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# DHA TELEHEALTH CLINICAL GUIDELINES

## FOR VIRTUAL MANAGEMENT

### OF FEVER IN CHILDREN – 17

#### Version 2

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Health Policies and Standards Department

Health Regulation Sector (2024)

## INTRODUCTION

Health Regulation Sector (HRS) forms an integral part of Dubai Health Authority (DHA) and is mandated by DHA Law No. (14) of the year (2021) amending some clauses of law No. (6) of 2018 pertaining to the Dubai Health Authority (DHA), to undertake several functions including but not limited to:

- Developing regulation, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector;
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice;
- Managing patient complaints and assuring patient and physician rights are upheld;
- Governing the use of narcotics, controlled and semi-controlled medications;
- Strengthening health tourism and assuring ongoing growth; and
- Assuring management of health informatics, e-health and promoting innovation.

The DHA Telehealth Clinical Guidelines aim to fulfil the following overarching DHA Strategic Priorities (2026):

- Pioneering Human-centered health system to promote trust, safety, quality and care for patients and their families.
- Make Dubai a lighthouse for healthcare governance, integration and regulation.
- Leading global efforts to combat epidemics and infectious diseases and prepare for disasters.

- Pioneering prevention efforts against non-communicable diseases.
- Become a global digital health hub.
- Foster healthcare education, research and innovation.

## ACKNOWLEDGMENT

The Health Policy and Standards Department (HPSD) developed this Guideline in collaboration with Subject Matter Experts and would like to acknowledge and thank these health professionals for their dedication toward improving quality and safety of healthcare services in the Emirate of Dubai.

### Health Regulation Sector

#### Dubai Health Authority

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## EXECUTIVE SUMMARY

Telehealth is based on Evidence Based Practice (EBP) which is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient.

It means integrating individual clinical expertise with the best available external clinical evidence and guidelines from systematic research.

EBP is important because it aims to provide the most effective care virtually, with the aim of improving patient outcomes. As health professionals, part of providing a professional service is ensuring that practice is informed by the best available evidence.

Fever is a common presenting complaint in children. The primary purpose of this Telehealth Guideline is to assist doctors when managing young children with fever.

This guideline for the virtual management of fever in children is presented in the format comprising of clinical history/symptoms, differential diagnosis, investigations and management.

Identification of 'Red Flags' or serious conditions associated with the disease is an essential part of this telehealth guideline as it aids the physician to manage patients safely and appropriately by referrals, if indicated during virtual telehealth assessment, to ER, family physicians or specialists for a face to face management.

## DEFINITIONS/ABBREVIATIONS

**Virtual Clinical Assessment:** Is the evaluation of the patient's medical condition virtually via telephone or video call consultations, which may include one or more of the following: patient medical history, physical examination and diagnostic investigations.

**Patient:** The person who receives the healthcare services or the medical investigation or treatment provided by a DHA licensed healthcare professional.

## ABBREVIATIONS

<b>DHA</b>	:	Dubai Health Authority
<b>EBP</b>	:	Evidence Based Practice
<b>ER</b>	:	Emergency Room
<b>FUO</b>	:	Fever of Unknown Origin
<b>NICE</b>	:	National Institute for Health and Care Excellence
<b>QDS</b>	:	“Quarter in Die” (Four times a day)
<b>TID</b>	:	“Ter In Die” (Three times a day)

## 1. BACKGROUND

- 1.1. Fever is a common presenting complaint in children. Most febrile illnesses either resolve before a diagnosis can be made or develop distinguishing characteristics that lead to a diagnosis. Fever of unknown origin (FUO) refers to a prolonged febrile illness without an established etiology despite thorough evaluation.
- 1.2. The mean normal temperature is generally considered to be 37°C (98.6°F)
- 1.3. Elevated body temperature may result from fever (increased body temperature with elevated hypothalamic set-point) or hyperthermia (increased body temperature with normal hypothalamic set-point) The temperature elevation that is considered "abnormal" depends upon the age of the child and the site of measurement. The temperature elevation that may prompt clinical investigation for infection depends upon the age of the child and the clinical circumstances.
- 1.4. Fever is a sign of underlying disease, the cause of which should be evaluated, particularly if the child is ill-appearing or the fever persists. The response of fever to an antipyretic agent does not help to distinguish bacterial from viral infection. In most cases, the febrile child has additional symptoms and signs of an acute infection, which can be managed as indicated. However, in some children, particularly children with underlying disease, fever may be a sign of a more serious or even life-threatening process.

