

## Hospital admission criteria for COVID-19 Pediatric patients

Version 1.1

### 1. Introduction:

- 1.1 Background:** The current rapid worldwide spread of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection justifies the global effort to identify effective preventive strategies and optimal medical management. While data are available for adult patients with coronavirus disease 2019 (COVID-19), limited reports have analyzed pediatric patients infected with SARS-CoV-2. Although severe cases of COVID-19 in children, including fatal cases, have been reported, most children appear to have asymptomatic, mild, or moderate disease. Although clinical manifestations of children's COVID-19 cases were generally less severe than those of adult patients, young children, particularly infants, were vulnerable to infection. Add on that, there have been few reports of children with COVID-19 and clinical features that are similar to those of toxic shock syndrome and atypical Kawasaki disease.
- 1.2 Aim and scope:** to standardize the hospital admission criteria at healthcare facility caring for COVID-19 pediatric patients.
- 1.3 Targeted end users & setup:** This guidance is for clinicians caring for patients at all healthcare facilities that deal with suspected or confirmed COVID-19 pediatric patients this includes Pediatric Emergency Department(ED) and outpatient clinics.
- 1.4 Targeted population:** All pediatric patients who meets the case definition of confirmed/suspected COVID-19 as stated in MOH/SCDC guidance version 1.2.
- 1.5 Methodology:** A literature search was performed, focusing on risk factors for severe illness and mortality in pediatric patients diagnosed with COVID-19. Seventy-two articles were identified in MEDLINE. The articles reviewed were randomized controlled trials, prospective observational studies, and retrospective studies. The general evidence for COVID-19 related subjects is currently insufficient. Most of the studies on risk factors for severe illness and mortality are small, single-center studies of variable quality. Evidence for specific admission criteria does not exist at the time of writing this guideline.
- 1.6 Disclaimer:** This guidance was done with the best available data, and limited evidence.
- 1.7 Updating:** This guidance will be updated with the emergence of higher quality evidence or change in the general clinical situation.

## 2. Admission criteria best practice recommendations:

2.1 We Recommend to admit any pediatric patient who meets the case definition of confirmed/suspected COVID-19 as stated in MOH/SCDC guidance version 1.2, who is symptomatic plus any of the following high risk criteria.

### 2.2 The High risk criteria:

- 2.2.1 Infants aged <1 year.
- 2.2.2 Clinical or radiographic evidence of pneumonia.
- 2.2.3 SpO<sub>2</sub> < 92% on room air.
- 2.2.4 Respiratory failure.
- 2.2.5 Pre-existing chronic condition:
  - Chronic pulmonary disease (including moderate to severe asthma).
  - Cardiovascular disease.
  - Chronic kidney disease.
  - Chronic liver disease.
  - Neuromuscular disease.
  - Endocrine disorders (eg, Diabetes Mellitus).
  - Metabolic disorders.
- 2.2.6 Immunosuppressed patient (eg, related to cancer, chemotherapy, radiation therapy, hematopoietic cell or solid organ transplant, immunomodulator and high doses of glucocorticoids).
- 2.2.7 Clinical features that are similar to those of toxic shock syndrome and atypical Kawasaki disease.
- 2.2.8 Gastroenteritis picture with dehydration and/or poor oral intake.
- 2.2.9 Persistent high fever for 3–5 days.
- 2.2.10 Disease course longer than 1 week, and no improvements in symptoms or signs or progressive exacerbation.
- 2.2.11 Severe obesity (body mass index  $\geq$ 120 percent of the 95<sup>th</sup> percentile).
- 2.2.12 Home isolation or non-hospital based quarantine facilities is not applicable as per MOH/CDC update guidance.

### NOTE:

This is a tool to guide clinicians for the decision of admission and does not replace clinical judgment and decisions.

### 3. References:

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- 3.11 Richardson S, Hirsch JS, Narasimhan M, et al. Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the New York City Area. JAMA. 2020.
- 3.12 <https://www.cdc.gov/coronavirus/2019-ncov/hcp/pediatric-hcp.html>. (accessed on May,10,2020).