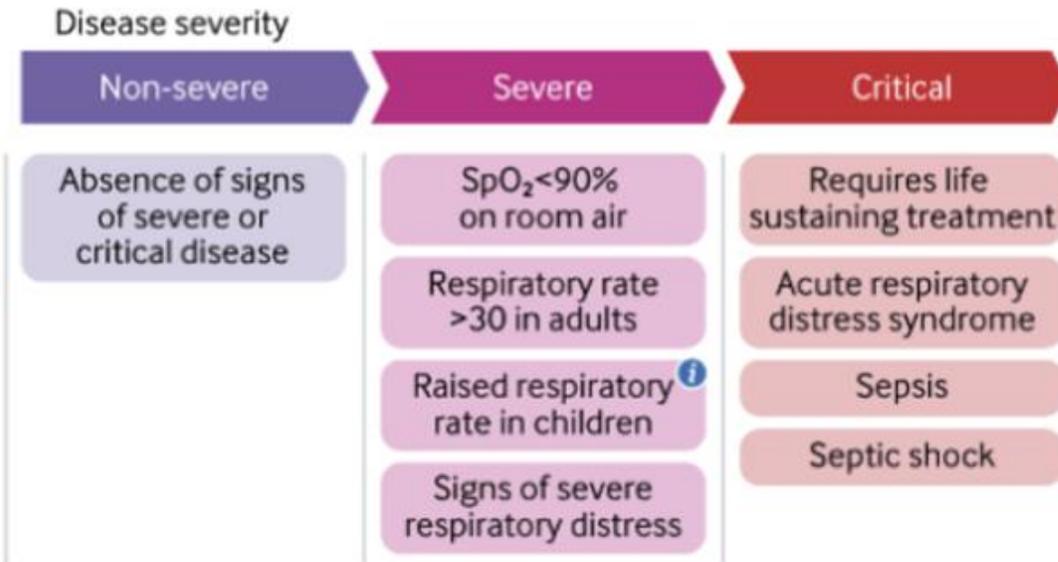


MANAGEMENT OF COVID-19

Classification according to severity and risk factors

Population

This recommendation applies only to people with these characteristics:



NON-SEVERE

MILD: Symptomatic patients meeting the case definition for COVID-19 without evidence of viral pneumonia or hypoxia

MODERATE

Adolescent or adult with clinical signs of pneumonia (fever, cough, dyspnea, fast breathing) but no signs of severe pneumonia, including SpO₂ ≥ 90% on room air
Child with clinical signs of non-severe pneumonia (cough or difficulty breathing + fast breathing and /or chest indrawing) and no signs of severe pneumonia.

