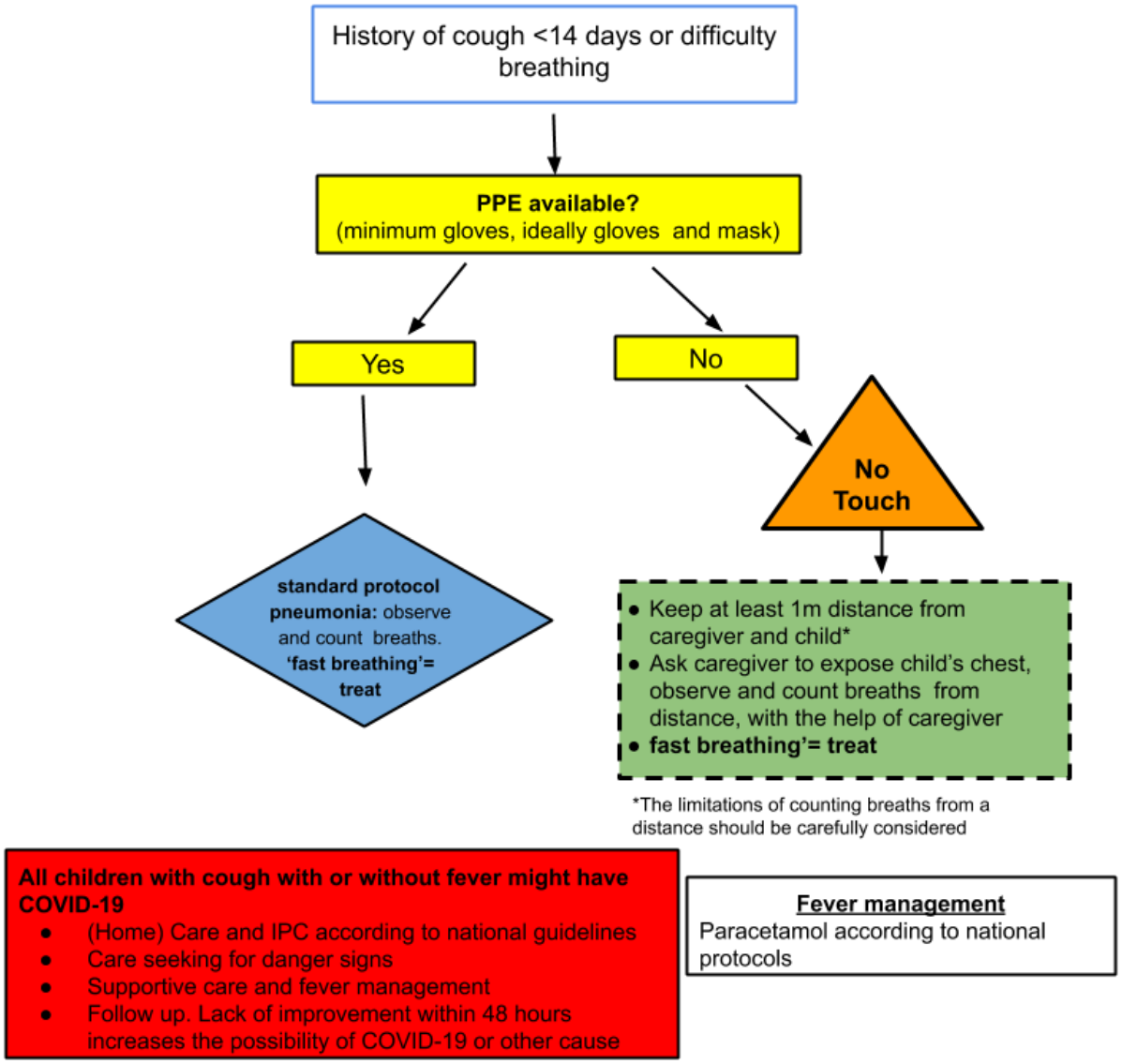
Annex II: Settings with clusters/community transmission