## 2. SCOPE

2.1. Telehealth services in DHA licensed Health Facilities.

## 3. PURPOSE

3.1. To support the implementation of Telehealth services for patients with complaints of Fever in children in Dubai Health Authority (DHA) licensed Health Facilities

## 4. APPLICABILITY

4.1. DHA licensed physicians and health facilities providing Telehealth services.

4.2. Exclusion for Telehealth services are as follows

4.2.1. Emergency cases where immediate intervention or referral is required.

4.2.2. Prescribe Narcotics, Controlled or Semi-Controlled medications.

## 5. RECOMMENDATION

5.1. Virtual Clinical Assessment

Clinical assessment should be focused on:

5.1.1. Life-threatening features of illness in children (which will require urgent referral to ER):

First, all doctors should identify any immediately life-threatening features, including compromise of the airway, breathing or circulation, and decreased level of consciousness.



5.1.2. Assessment of risk of serious illness:

Assess children with feverish illness for the presence or absence of symptoms and signs that can be used to predict the risk of serious illness using the traffic light system (see table 1 below).

When assessing children with learning disabilities, take the individual child's learning disability into account when interpreting the traffic light table.

Recognize that children with any of the following symptoms or signs are in a high-risk group for serious illness:

- a. Pale/mottled/ashen/blue skin, lips or tongue
- b. No response to social cues
- c. Appearing ill to a doctor or parent
- d. Does not wake or if roused does not stay awake
- e. Weak, high-pitched or continuous cry
- f. Grunting
- g. Respiratory rate greater than 60 breaths per minute
- h. Moderate or severe chest indrawing
- i. Reduced skin turgor
- j. Bulging fontanelle

- k. Children younger than 3 months with a temperature of 38°C or higher

Recognize that children with any of the following symptoms or signs are in at least an intermediate-risk group for serious illness:

- a. Pallor of skin, lips or tongue reported by parent or carer
- b. Not responding normally to social cues
- c. No smile
- d. Wakes only with prolonged stimulation
- e. Decreased activity
- f. Nasal flaring
- g. Dry mucous membranes
- h. Poor feeding in infants
- i. Reduced urine output
- j. Rigors
- k. Children aged 3–6 months with a temperature of 39°C or higher

Recognize that children who have all of the following features, and none of the high- or intermediate-risk features, are in a low-risk group for serious illness (which can be managed telephonically/ virtually):

- a. Normal color of skin, lips and tongue
- b. Responds normally to social cues

- c. Happy/smiles
- d. Stays awake or awakens quickly
- e. Strong normal cry or not crying
- f. Normal skin and eyes
- g. Moist mucous membranes

In children older than 6 months do not use level of body temperature alone to identify those with serious illness.

Do not use duration of fever to predict the likelihood of serious illness.

However, children with a fever lasting more than 5 days should be assessed for Kawasaki disease.

If you are seeing the child via face-to-face or virtual clinic, assess children with fever for signs of dehydration. Look for:

- a. Prolonged capillary refill time
- b. Abnormal skin turgor
- c. Abnormal respiratory pattern
- d. Weak pulse
- e. Cool extremities.

#### 5.1.3. Symptoms and signs of specific illnesses

Look for a source of fever and check for the presence of symptoms and signs that are associated with specific diseases (see table 2 below).

Consider meningococcal disease in any child with fever and a non-blanching rash, particularly if any of the following features (which can be observed during video) are present:

- a. An ill-looking child
- b. Lesions larger than 2 mm in diameter (purpura)
- c. A capillary refill time of 3 seconds or longer
- d. Neck stiffness.

Consider bacterial meningitis in a child with fever and any of the following features:

- a. Neck stiffness
- b. Bulging fontanelle
- c. Decreased level of consciousness
- d. Convulsive status epilepticus.

Note: Be aware that classic signs of meningitis (neck stiffness, bulging fontanelle, high-pitched cry) are often absent in infants with bacterial meningitis.

Consider herpes simplex encephalitis in children with fever and any of the following features:

- a. Focal neurological signs
- b. Focal seizures

c. Decreased level of consciousness.