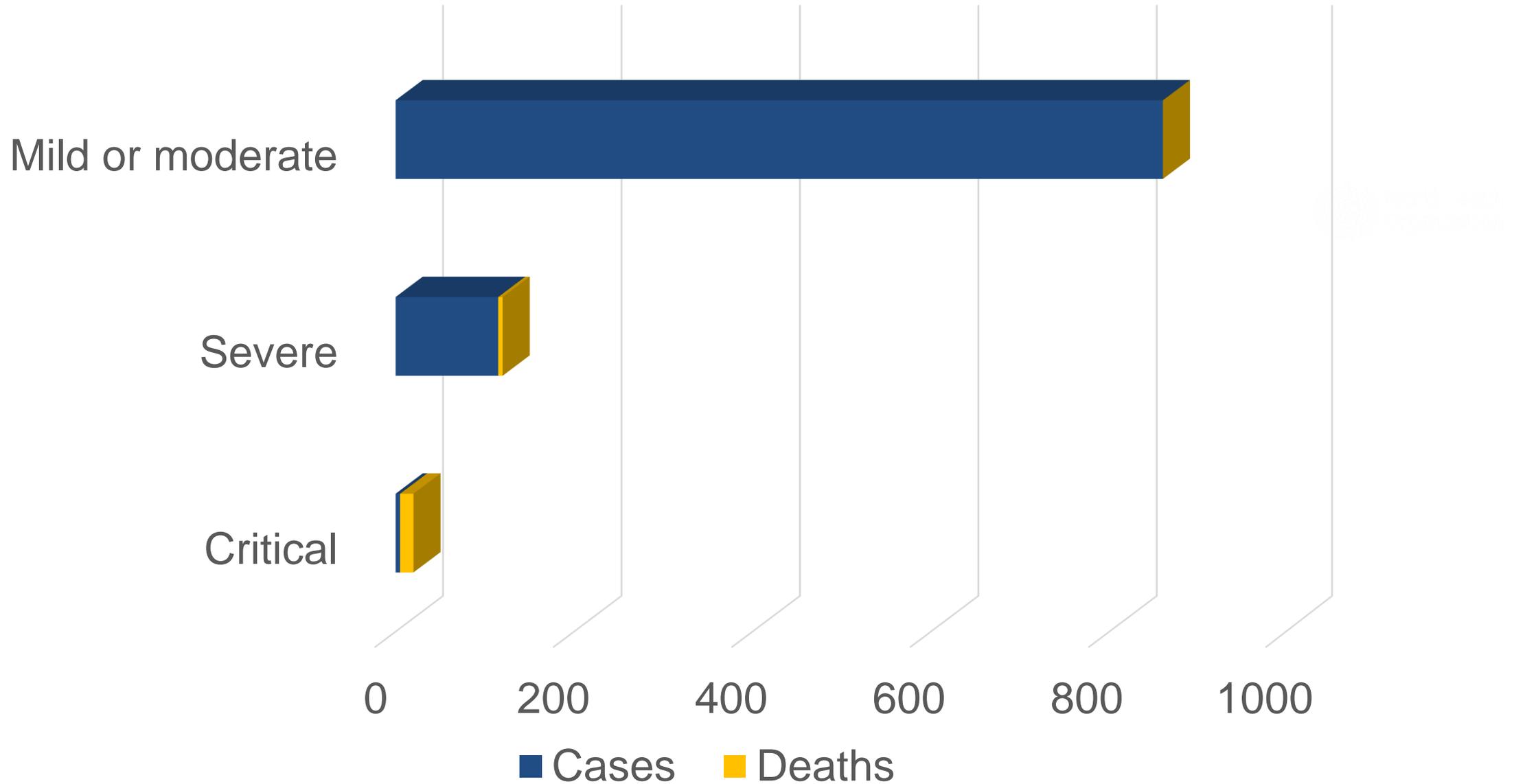
Infographic co-produced by BMJ and MAGIC; designer Will Stahl-Timmins (see [BMJ Rapid Recommendations](#)).

Risk factors for severe disease include:

Older age (> 60 years), Obesity/overweight, hypertension, diabetes, cardiac disease, chronic lung disease, cerebrovascular disease, dementia, mental disorders, chronic kidney disease, immunosuppression (including HIV), cancer, smoking.

In pregnancy, increasing maternal age, high BMI and chronic conditions are also risk factors.

Cases by illness severity



Management of MILD COVID-19



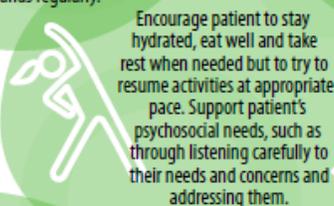
- **Ensure testing for other endemic infections** that cause fever (e.g. malaria, dengue), irrespective of the presence of respiratory signs and symptoms.
- **Isolate** the patient to contain virus transmission at a health facility, community facility or at home.
- **Treat symptoms**
 - Give **antipyretics** for fever
 - Ensure adequate **nutrition**
 - Ensure adequate **hydration**
- Do not routinely give antibiotic therapy or prophylaxis.
- Counsel about signs and symptoms that should prompt urgent care: chest pain, fast or difficulty breathing (at rest or while speaking), fast heart rate, palpitations,



WHO Mild COVID-19 HOME CARE BUNDLE FOR HEALTH CARE WORKERS*



Instruct patient to stay in isolation, preferably in separate room with adequate ventilation. Ensure good flow of fresh air and open windows where possible. Minimize close contact with others (households and/or visitors). If within 1 m of others, patient should wear a mask, and caregivers should wear PPE. Wash your hands regularly.



Encourage patient to stay hydrated, eat well and take rest when needed but to try to resume activities at appropriate pace. Support patient's psychosocial needs, such as through listening carefully to their needs and concerns and addressing them.



Advise patient to monitor for worsening of symptoms, such as chest pain, fast or difficulty breathing (at rest or while speaking), fast heart rate, palpitations, confusion, altered mental status, or any other emergency signs*. If present, instruct patient to call for emergency help according to national protocols.

EMERGENCY SIGN:
Obstructed or absent breathing, severe respiratory distress, cyanosis, shock, coma and/or convulsions.



