Western Cape Government
Health

# WESTERN CAPE CRITICAL CARE TRIAGE TOOL

**Referral of any patient to ICU (COVID-19 & non-COVID-19)**

**RE-REFER** ← **DETERIORATION**

**Does the patient require critical care and ventilatory support?**

**NO** → **Management**
**Non-COVID: High Care/ Ward**
**COVID: Isolation ward**

**YES**

**Has the patient expressed wishes NOT to be admitted to ICU?**

**YES** → **Management Plan (excluding ICU)**

**e.g. Isolation COVID-19 ward.**
**Advise on $O_2$ therapy, IPC**

**e.g.non-COVID-19 patient in HCU/ward**

**Early end-of-life discussion with next –of-kin**

**Refer to Palliative Care Team if available**

***Refer to Association of Palliative Care Practitioners guidelines***

**No response or worsening** → **End-of-life care**

**Palliative Care Team to provide additional support/ advice**

**NO**

**Is the patient likely to benefit from being admitted to ICU?**
**Review exclusion criteria**

**NO**

**YES** ⇄ **Discuss with referral center at earliest opportunity**

| ICU ADMISSION TRIAGE | Calculate Priority Score = Point in A + B + C + D<br>*Max = 15 points. Minimum = 1 point*<br>*Co-Morbidity: Only 1x score given for the worst co-morbidity* | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| A. Acute illness score | SOFA < 6 | SOFA 6-8 | SOFA 9-11 | SOFA ≥12 |
| B. Age | No score | 65-75 years | >75 years | No score |
| C. Baseline Functionality score (last month prior to acute illness) | No score | ECOG 1 | Clinical Frailty Scale = 4 or ECOG 2 | Clinical Frailty Scale =5 (Exclusion ≥6)<br>or ECOG 3 |
| D. Co-morbidity score<br>*Save the most life-years.*<br>*Choose the worst category column for the patient.*<br>*A single point (the worst) is allocated for the Co-Morbidity Score.*<br>*Therefore; if a patient has more than one co-morbidity, only the worst one will determine the point.* | ***Co-morbidities***<br>• Chronic lung disease mMRC 1<br>• Hypertension<br>• DM<br>• BMI ≥35 in COVID-19<br>• Chronic cardiac failure (NYHA 1)<br>• Chronic connective tissue disorders<br>• Burns (ABSI < 6) | ***Co-morbidities (+/- 10-year mortality risk)***<br>• Chronic lung disease mMRC 2<br>• Chronic renal failure (GFR 31-59ml/min)<br>• Chronic cardiac failure (NYHA 2)<br>• Patient on chronic immunosuppressive drugs<br>• Macro-vascular disease with symptoms: IHD (Angina), PVD, TIA<br>• Previous cardiac surgery requiring regular follow up<br>• Malignancy with ≤10 year expected survival<br>• Burns (ABSI 6-7) | ***Co-morbidities (+/- 5-year mortality risk)***<br>• Chronic lung disease mMRC 3<br>• Severe PVD (including non-traumatic amputation), myocardial infarction, stroke<br>• >75 years with hip fracture<br>• HIV: Detectable viral load, CD4 ≤ 200<br>• Malignancies with ≤5 year expected survival<br>• Chronic end-stage renal disease (GFR 16 - 30 ml/min)<br>• Liver cirrhosis with history of decompensation<br>• Burns (ABSI 8-9) | ***Severely life-limiting conditions (death likely within 1 year)***<br>• Chronic end-stage renal disease (GFR ≤ 15 ml/min)<br>• Dialysis<br>• All cancers with ≤1 year expected survival<br>• Chronic cardiac failure (NYHA 3)<br>• High spinal lesion C5 and above<br>• Burns (ABSI 10-11) |

**Reclassify** ← **Improvement in clinical status and/or resource availability**

**Reassess daily for changes in resource availability or changes in clinical condition**

**Transfer to Appropriate Site**
- **COVID-19 patients in isolation ward**
- **Non-COVID-19 patients in high care/other site**

**Management Plan excl. ICU**
- **Medical care incl. intensive symptom management**
- **Advise on $O_2$ Rx, IPC**
- **Psychosocial support**

**RED 1-3**
***Highest priority for ventilatory support***

**ORANGE 4-6**
***Intermediate priority for ventilatory support***

**YELLOW 7-9**
***Low priority for ventilatory support***

**GREEN 10-15**
***Lowest priority for ventilatory support. Palliation strongly suggested***

**Admit referrals sequentially from red to orange to yellow to green priority categories. If there are ties within a specific category, tiebreakers will be used to prioritize patients:**

1) **Number of co-morbidities: Preference to the patient with the least number of co-morbidities.**
2) **Patient age groups (years) in following order: 12-40; 41-60; 61-75; >75. Preference to the patient who have completed the least number of life-cycles.**
3) **Individuals whose work supports provision of healthcare and essential services to others.**