Consider pneumonia in children with fever and any of the following signs

(which can be observed during video):

a. Tachypnoea, respiratory rate:

- Greater than 60 breaths per minute, age 0–5 months
- Greater than 50 breaths per minute, age 6–12 months
- Greater than 40 breaths per minute, age older than 12 months

b. Crackles in the chest

c. Nasal flaring

d. Chest in-drawing

e. Cyanosis

f. Oxygen saturation of 95% or less when breathing air.

Consider urinary tract infection in any child younger than 3 months with

fever. And consider urinary tract infection in a child aged 3 months or

older with fever and 1 or more of the following:

a. Vomiting

b. Poor feeding

c. Lethargy

d. Irritability

e. Abdominal pain or tenderness

f. Urinary frequency or dysuria.

Consider septic arthritis/osteomyelitis in children with fever and any of the following signs:

- a. Swelling of a limb or joint
- b. Not using an extremity
- c. Non-weight bearing

Consider Kawasaki disease in children with fever that has lasted longer than 5 days and who have 4 of the following 5 features ((which can be observed during video):

- a. Bilateral conjunctival injection
- b. Change in mucous membranes in the upper respiratory tract (for example, injected pharynx, dry cracked lips or strawberry tongue)
- c. Change in the extremities (for example, oedema, erythema or desquamation)
- d. Polymorphous rash
- e. Cervical lymphadenopathy

Be aware that, in rare cases, incomplete/atypical Kawasaki disease may be diagnosed with fewer features.

#### 5.1.4. Imported infections

When assessing a child with feverish illness, enquire about recent travel abroad and consider the possibility of imported infections according to the region visited.

#### 5.1.5. Traffic light system for identifying risk of serious illness

Children with fever and any of the symptoms or signs in the red column should be recognized as being at high risk and must be referred to ER. Similarly, children with fever and any of the symptoms or signs in the amber column and none in the red column should be recognized as being at intermediate risk (and can be referred to Secondary care). Children with symptoms and signs in the green column and none in the amber or red columns are at low risk (and can be managed virtually upon doctor's discretion/clinical judgment). The management of children with fever should be directed by the level of risk.

Please note that some of the clinical features mentioned below be observed mainly during face-to-face, video or Virtual clinic consultation. If a doctor feels further assessment /physical examination is required, then a referral should be made accordingly.

Refer to APPENDIX 1 for Traffic Light System in identifying risk of serious illness

Refer to APPENDIX 2 for summary table on symptoms and signs suggestive of specific disease

## 6. MANAGEMENT

6.1. Refer to APPENDIX 3 for the Virtual Management of Fever in Children

## 7. REFERRAL CRITERIA

7.1. Management according to risk of serious illness

7.1.1. Children whose symptoms and signs suggest an immediately life-threatening illness should be referred immediately for emergency medical care

7.1.2. Children with any 'red' features should be referred to ER

7.1.3. If any 'amber' features are present and no diagnosis has been reached, provide parents or carers with a 'safety net' or refer to specialist pediatric care for further assessment. The safety net should be 1 or more of the following:

- a. providing the parent or carer with verbal and/or written information on warning symptoms and how further healthcare can be accessed.
- b. arranging further follow-up call at a specified time (usually within 24hours)

7.1.4. Children with 'green' features and none of the 'amber' or 'red' features can be cared for at home with appropriate advice for parents and carers,



including advice on when to seek further attention from the healthcare services

## 7.2. Other consideration for Referral to Hospital for Admission

7.2.1. In addition to the child's clinical condition, consider the following factors when deciding whether to refer a child with fever to hospital:

- a. Social and family circumstances
- b. Other illnesses that affect the child or other family members
- c. Parental anxiety and instinct (based on their knowledge of their child)
- d. Contacts with other people who have serious infectious diseases
- e. Recent travel abroad to tropical/subtropical areas, or areas with a high risk of endemic infectious disease
- f. When the parent or carer's concern for their child's current illness has caused them to seek healthcare advice repeatedly
- g. Where the family has experienced a previous serious illness or death due to feverish illness which has increased their anxiety levels
- h. When a feverish illness has no obvious cause, but the child remains ill longer than expected for a self-limiting illness.