If there is fever, treat with antipyretic, such as paracetamol. There is no need for antibiotics unless bacterial infection is suspected. In areas with other endemic infections (e.g. malaria, TB, dengue), follow routine treatment protocols for fever. Advise patient taking medications for chronic conditions (e.g. diabetes or hypertension) to continue with them.



If patient is at risk for severe disease[†], monitor oxygen saturation with pulse oximeter, at least twice a day. If SpO₂ is <90%, instruct patient to call for emergency help. If between SpO₂ is between 90–94%, call for urgent help, as this range may be an early sign for deterioration in someone with previously normal lungs. Oral corticosteroids may be prescribed at this time.

[†]Risk factors for severe disease includes: older age (> 60 years), hypertension, diabetes, cardiac disease, chronic lung disease, cerebrovascular disease, dementia, mental disorders, chronic kidney disease, immunosuppression (including HIV), obesity, cancer. In pregnancy, increasing maternal age, high BMI and chronic conditions are also risk factors.



WHO Mild COVID-19 HOME CARE BUNDLE FOR HEALTH CARE WORKERS*

*This is a derivative product related to the WHO COVID-19 Living Clinical Management Guidance, WHO Living Guidelines for Therapeutics and COVID-19, WHO Home care for patients with suspected or confirmed COVID-19 and OpenWHO.org. Advice for health workers that are caring for COVID-19 patients at home.

Severe disease

Adolescent or adult with clinical signs of pneumonia (fever, cough, dyspnoea) plus one of the following: respiratory rate > 30 breaths/min; severe respiratory distress; or SpO₂ < 90% on room air at rest.

Child with clinical signs of pneumonia (cough or difficulty in breathing) + at least one of the following:

- Central cyanosis or SpO₂ < 90%; severe respiratory distress (e.g. fast breathing, grunting, very severe chest indrawing); general danger signs: inability to breastfeed or drink, lethargy or unconsciousness, or convulsions.
- Fast breathing (in breaths/min): < 2 months: ≥ 60; 2–11 months: ≥ 50; 1–5 years: ≥ 40.

Critical COVID-19

Patient presenting with acute respiratory distress syndrome, sepsis, septic shock, acute thrombosis or other conditions that normally require life-sustaining therapies.



CAUTION: The oxygen saturation threshold of 90% to define severe COVID-19 is arbitrary and should be interpreted cautiously. For example, clinicians must use their judgment to determine whether a low oxygen saturation is a sign of severity or is normal for a given patient with chronic lung disease. Similarly, a saturation between 90–94% on room air may be abnormal (in patient with normal lungs) and can be an early sign of severe disease, mainly if patient is on a downward trend. Generally, if there is any doubt, err on the side of considering the illness as severe.

▲ Supplemental oxygen and humidification at home should be medically prescribed and supervised by a health worker. Use only concentrators that are approved by the local authorities. Follow the instructions for use and avoid flammable sources close by.

Criteria for discharging patients from isolation (i.e. discontinuing transmission-based precautions) without requiring retesting:

- For symptomatic patients: 10 days after symptom onset, plus at least 3 additional days without symptoms (including without fever and without respiratory symptoms).
- For asymptomatic cases: 10 days after positive test for SARS-CoV-2.

ADDITIONAL REFERENCES

WHO patient leaflet for the self-management of symptoms

<https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19/publications-and-technical-guidance/2020/sup-port-for-rehabilitation-self-management-after-covid-19-related-illness-2020-produced-by-who/europe>

WHO Healthy at Home

<https://www.who.int/campaigns/connecting-the-world-to-combat-coronavirus/healthyathome>

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<https://www.who.int/publications/i/item/clinical-management-of-covid-19>
<https://www.who.int/teams/health-care-readiness-clinical-unit/covid-19>



World Health Organization

Management of MODERATE COVID-19



- **Ensure testing for other endemic infections and consider alternative causes.**
- **If COVID-19 is suspected, isolate** patient to contain virus transmission.
- **Treat symptoms** as described for mild patients.
- **Antibiotics should NOT be prescribed unless there is explicit clinical suspicion of a bacterial infection**
 - Consider empiric antibiotics for possible pneumonia in older people (especially those in long-term care facilities) and children < 5 years of age.
- **Closely monitor for signs or symptoms of disease progression.** Signs and symptoms of severe disease and pulse oximetry
For patients at high risk for deterioration, isolation in hospital is preferred.

