

3 Practical Tools for the Daily Work in the ICU



We created the following three practical tools for physicians and medical personnel for their daily work in the ICU related to COVID-19 and sepsis.

- Recommendations for Vasoactive Management for Hemodynamic Support in COVID-19 Patients with Septic Shock
- SOFA Score
- WHO Categorization of Clinical Syndromes Associated with COVID-19 in Adults

Recommendations for Vasoactive Management for Hemodynamic Support in COVID-19 Patients with Septic Shock

In March 2020, the Surviving Sepsis Campaign published new therapy guidelines for the treatment of critically ill adult patients with Coronavirus (COVID-19) Based on these guidelines, we have summarized the recommendations specifically related to the vasoactive management for hemodynamic support in COVID-19 patients with septic shock on an A3 poster.

## Surviving Sepsis Campaign:

## Guidelines on the Management of Critically III Adults with Coronavirus Disease 2019 (COVID-19)

Recommendation for Vasoactive Management for Hemodynamic Support in COVID-19 Patients with septic shock:

**Recommendation 1** For adults with COVID-19 and shock, it is suggested using norepinephrine as the first-line vasoactive agent, over other agents (weak recommendation, low quality evidence).

**Recommendation 2** If norepinephrine is not available, it is suggested using either vasopressin or epinephrine as the first-line vasoactive agent, over other vasoactive agents, for adults with COVID-19 and shock (weak recommendation, low quality evidence).

**Recommendation 3** For adults with COVID-19 and shock, it is recommended against using dopamine if norepinephrine is available (strong recommendation, high quality evidence).

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**SOFA Score** 

### Sequential [Sepsis-Related] Organ Failure Assessment Score

	Score				
System	0	1	2	3	4
RESPIRATION					
PaO <sub>2</sub> /FIO <sub>2</sub> , mm Hg (kPa)	≥400 (53.3)	<400 (53.3)	<300 (40)	<200 (26.7) with respiratory support	<100 (13.3) with respiratory support
COAGULATION					
Platelets, ×10 <sup>3</sup> /μL	≥150	<150	<100	<50	<20
LIVER					
Bilirubin, mg/dL (µmol/L)	<1.2 (20)	1.2–1.9 (20–32)	2.0–5.9 (33–101)	6.0-11.9 (102-204)	>12.0 (204)
Cardiovascular	MAP ≥70 mm Hg	MAP <70 mm Hg	Dopamine <5 or dobutamine (any dose) <sup>a</sup>	Dopamine 5.1–15 or epinephrine ≤0.1 or norepinephrine ≤0.1ª	Dopamine >15 or epinephrine >0.1 or norepinephrine >0.1
CENTRAL NERVOUS S	SYSTEM				
Glasgow Coma Scale score <sup>b</sup>	15	13–14	10–12	6–9	<6
RENAL					
Creatinine, mg/dL (µmol/L)	<1.2 (110)	1.2–1.9 (110–170)	2.0–3.4 (171–299)	3.5-4.9 (300-440)	>5.0 (440)
Urine output, mL/d				<500	<200

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#### WHO Categorization of Clinical Syndromes Associated with COVID-19 in Adults

In March 2020, the World Health Organization (WHO) published interim guidelines for the Clinical Management of Severe Acute Respiratory Infection when COVID-19 is Suspected. In this document, the WHO outlined clinical syndromes associated with COVID-19. We have summarized these guidelines for adult patients on an A3 poster, which is also available for printing and can be used as an overview in the intensive care unit.

# WHO's Categorisation of Clinical Syndroms Associated with COVID-19 in Adults

MILD ILLNESS	Patients uncomplicated upper respiratory tract viral infection may have non-specific symptoms such as fever, fatigue, cough (with or without sputum production), anorexia, malaise, muscle pain, sore throat, dyspnea, nasal congestion, or headache.  Rarely, patients may also present with diarrhoea, nausea, and vomiting.  The elderly and immunosuppressed may present with atypical symptoms. Symptoms due to physiologic adaptations of pregnancy or adverse pregnancy events, such as dyspnea, fever, GI-symptoms or fatigue, may overlap with COVID-19 symptoms.
PNEUMONIA	Adult with pneumonia but no signs of severe pneumonia and no need for supplemental oxygen.
SEVERE PNEUMONIA	Adolescent or adult: fever or suspected respiratory infection, plus one of the following: respiratory rate $>$ 30 breaths/min; severe respiratory distress; or ${\rm SpO_2} \le 93\%$ on room air (adapted from 14).
ACUTE RESPIRATORY DISTRESS SYNDROME (ARDS)	Onset: within 1 week of a known clinical insult or new or worsening respiratory symptoms. Chest imaging (radiograph, CT scan, or lung ultrasound): bilateral opacities, not fully explained by volume overload, lobar or lung collapse, or nodules.  Origin of pulmonary infiltrates: respiratory failure not fully explained by cardiac failure or fluid overload. Need objective assessment (e.g. echocardiography) to exclude hydrostatic cause of infiltrates/oedema if no risk factor present.

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#### AMOMED's Offer for Intensive Care Medicine for COVID-19 Patients

The current COVID 19 outbreak has become an enormous challenge for hospitals and medical staff. In this exceptional situation, AMOMED Pharma offers support with pharmaceutical products for intensive care, including for septic shock, which can lead to dangerous complications for COVID-19 patients. Learn more or register here to gain access to our AmoMED Academy for studies and product insights. You can also contact us at <a href="medinfo@amomed.com">medinfo@amomed.com</a> or +43 1 545 01 130. We are happy to answer any questions you may have.

1Quelle: <u>DocCheck Flexikon</u>
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