## 8. TREATMENT

### 8.1. Antipyretic interventions

#### 8.1.1. Effects of body temperature reduction

- a. Antipyretic agents do not prevent febrile convulsions and should not be used specifically for this purpose.

8.1.2. Physical interventions to reduce body temperature

- b. Tepid sponging is not recommended for the treatment of fever.
- c. Children with fever should not be underdressed or over-wrapped.

8.1.3. Drug interventions to reduce body temperature

- a. Consider using either paracetamol or ibuprofen in children with fever who appear distressed. For Antipyretic Regimens (including dosage) please see below\*
- b. When using paracetamol or ibuprofen in children with fever:
  - i. Continue only as long as the child appears distressed
  - ii. Consider changing to the other agent if the child's distress is not alleviated
  - iii. Do not give both agents simultaneously
  - iv. Only consider alternating these agents if the distress persists or recurs before the next dose is due.

8.2. Antipyretic regimens

- 8.2.1. Paracetamol, for most children with fever who are treated with an antipyretic agent, it is recommended the use of paracetamol for its long track record of safety at therapeutic doses.

- a. Paracetamol generally is not recommended for infants younger than three months of age without prior consultation with a health care provider because fever may be the only sign of serious infection in such infants.
  - b. Paracetamol dosage varies according to age and weight. Refer to Appendix 4 for Paracetamol dosage.
- 8.2.2. Ibuprofen – dosage varies according to age and weight. Refer to Appendix 5 for dosage.
- a. Ibuprofen generally is not recommended for infants <3 months of age without prior consultation with a health care provider because fever may be the only sign of serious infection in such infants.
  - b. Adverse effects of ibuprofen may include gastritis and gastrointestinal bleeding. When administered at appropriate doses and taken with food, ibuprofen usually is safe. However, acute kidney injury has been reported following appropriate doses of ibuprofen.
  - c. Overdose may occur if ibuprofen is administered simultaneously with combination cough and cold remedies that contain ibuprofen, with unsupervised ingestion, and unclear instruction for administration. Overdose of ibuprofen appears more easily managed than overdose of paracetamol.

- 8.2.3. Combining or alternating therapy — it is not recommended combining or alternating therapy with paracetamol and ibuprofen to treat fever in children. Although combining or alternating paracetamol and ibuprofen may be more effective than either agent alone in reducing fever, it is not clear that this reduction is clinically significant. In addition, there is little information about the effects on the child's discomfort or the safety of combining or alternating antipyretic therapy, and there are theoretic concerns of liver or kidney injury, particularly for children with volume depletion.
- 8.2.4. Duration — The duration of administration of antipyretic therapy depends upon the child's response; the end-point is the child's comfort. Prolonged use of antipyretic agents generally is not necessary because most febrile illnesses in children are self-limited viral infections. Re-evaluation for secondary bacterial infection may be warranted in children whose fever and discomfort persist for more than two to three days.
- 8.2.5. Treatment response — Treatment with antipyretic agents should make the febrile child more comfortable. It is more important for caregivers to monitor the child's general appearance (for signs of serious illness such as lethargy, stiff neck, altered mental status, petechial or purpuric rash), activity level, and fluid intake than to monitor the temperature curve. With either paracetamol or ibuprofen, a response

should be seen within 60 minutes; the response peaks in three to four hours. If the temperature remains elevated and the child's discomfort is not improved three to four hours after administration of Paracetamol or ibuprofen, some experts would suggest switching from paracetamol to ibuprofen or ibuprofen to paracetamol. There are no published studies to evaluate the safety or efficacy of this practice; however, in theory, some fevers may respond better to one antipyretic agent than another. Persistence of a febrile illness beyond four or five days, a marked increase in the height of the maximum fever during the course of the illness, or the development of new localizing symptoms should raise concerns about alternative diagnoses or bacterial superinfection, which should be referred to secondary care for further evaluation.

### 8.3. Parent Education

#### 8.3.1. Advise parents or carers looking after a feverish child at home:

- a. to offer the child regular fluids (where a baby or child is breastfed the most appropriate fluid is breast milk)
- b. how to detect signs of dehydration by looking for the following features:
  - sunken fontanelle
  - dry mouth
  - sunken eyes

- absence of tears
  - poor overall appearance
- c. how to identify a non-blanching rash
- d. to check their child during the night
- e. to keep their child away from nursery or school while the child's fever persists but to notify the school or nursery of the illness.