Caring for pregnant women at home



- **Pregnant or recently pregnant women with suspected or confirmed mild COVID-19 may be considered for home care if they:**
 - Are **able to return promptly** to the hospital should their condition worsen
 - There is **no concern for rapid deterioration**, including risk factors such as:
 - Smoking
 - Obesity
 - Other conditions that would place them at increased risk (e.g. cardiovascular disease, diabetes mellitus, chronic lung disease, cancer, chronic kidney disease, immunosuppression)
 - This includes pre-existing and pregnancy-related comorbidities (e.g. pregnancy-induced hypertension, gestational diabetes).
- Isolation is recommended, and can be done at a health facility, community

Caring for children at home

- Children with mild or moderate disease may be considered for home care if they:
 - Do not smoke
 - Are not obese
 - Do not have other conditions that place them at increased risk (e.g. cardiovascular disease, diabetes mellitus, chronic lung disease, cancer, chronic kidney disease, immunosuppression)
- **Caregivers of children must monitor closely for signs and symptoms of clinical deterioration requiring urgent**

Signs and symptoms in CHILDREN with COVID-19 requiring urgent re-evaluation

- Difficulty breathing
 - Infants: grunting or inability to breastfeed
- Fast or shallow breathing
- Blue lips or face
- Chest pain or pressure
- New confusion
- Inability to awaken/not interacting when awake
- Inability to drink or keep down any

Home care for patients with chronic conditions



- Patients with chronic conditions may not be able to access their usual health care facilities during COVID-19.
- Ensure an **adequate drug supply** for patients with non-communicable diseases or other chronic conditions, with repeat prescriptions and mechanisms for delivery readily available (e.g. a 6-month supply instead of usual 90-day supply).
- Older patients should have at least a two-week supply of critical medications and supplies.

Routine Monitoring & Care Framework for COVID-19

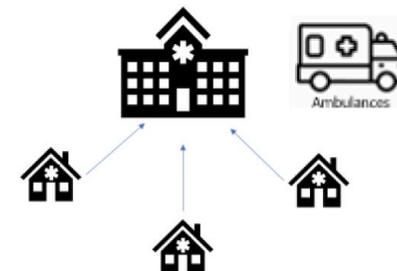
Severity of Illness		Mild	Moderate		Severe	Critical
Patient Disposition		Home*	Home**	Inpatient Ward	High Dependency, Step-down or Intensive Care Unit	Intensive Care Unit
Vital Signs	Temperature	Check on initial assessment	Every 8-12h	Every 6-8h	Intermittent, at least 4 hours	Intermittent, at least every 3h or continuously
	Oxygen Saturation (SpO2)	Check on initial assessment*	Every 8-12h	Every 6-8h	Continuous or as frequent as possible	Continuous or as frequent as possible
	Respiration Rate (RR)	Check on initial assessment				
	Heart Rate (HR) & Regularity	Check on initial assessment				
	Blood Pressure (BP)	Check on initial assessment	Every 8-12h	Every 6-8h	Intermittent, at least every 2-4h	Continuously if arterial line is in place, or every 5-15 minutes during resuscitation, and every 30-60 minutes once stabilized
Assessment Measures	Physical Exam	-	-	On admission & Every 6-8h	Once a shift minimum	Focused examination specific to clinical problems every 30-60 minutes during resuscitation. Once stabilized, every 2-4h
	Mental Status (AVPU)	Minimum screening required for ALL patients	Daily	Every 6-8h	Intermittent, at least every 2-4h	Continuous observation at the bedside with the patient or ever 1-2h, intermittently
	Intake & Output Measurements	-	-	Every 6-8h	Every 4 hours	Every 1h

When to refer to hospital

1. Severe and Critical illness
2. Moderate cases with risk factors*
3. Mild or moderate cases develop symptoms such as Chest pain, Fast or difficulty breathing (at rest or while speaking), Tachycardia or palpitations, Confusion or altered mental status,

Any other emergency sign

EMERGENCY SIGN:
Obstructed or absent breathing, severe respiratory distress, cyanosis, shock, coma and/or convulsions.



