

COVID-19 SEVERITY SCORING TOOL USER GUIDE

The **COVID-19 Severity Scoring Tool** aims to quickly help determine which patients presenting to Emergency Units with suspected or confirmed COVID-19 require oxygen or mechanical ventilation. It aids frontline providers in classifying patients into one of three severity categories: critical, severe and moderate/mild. Critical patients are most likely in need of mechanical ventilation. Severe patients are expected to require oxygen, while moderate/mild patients probably do not.

The tool was derived via machine learning from 13,500 COVID-19-positive patients in multiple countries. An early assessment suggests that the tool correctly classifies 93.6% of patients, overestimating 5.7% and underestimating 0.8% of patient severities.

Reference Notes

COMORBIDITIES

- **Cardiovascular disease:** a history of atherosclerosis, heart attack, stroke, heart failure, arrhythmia, heart valve problems, peripheral artery disease.
- **Hypertension:** a history of hypertension, not current high BP.
- **Diabetes:** a history of diabetes, not current high blood sugar level.
- **Tuberculosis (TB):** a history of pulmonary (lung) TB.
- **Chronic obstructive pulmonary disease (COPD)/asthma:** emphysema, chronic bronchitis or asthma.
- **Current smoker:** >100 cigarettes in lifetime and a current smoker.

MOBILITY/ACTIVITY

- **Walks independently:** Can walk on their own without any help.
- **Walks with assistance:** Needs help to walk.
- **Requires stretcher (“gurney”):** Cannot walk at all, even with help.

MENTAL STATUS ASSESSMENT (APP ONLY)

- **A = Alert +/- Oriented:** Patient opens eyes spontaneously, responds to examiner and environment, can follow commands and track objects.
- **V = Responds to Voice:** Patient’s eyes do not open spontaneously. Eyes open in response to a verbal stimulus (voice).
- **P = Responds to Pain:** Patient’s eyes do not open spontaneously. Patient responds to application of painful stimuli with motion, moan or cry.
- **U = Unresponsive:** Patient does not respond spontaneously or to verbal or painful stimuli.

AUSCULTATION (APP ONLY)

- **Minor findings bilaterally:** Mildly diminished breath sounds, mild crackles, mild wheezing.
- **Severe findings bilaterally:** Severely diminished breath sounds, severe crackles, severe wheezing, rhonchi, bronchial breath sounds, pleural rub, etc.

NOTES ON RECORDING PATIENT DATA

- Record age in years (App only).
- Record DOB in DD/MM/YY format (paper form only).
- Record temperature in degrees Celsius.
- Record pulse rate per minute.
- Record respiratory rate per minute.
- Record whether or not the patient is experiencing shortness of breath (difficulty or laboured breathing)

Note: The COVID-19 Severity Scoring Tool is a guide to inform clinical decision making. It is **NOT** intended for use as replacement for clinical decision making or diagnostic investigations.

HOW TO USE THE COVID-19 SEVERITY SCORING TOOL - APP

Step 1

- Go to the website link: <https://surgisphere.com/research-tools/triage/severity.html> on the browser of your smartphone or tablet.

Step 2

- Ask patient about history of listed comorbidities and immunocompromised states listed on the tool; mark those that apply on App.
- Ask the patient if s/he has shortness of breath; mark on App.

Step 3

- Assess mental status using the AVPU scale; mark in App.
- Check vital signs; record in App.
- Record age in years in App.

Step 4

- Listen to patient's chest, noting findings in App under "Auscultation".
- Mark the patient's ability to ambulate on the app.

Step 5

- Click the button at the bottom ("Severity Score") to arrive at the severity score category.

Step 6

- Look at the recommendations corresponding to the severity category.
- Note: Recommendations are resource-dependant, and should never replace clinical assessment.

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HOW TO USE THE COVID-19 SEVERITY SCORING TOOL – PAPER

Step 1

- Record patient's full name, DOB and sex.
- Record provider name and designation, and date and time of scoring.

Step 2

- Ask patient about history of all comorbidities and immunocompromised states listed on the tool.
- If the patient has cardiovascular disease, **or** more than 2 comorbidities, **or** immunocompromised: circle the number '2' in the corresponding row.

Step 3

- Assess patient's mobility and circle corresponding "Mobility" number.
- Assess for unresponsiveness and difficulty breathing, and circle corresponding "Assessment" number.

Step 4

- Assess vital signs (temperature, pulse and respiratory rate, and systolic blood pressure).
- Compare vital signs to the scoring parameters.
- Circle the appropriate numbers corresponding to each vital sign.

Step 5

- Add **all** circled numbers to arrive at final score.
- Compare the final score to the number ranges in the severity categories and identify the appropriate category.

Step 6

- Look at the recommendations corresponding to the severity category.
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