8.3.2. Advising parent when to seek further help: Following contact with a healthcare professional, parents and carers who are looking after their feverish child at home should seek further advice if:

- a. the child has a fit
- b. the child develops a non-blanching rash
- c. the parent or carer feels that the child is less well than when they previously sought advice
- d. the parent or carer is more worried than when they previously sought advice
- e. the fever lasts longer than 5 days
- f. the parent or carer is distressed or concerned that they are unable to look after their child.

## REFERENCES

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## APPENDICES

### APPENDIX 1 - TRAFFIC LIGHT SYSTEM FOR IDENTIFYING RISK OF SERIOUS ILLNESS

	Green – low risk (manage internally)	Amber – intermediate risk (Refer to Specialist)	Red – high risk (Refer to ER)
Color of skin, lips or tongue	Normal color	Pallor reported by parent/carer	Pale/mottled/ashen/blue
Activity	<ul style="list-style-type: none"> <li>• Responds normally to social cues</li> <li>• Content/smiles</li> <li>• Stays awake or awakens quickly</li> <li>• Strong normal cry/not crying</li> </ul>	<ul style="list-style-type: none"> <li>• Not responding normally to social cues</li> <li>• No smile</li> <li>• Wakes only with prolonged stimulation</li> <li>• Decreased activity</li> </ul>	<ul style="list-style-type: none"> <li>• No response to social cues</li> <li>• Appears ill to a healthcare professional</li> <li>• Does not wake or if roused does not stay awake</li> <li>• Weak, high-pitched or continuous cry</li> </ul>
Respiratory		<ul style="list-style-type: none"> <li>• Nasal flaring</li> <li>• Tachypnoea: respiratory rate <ul style="list-style-type: none"> <li>○ &gt;50 breaths/minute, age 6–12 months;</li> <li>○ &gt;40 breaths/minute, age &gt;12 months</li> </ul> </li> <li>• Oxygen saturation <math>\leq 95\%</math> in air</li> <li>• Crackles in the chest</li> </ul>	<ul style="list-style-type: none"> <li>• Grunting</li> <li>• Tachypnoea: respiratory rate &gt;60 breaths/minute</li> <li>• Moderate or severe chest indrawing</li> </ul>
Circulation and hydration	<ul style="list-style-type: none"> <li>• Normal skin and eyes</li> </ul>	<ul style="list-style-type: none"> <li>• Tachycardia:</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced skin turgor</li> </ul>



	<ul style="list-style-type: none"> <li>Moist mucous membranes</li> </ul>	<ul style="list-style-type: none"> <li>&gt;160 beats/minute, age &lt;12 months</li> <li>&gt;150 beats/minute, age 12–24 months</li> <li>&gt;140 beats/minute, age 2–5 years</li> <li>Capillary refill time <math>\geq 3</math> seconds</li> <li>Dry mucous membranes</li> <li>Poor feeding in infants</li> <li>Reduced urine output</li> </ul>	
Other	None of the amber or red symptoms or signs	<ul style="list-style-type: none"> <li>Age 3–6 months, temperature <math>\geq 39^{\circ}\text{C}</math></li> <li>Fever for <math>\geq 5</math> days</li> <li>Rigors</li> <li>Swelling of a limb or joint</li> <li>Non-weight bearing limb/not using an extremity</li> </ul>	<ul style="list-style-type: none"> <li>Age &lt;3 months, temperature <math>\geq 38^{\circ}\text{C}^*</math></li> <li>Non-blanching rash</li> <li>Bulging fontanelle</li> <li>Neck stiffness</li> <li>Status epilepticus</li> <li>Focal neurological signs</li> <li>Focal seizures</li> </ul>
*Some vaccinations have been found to induce fever in children aged under 3 months			