Ivermectin in COVID-19: Summary of recommendations

In March 2021, the following WHO recommendation released:

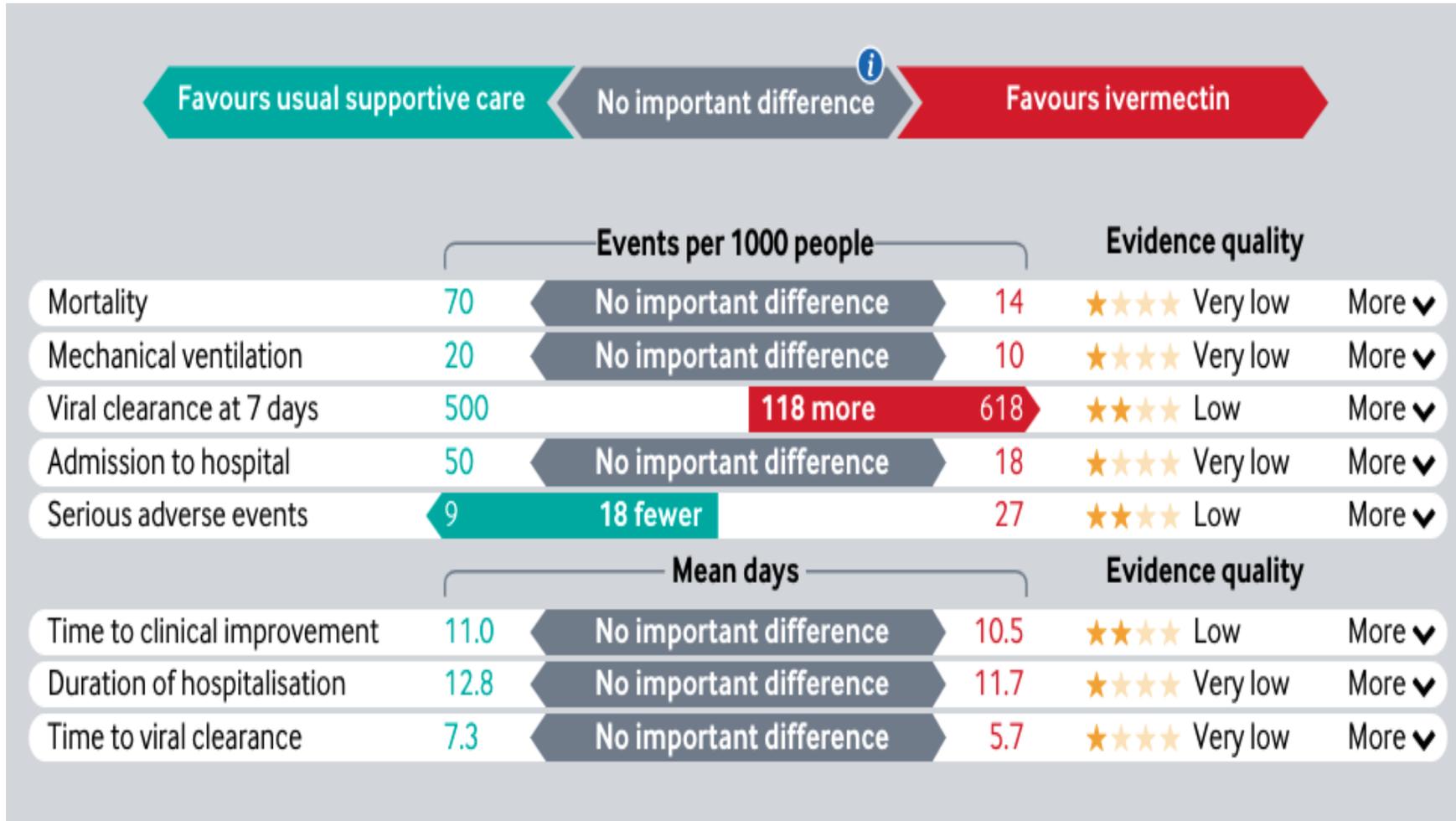
Only in research settings

We recommend not to use ivermectin in patients with COVID-19 except in the context of a clinical trial.

Remark: This recommendation applies to patients with any disease severity and any duration of symptoms.

