

DECISION-AID (01/06/2021)
INTENSIFIED HOME-BASED CARE FOR COVID-19 WORRISOME ADULT PATIENTS
IN CASE OF HOSPITAL SATURATION

Online (potentially more recent) version available [HERE](#)

Confirmed or highly suspected COVID-19 adult patients
with at least one sign of pneumonia¹ AND
SpO₂ ≤ 94%² at room air or respiratory rate ≥ 25/minute

Red flags

- **Oxygen saturation at rest:**
 - SpO₂ < 90%
 - SpO₂ < 88% if chronic hypoxaemic lung disease
 - SpO₂ ≤ 92% with an oxygen flow max 4L/min
- **Respiratory Rate** ≥ 30/min at rest or < 12/min
- **Haemodynamic impairment:** systolic hypotension < 100 mmHg OR tachycardia > 120/min OR bradycardia < 45/min
- **Altered consciousness**
- Clinical signs of **dehydration**³ and/or **hypovolemia**⁴
- **No improvement** of health status after 72 hours of intensified home-based management



**IMMEDIATE
HOSPITAL
ADMISSION**

If no Red flags: EVALUATION

Risk factors for severe COVID-19⁵

- > 65 years⁶
- BMI ≥ 30
- Diabetes type 1 and 2
- Chronic heart condition⁷
- High blood pressure
- Chronic lung disease⁸
- Chronic kidney insufficiency (stage 3a to 5)
- Chronic liver diseases
- Malignant hemopathy or active cancer
- Severe immunosuppression⁹
- Neurological conditions¹⁰
- Down syndrome, cerebral palsy
- Homozygous sickle cell disease¹¹

- Recent laboratory analysis
- Patient autonomy¹², training¹³, preferences¹⁴
- Informal caregivers 24/7
- Multi-disciplinary team of health care providers¹⁵
- Personal Protection Equipment for formal/informal caregivers
- Reliable pulse oximeter¹⁶
- Quickly available O₂
- Consignment of all information in the (electronic) medical record

**Information & Concertation : patient, caregivers, healthcare team
(including hospital reference specialist for COVID-19)**

INTENSIFIED HOME-CARE

Frequent (tele)monitoring¹⁷ (at least 2-3 times a day) of vital signs either done by the patient, the caregivers and/or the health care professionals

Thromboprophylaxis	Oxygen therapy	Corticosteroids	Others
<ul style="list-style-type: none"> • Encourage mobilization & hydration in all patients • Enoxaparine SC 50 UI kg/ day, during 14 days: <ul style="list-style-type: none"> ◦ To be considered according to clinical judgement in all bedridden patients ◦ Recommended in bedridden patients with risk factors for venous thromboembolism¹⁸ ◦ Not to be added to chronic anticoagulation treatment 	<ul style="list-style-type: none"> • Nasal cannula¹⁹ • Start if SpO₂ ≤ 94% • Target SpO₂ > 92% with oxygen flow max 4L/min • If chronic hypoxaemic lung disease, target SpO₂ 88-92% • Start at 2L/min, control after 30 min • If necessary, increase the dosage stepwise by of 1L/min • Respect safety measures • Free the unused material 	<ul style="list-style-type: none"> • Systematic corticosteroids not recommended in patients without hypoxaemia requiring supplemental oxygen • In patients with hypoxaemia requiring supplemental O₂: <ul style="list-style-type: none"> ◦ Oral Dexamethasone 6mg/day during 10 days OR ◦ Methylprednisolone 32mg/day during 10 days 	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Paracetamol NSAID (if no contra-indication)</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Antibiotics only if bacterial co-infection²⁰ and according to the BAPCOC recommendations</div> <div style="border: 1px solid black; padding: 5px;">PPI to be considered if NSAID or corticosteroids when risks factors of GI bleeding²¹</div>

! New evidence on COVID-19 is accumulating rapidly.
The validity of this decision-aid tool (01/06/2021) will be re-assessed regularly.
For the most recent version see [here](#).
All footnotes are described in the following page.