## APPENDIX 2 – SYMPTOMS AND SIGNS SUGGESTIVE OF SPECIFIC DISEASES

Diagnosis to be considered	Symptoms and signs in conjunction with fever
<b>Meningococcal disease</b>	<p>Non-blanching rash, particularly with 1 or more of the following:</p> <ul style="list-style-type: none"> <li>• An ill-looking child</li> <li>• Lesions larger than 2 mm in diameter (purpura)</li> <li>• Capillary refill time of <math>\geq 3</math> seconds</li> <li>• Neck stiffness</li> </ul>
<b>Bacterial meningitis</b>	<ul style="list-style-type: none"> <li>• Neck stiffness</li> <li>• Bulging fontanelle</li> <li>• Decreased level of consciousness</li> <li>• Convulsive status epilepticus</li> </ul>
<b>Herpes simplex encephalitis</b>	<ul style="list-style-type: none"> <li>• Focal neurological signs</li> <li>• Focal seizures</li> <li>• Decreased level of consciousness</li> </ul>
<b>Pneumonia</b>	<ul style="list-style-type: none"> <li>• Tachypnoea (respiratory rate <math>&gt;60</math> breaths/minute, age 0–5 months; <math>&gt;50</math> breaths/minute, age 6–12 months; <math>&gt;40</math> breaths/minute, age <math>&gt;12</math> months)</li> <li>• Crackles in the chest</li> <li>• Nasal flaring</li> <li>• Chest indrawing</li> <li>• Cyanosis</li> </ul> <p>Oxygen saturation <math>\leq 95\%</math></p>
<b>Urinary tract infection</b>	<ul style="list-style-type: none"> <li>• Vomiting</li> <li>• Poor feeding</li> <li>• Lethargy</li> <li>• Irritability</li> <li>• Abdominal pain or tenderness</li> <li>• Urinary frequency or dysuria</li> </ul>
<b>Septic arthritis</b>	<ul style="list-style-type: none"> <li>• Swelling of a limb or joint</li> </ul>

	<ul style="list-style-type: none"><li>• Not using an extremity</li><li>• Non-weight bearing</li></ul>
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## APPENDIX 3 – VIRTUAL MANAGEMENT OF FEVER IN CHILDREN ALGORITHM

### Virtual Management of Fever in Children

#### Red Flags

Does the child have any of the following symptoms?

Color of skin, lips or tongue: Pale/mottled/ashen/blue	Circulation and hydration: Reduced skin turgor, and/or not passing urine
Activity: <ul style="list-style-type: none"> <li>No response to social cues;</li> <li>Appears ill to a healthcare professional;</li> <li>Does not wake or if roused does not stay awake</li> <li>Weak, high-pitched or continuous cry</li> </ul>	Other, e.g: <ul style="list-style-type: none"> <li>Age &lt;3 months, temperature <math>\geq 38^{\circ}\text{C}^*</math> (unless it is due to post vaccination)</li> <li>Non-blanching rash</li> <li>Bulging fontanelle</li> <li>Neck stiffness</li> <li>Status epilepticus</li> <li>Focal neurological signs</li> <li>Focal seizures</li> </ul>
Respiratory <ul style="list-style-type: none"> <li>Grunting</li> <li>Tachypnoea: respiratory rate &gt;60 breaths/minute</li> <li>Moderate or severe chest indrawing</li> </ul>	



Refer to ER for face-to-face consultation



Does the child have any of the following symptoms?

Color of skin, lips or tongue: pallor reported by parent/carer	Circulation and hydration: <ul style="list-style-type: none"> <li>Tachycardia: <ul style="list-style-type: none"> <li>&gt;160 beats/minute, age &lt;12 months</li> <li>&gt;150 beats/minute, age 12–24 months</li> <li>&gt;140 beats/minute, age 2–5 years</li> </ul> </li> <li>Capillary refill time <math>\geq 3</math> seconds</li> <li>Dry mucous membranes</li> <li>Poor feeding in infants</li> <li>Reduced urine output</li> </ul>
Activity: <ul style="list-style-type: none"> <li>Not responding normally to social cues</li> <li>No smile</li> <li>Wakes only with prolonged stimulation</li> <li>Decreased activity</li> </ul>	Other: <ul style="list-style-type: none"> <li>Age 3–6 months, temperature <math>\geq 39^{\circ}\text{C}</math></li> <li>Fever for <math>\geq 5</math> days</li> <li>Rigors</li> <li>Swelling of a limb or joint</li> <li>Non-weight bearing limb/not using an extremity</li> </ul>
Respiratory: <ul style="list-style-type: none"> <li>Nasal flaring</li> <li>Tachypnoea: respiratory rate</li> <li>&gt;50 breaths/minute, age 6–12 months;</li> <li>&gt;40 breaths/minute, age &gt;12 months</li> <li>Oxygen saturation <math>\leq 95\%</math> in air</li> <li>Crackles in the chest.</li> </ul>	