Summary of Findings Table (Ivermectin)

7 randomized trials
1419 participants



Inhaled corticosteroids for mild or moderate illness

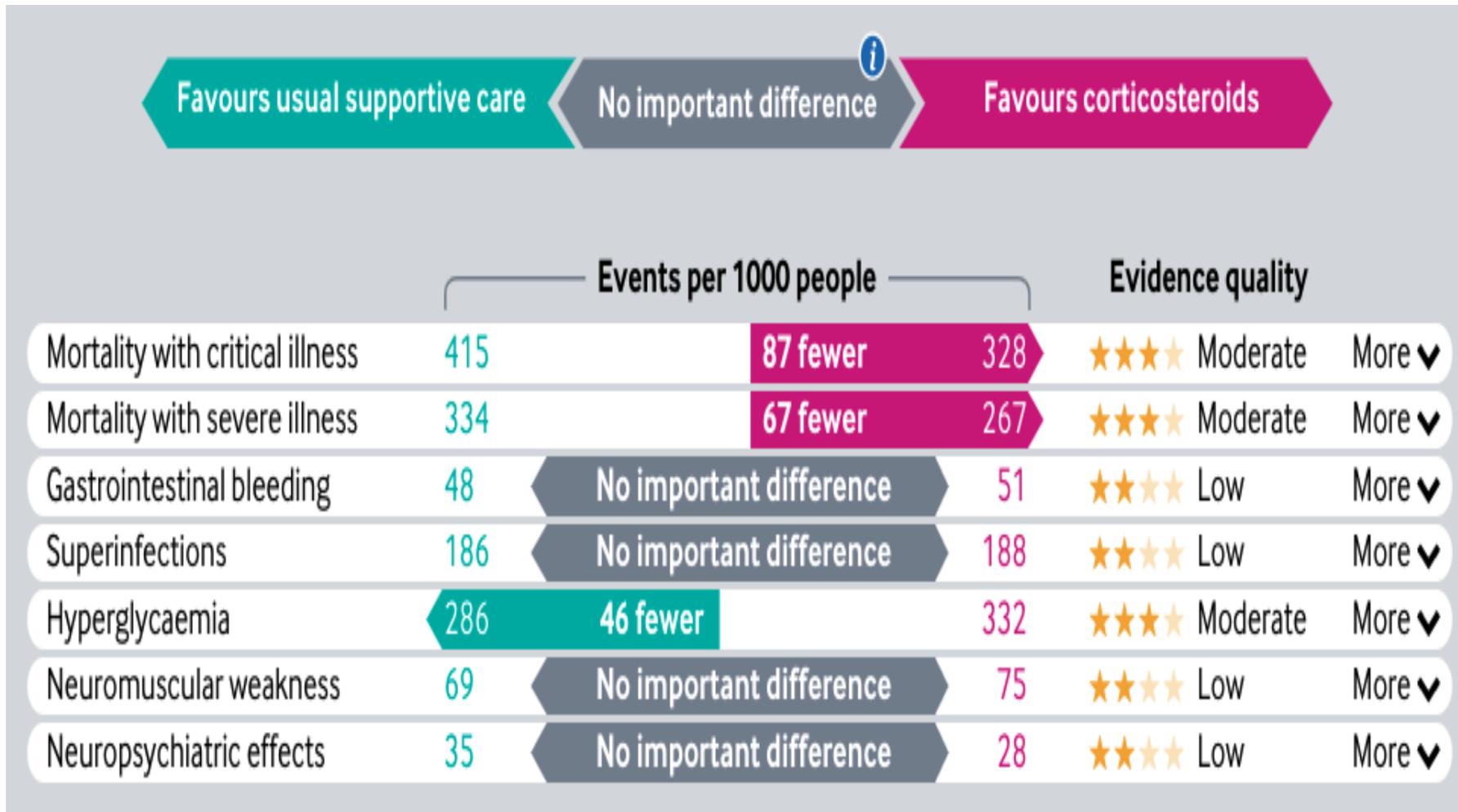
Two research studies have shown promising results.
WHO is evaluating evidence for developing recommendations.

Management of **SEVERE** COVID-19

- **Hospital inpatient care**, with close monitoring
- **Supplemental oxygen therapy with SpO₂ target >90%** ($\geq 94\%$ if emergency signs present, $\geq 92-95\%$ for pregnant women)
- **Awake prone positioning** for patients receiving supplemental oxygen.
- **Systemic corticosteroids** daily for 7-10 days.
- **Standard thromboprophylaxis dosing of anticoagulation**
- **Antibiotics** empiric therapy

Summary of Findings Table (Corticosteroids)

11 randomized trials
5950 participants



Suggested Regimen

Corticosteroids



- Various formulations exist. There are no clear differences in efficacy or adverse effects among different preparations.
- May be given intravenously or orally.
- A duration of 7-10 days may be used.
- Glucose should be monitored in all patients receiving steroids, regardless of prior history of diabetes.