- ¹ **Pneumonia signs:** fever, cough, dyspnoea or fast breathing (RR > 20/min).
- ² **SpO₂** must be measured for at least 1-2 minutes. The level of SpO₂ prompting a hospital admission must be interpreted along with the clinical judgement of the patient's health.
- ³ **Clinical signs of dehydration:** weight loss ≥ 5% (severe if > 10%), positive skin fold, thirst, dry mouth, possible confusion and decrease of urine flow.
- ⁴ **Clinical signs of hypovolemia:** arterial hypotension, tachycardia, cold and marbled extremities and decrease of urine flow.
- ⁵ The presence of one of the **risk factors** is a warning sign which should trigger, according to your clinical judgement, a twice more frequent home-based monitoring or, if not possible, an indication for a hospital admission (except when in contradiction with the advanced care planning).
- Be aware** that each additional age year after 65 years and each accumulation of risk factors induces a higher risk.
- ⁶ For patients over **75 years old** that are residents in an institution, please refer to the therapeutic protocol for COVID-19: in French <http://docs.toubipbip.be/docs/d574edb2e8fce1a0.pdf>.
- ⁷ **Chronic heart conditions:** heart failure, coronary disease, cardiomyopathy and pulmonary hypertension.
- ⁸ **Chronic lung disease:** COPD, interstitial lung disease, cystic fibrosis...
- ⁹ **Severe immunosuppression:** organ transplants, bone marrow transplant, HIV/AIDS, long-term use of prednisone or other treatments which weaken the immune system (chemotherapy or radiotherapy)
- ¹⁰ **Neurological conditions:** dementia, cerebro-vascular disease...
- ¹¹ **For other rare diseases**, although there is no current evidence, be confident to your clinical judgement.
- ¹² **Patient autonomy** for food, hydration, monitoring, ability to call for help, therapy.
- ¹³ **Patient and/or his/her caregiver training** to use appropriately oxygen therapy and pulse oximeter, or to identify red flags in order to react quickly and call the nearest hospital. A telephone number that can be reached 24/7 can be useful.
- ¹⁴ **Importance of information and consultation** with the patient, in particular on the level of intensity of care that the patient wants to receive, including admission to hospital in the event of an urgent medical situation (red flags).
- ¹⁵ This **team** can include a coordinating GP, nurses, physiotherapists and a reference hospital team, sharing information by the same communication channels, information; such a team allows integrated care with the consultation of all parties including the patient and his/her caregivers. Therapeutic options should be duly discussed with the patients.
- ¹⁶ The use of **pulse oximeter** should follow the following recommendations :
- Use **CE marked oximeters** and, if possible, obtain the ARMS (Accuracy root mean square) as information to assess their reliability.
 - Use devices with a curve display or at least a pulse signal display and **only accept values associated with a strong pulse signal**.
 - When interpreting the results, be cautious of **possible hypoperfusion** (hypotension, vasoconstrictor drugs and vascular patient) and warm the cold extremities before measurement.
 - Perform **measurements at rest**, during silent breathing.
 - Use **index or middle finger**, clean the finger and remove nail polish if necessary (avoid measuring at toes or earlobes).
 - **Stabilize the device** to avoid motion and
 - **Observe the readings for 30 to 60 seconds** to identify the most current value.
 - In case of patient self-use, provide **clear instructions on how to use** the device.
- ¹⁷ **Monitoring** can be carried out by the patient, relatives or a health professional (general practitioner, nurse, physiotherapist etc.) BUT the medical decision remains the responsibility of the general practitioner. Telemonitoring appears feasible in COVID-19 patients even though there is currently no evidence on the (cost)effectiveness of telemonitoring for COVID-19 patients cared for at home.
- ¹⁸ **Risk of venous thromboembolism:** known thrombophilia; personal or familial history of VTE ; obesity (BMI>30); heart failure; respiratory failure; age >70; active cancer; major surgery in the last 3 months.
- ¹⁹ Preferably give **oxygen** through nasal cannula. A classical oxygen mask can be used in case of a congested nose.
- ²⁰ If **bacterial pneumonia** is suspected or confirmed in patients with COVID-19, the appropriateness of **antibiotics** depends on the local resistance profiles and patients allergy: in Belgium, the Belgian Antibiotic Policy Coordination Commission (BAPCOC) recommends high-dose amoxicillin or amoxicillin clavulanate.
- ²¹ Risk factors for **GI bleeding** : combined use of NSAIDs and corticosteroids / NSAIDs or corticosteroids used jointly with anticoagulants or antiplatelet therapy / History of GI ulcer, bleeding, or perforation />65 years and/or serious comorbidities.

More information on COVID-19: https://covid-19.sciensano.be/sites/default/files/Covid19/COVID-19_fact_sheet_ENG.pdf

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