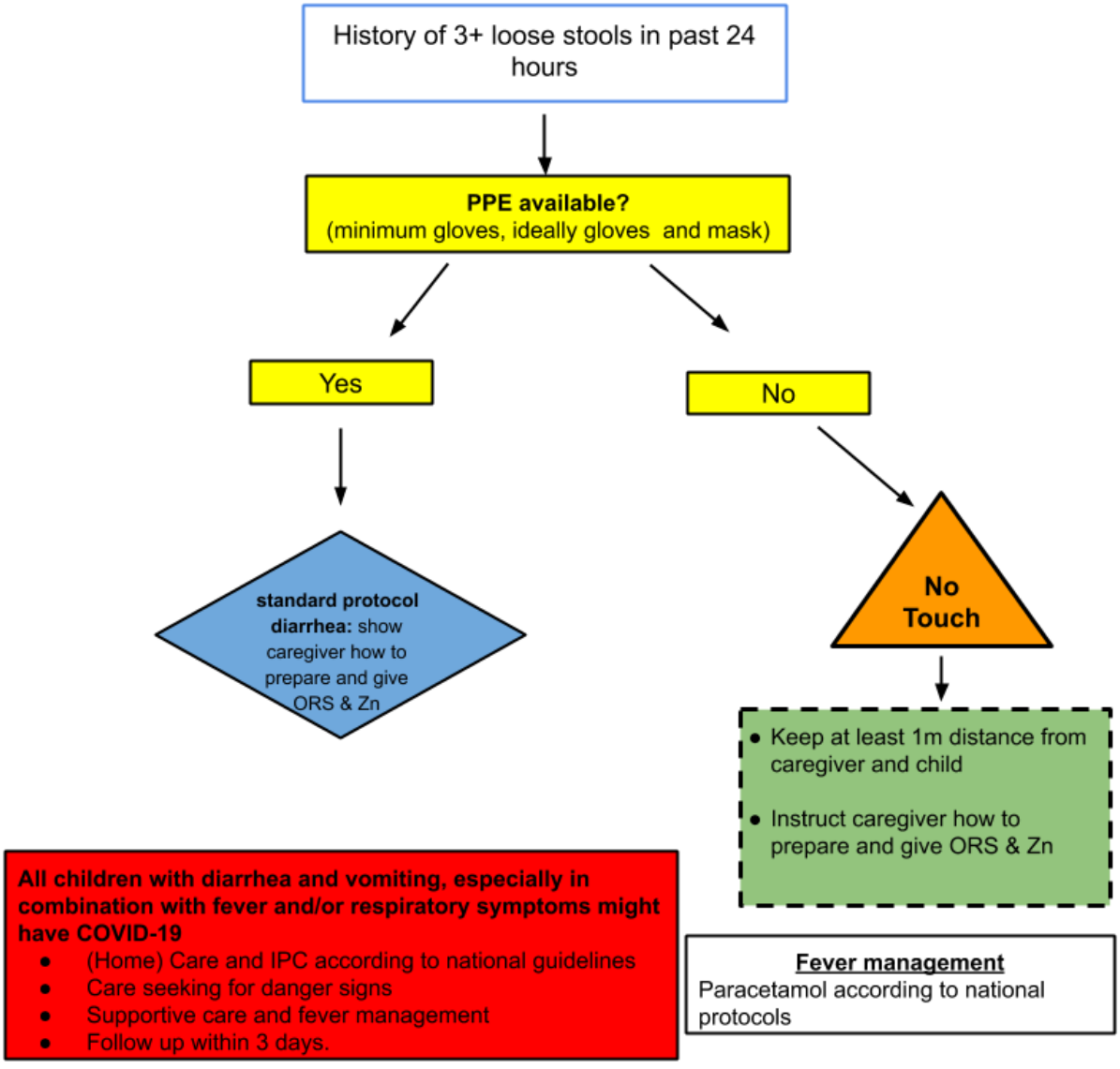
Assess and treat for malaria in a setting with cluster/community transmission



Assess and treat for Pneumonia in a setting with clusters/community transmission



Assess and treat for diarrhoea in setting with cluster/community transmission



Fever treatment with paracetamol

Indicated in children with

- Cough and fever
- Fever and malaria RDT negative
- Presumed or confirmed COVID-19