Remdesivir in COVID-19: summary of recommendations

In December 2020, the following recommendations regarding remdesivir for patients with COVID-19 were released by WHO:

- **Conditional recommendation:** We suggest against the use of remdesivir in the treatment of hospitalized patients with COVID-19.

Therapeutics and COVID-19

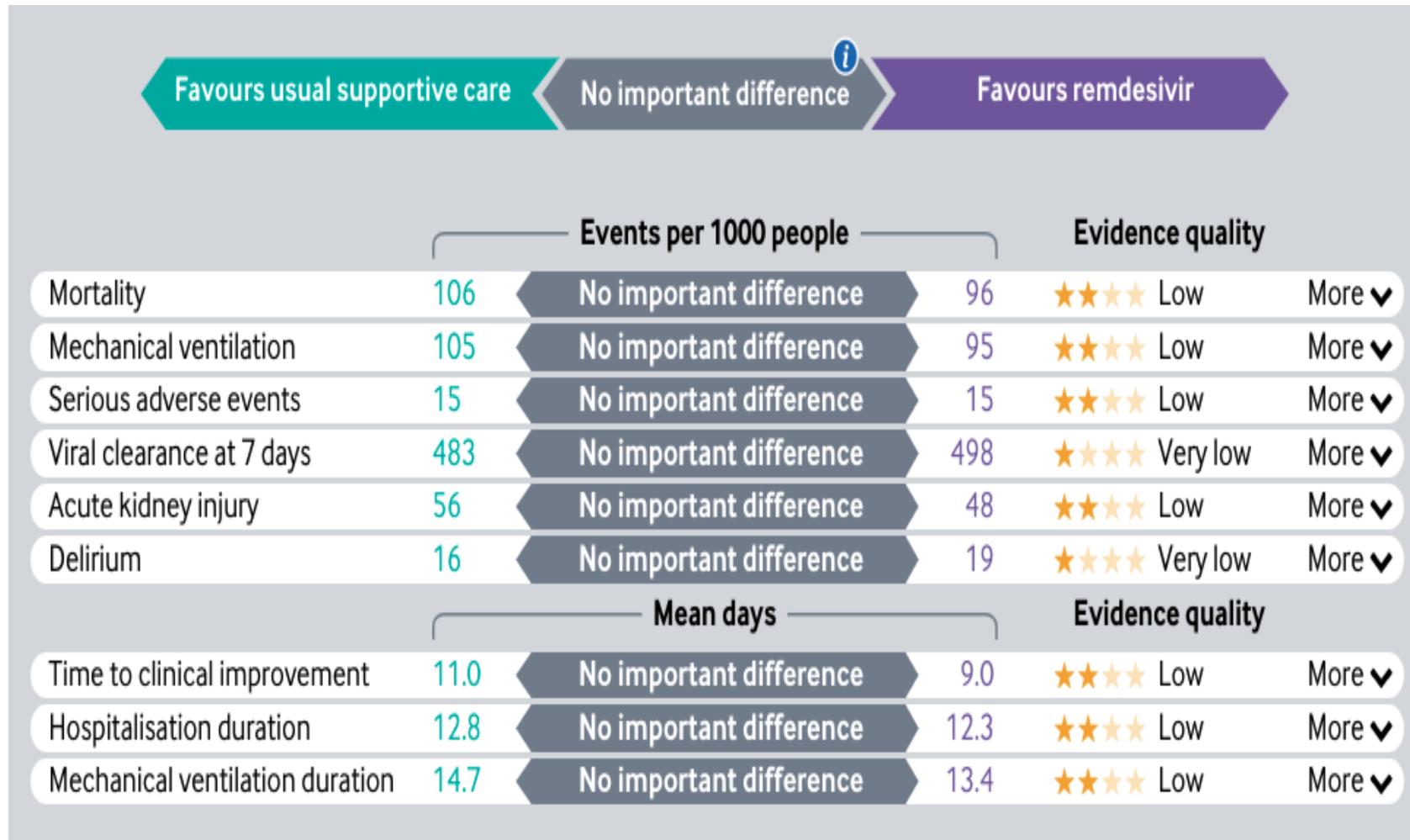
LIVING GUIDELINE

17 DECEMBER 2020



Summary of Findings Table (Remdesivir)

4 randomized trials
7333 participants



Questions and discussion