Refer to Specialist for face-to-face consultation



### Management/Treatment

- Parent/caregiver education & advice, e.g. adequate hydration, look out for sign of dehydration
- Consider using either paracetamol or ibuprofen in children with fever who appear distressed.
- **Paracetamol** dosage varies according to age and weight

Child 1-2months: 30-60 mg every 8 hours PRN; maximum 60mg/kg per day.	Child 2-3years: 180 mg every 4-6hours; maximum QDS.	Child8-9years: 360-375mg QDS
Child 3-5 months: 60 mg every 4-6hours; maximum QDS.	Child 4-5years: 240mg every 4-6 hours; maximum QDS.	Child10-11years: 480-500mg QDS
Child 6 months-1 year: 120 mg every 4-6hours; maximum QDS	Child6-7years: 240-250mg QDS	Child12-15years: 480-750mg QDS

#### Ibuprofen – dosage varies according to age and weight

Neonate: Initially 10mg/kg for 1 dose, followed by 5mg/kg every 24 hours for 2 doses, the course may be repeated after 48 hours if necessary.	
child 1-2months: 5mg/kg 3-4 times a day	Child 4-6 years: 150mg TID.
Child 3-5months: 50mg TID	Child 7-9years: 200mg TID.
Child6-11 months: 50mg 3-4 times a day.	Child 10-11years: 300mg TID.
Child 1-3 years: 100 mg TID. Maximum daily dosetobegivenin3-4 divided doses; maximum 30mg/kg per day	Child 12-17years: Initially300-400mg 3-4timesaday; increased if necessary up to 600mg QDS;

#### APPENDIX 4 – PARACETAMOL DOSAGE - BY MOUTH (ORAL)

Child 1-2 months: 30–60 mg every 8 hours PRN; maximum 60 mg/kg per day.	Child 6–7years: 240–250 mg every 4– 6 hours; maximum 4 doses per day.
Child 3–5 months: 60 mg every 4–6 hours; maximum 4 doses per day.	Child 8–9 years: 360–375mg every 4– 6 hours; maximum 4 doses per day.
Child 6 months–1 year: 120 mg every 4–6 hours; maximum QDS	Child 10–11 years: 480–500mg every 4–6 hours; maximum 4 doses per day.
Child 2–3 years: 180 mg every 4–6 hours; maximum 4 doses per day.	Child 12–15 years: 480–750mg every 4–6 hours; maximum 4 doses per day.
Child 4–5 years: 240 mg every 4–6 hours; maximum 4 doses per day.	

## APPENDIX 5 – IBUPROFEN DOSAGE - BY MOUTH (ORAL)

Neonate: Initially 10 mg/kg for 1 dose, followed by 5 mg/kg every 24-hours for 2 doses, the course may be repeated after 48 hours if necessary.	
Child 1–2 months: 5 mg/kg 3–4 times a day	Child 4–6 years: 150 mg 3 times a day, maximum daily dose to be given in 3–4 divided doses; maximum 30 mg/kg per day.
Child 3–5 months: 50 mg 3 times a day, maximum daily dose to be given in 3–4 divided doses; maximum 30 mg/kg per day.	Child 7–9 years: 200 mg 3 times a day, maximum daily dose to be given in 3–4 divided doses; maximum 30 mg/kg per day; maximum 2.4 g per day.
Child 6–11 months: 50 mg 3–4 times a day, maximum daily dose to be given in 3–4 divided doses; maximum 30 mg/kg per day.	Child 10–11 years: 300 mg 3 times a day, maximum daily dose to be given in 3–4 divided doses; maximum 30 mg/kg per day; maximum 2.4 g per day.
Child 1–3 years: 100 mg TID. Maximum daily dose to be given in 3–4 divided doses; maximum 30mg/kg per day	Child 12–17years: Initially 300–400 mg 3–4 times a day; increased if necessary up to 600mg QDS; Maintenance 200–400 mg 3 times a day, may be adequate