Children <12 months:
Syrup 120mg/5ml, 10/15 mg/kg, 4 times a day

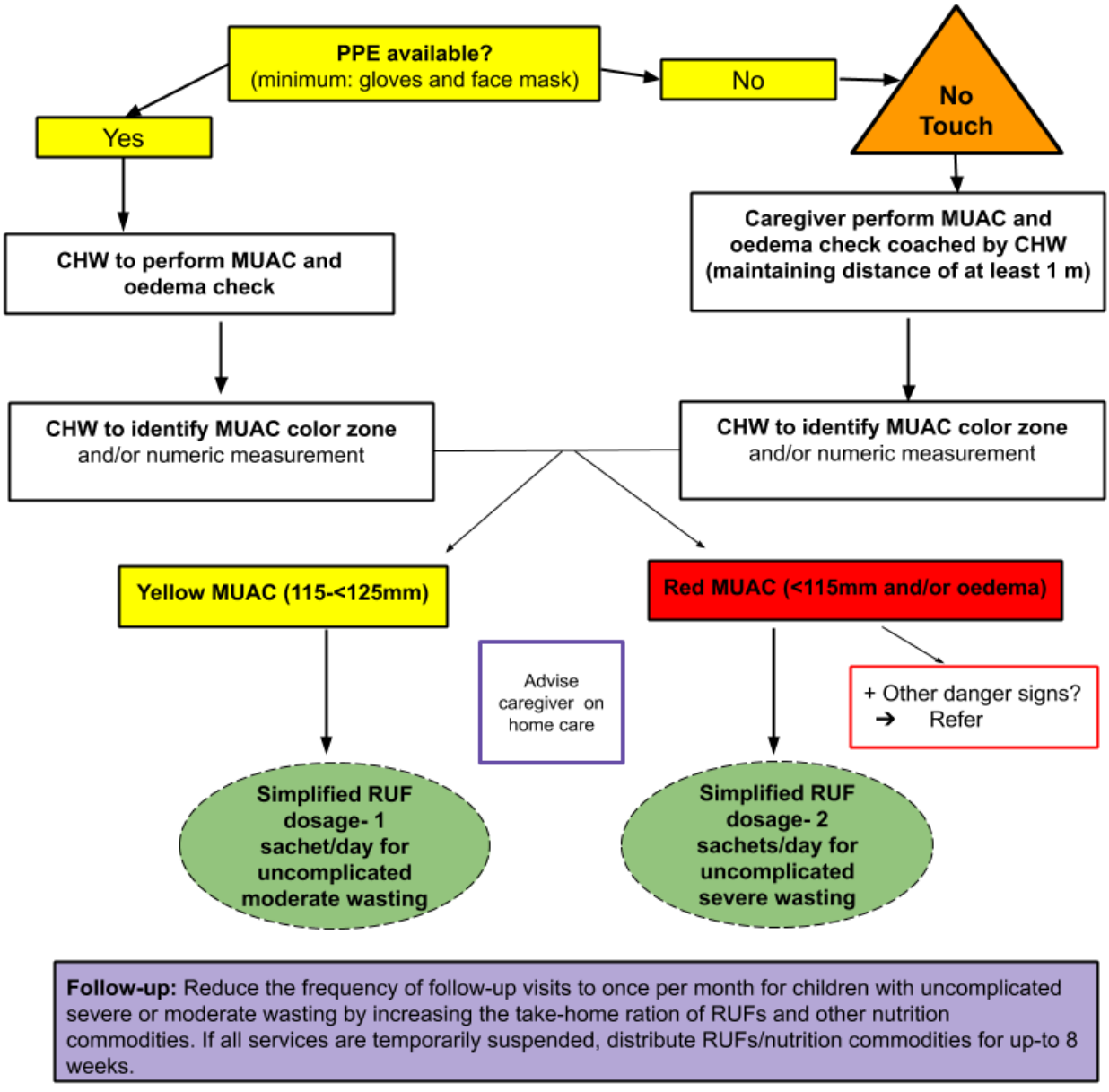
Age 2 - 4 months: 50 mg (2ml)
Age 4 - 12 months: 60 mg (2.5 ml)

Children 1 year and older:
500 mg tablets, 4 times a day

Age 1 up to 3 years: ¼ tablet
Age 3 up to 5 years: ½ tablet
Age 5 to 14 years: 1 tablet
Age 15 years or more: 1 to 2 tablets

Assess and treat for acute malnutrition in settings with cluster/community transmission

Where national protocols do not yet allow for treatment of acute malnutrition by CHWs, approval will need to be sought at national level and capacity and approach for training of CHWs considered.



Follow-up: Reduce the frequency of follow-up visits to once per month for children with uncomplicated severe or moderate wasting by increasing the take-home ration of RUFs and other nutrition commodities. If all services are temporarily suspended, distribute RUFs/nutrition commodities for up-to 8 weeks.