→ **Patients triaged to not receive ICU bed/ ventilation**

# WESTERN CAPE CRITICAL CARE TRIAGE TOOL

**IN-ICU DECISION TOOL:**

**Re-assess all patients admitted to ICU at 48 hours and at 120 hours after admission.**

**Reclassify the PRIORITY CATEGORY using; 1) Baseline SOFA score at admission, 2) SOFA after 48 hours, 3) SOFA after 120 hours.**

**Principles of re-assessment:**

**1) Once a patient has been accepted into the ICU (guided by the PRIORITY CALCULATOR FOR ADMISSION above), progression IN-ICU is now monitored by using the initial SOFA score as baseline in relation to the follow-up SOFA scores (delta-SOFA). The SOFA score can STAY THE SAME (not ideal), IMPROVE (desired) or DETERIORATE (worst).**

**2) After re-assessment (at 48 hours and 120 hours after admission) the patient can only stay in the SAME PRIORITY CATEGORY if the SOFA has IMPROVED.**

**3) If the SOFA score stays THE SAME in a re-assessment, the patient must move to the next LOWER PRIORITY CATEGORY**

**4) If the SOFA IMPROVES, the patient can either stay in the SAME PRIORITY CATEGORY, or move into a HIGHER PRIORITY CATEGORY, depending on the amount of SOFA score improvement.**

**SOFA < 6**

***Highest priority for continued ICU support***

**SOFA 6-8**

***Intermediate priority for continued ICU support***

**SOFA 9-11**

***Low priority for continued ICU support***

**SOFA 12 and more**

***Lowest priority for continued ICU support***

**Continue with critical care and re-evaluate and reclassify at 48 hours after ICU admission, 120 hours after ICU admission and then every 24 hours thereafter**

**When the patient moves into a lower priority after reassessment, the highest category patient will get preference. If there is no competition for resources, care will continue as is.**

**It is highly recommended that a decision-making team or SPECIALIST ICU UNIT help facilitate this process.**

**End-of-life care**

**Withdrawal of ventilatory support as per guidelines**

**Palliative Care Team to provide additional support/advice**

**Exclusion criteria for admission to ICU**

- **Patient expressed wish not to be admitted to ICU / advance directive**
- **Clinical Frailty Scale ≥6 and more**
- **ECOG score 4 (Eastern Cooperative Oncology Group)**
- **< 6 months life-expectancy**
- **Unwitnessed cardiac arrest**
- **Severe and irreversible neurological injury (GCS<6: motor score <4)**
- **Irreversible age-specific hypotension unresponsive to fluid resuscitation and vasopressor therapy**
- **Severe baseline cognitive impairment (inability to perform ADL)**
- **Chronic respiratory disease with poor functional capacity – mMRC 4**
- **Cardiovascular disease - NYHA 4 or known poor ejection fraction on maximal medical therapy**
- **HIV/AIDS with an AIDS defining illness**
- **CD4 ≤100 and/or VL ≥10 000 c/ml**
- **Severe burns with high predicted mortality (ABSI ≥ 12)**
- **Liver cirrhosis - Child Pugh ≥7 or MELD ≥20**
- **Advanced untreatable neuromuscular disease**
- **Chronic kidney failure in patient not eligible for dialysis**
- **End stage organ failure and not a candidate for transplantation**

## Sequential (Sepsis Related) Organ Failure Assessment

| Score | 0 | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| **Respiratory** | | | | | |
| $PaO_2/FiO_2$, mmHg | Normal | <400 (53.3) | <300 (<40) | <200 (26.7) with respiratory support | <100 (13.3) with respiratory support |
| **Coagulation** | | | | | |
| Platelets x10/$mm^3$ | Normal | <150 | <100 | <50 | <20 |
| **Liver** | | | | | |
| Bilirubin, µmol/l (mg/dL) | Normal | 20-32 (1.2-1.9) | 33-101 (2.0-5.9) | 102-204 (6.0-11.9) | <204 (12.0) |
| **Cardiovascular** | | | | | |
| Hypotension (mcg/kg/min) | Normal | MAP<70 mmHg | Any dose Dobutamine | Adrenaline <0.1 or Noradrenaline <0.1 | Adrenaline >0.1 or Noradrenaline >0.1 |
| **Central Nervous System** | | | | | |
| Glasgow Coma Score | Normal | 13-14 | 10-12 | 6-9 | <6 |
| **Renal** | | | | | |
| Creatinine, µmol/l (mg/dL) or Urine output | Normal | 110-170 (1.2-1.9) | 171-299 (2.0-3.4) | 300-440 (3.5-4.9) or <500 mL/day | >440 (5.0) or <200 mL/day |

# WESTERN CAPE CRITICAL CARE TRIAGE TOOL

**Clinical Scores to be used for assessment**

## Clinical Frailty Scale

**1 Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

**2 Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

**3 Managing Well** – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

**4 Vulnerable** – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being "slowed up", and/or being tired during the day.

**5 Mildly Frail** – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

**6 Moderately Frail** – People need help with **all outside activities** and with **keeping house.** Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

**7 Severely Frail** – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

**8 Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

**9 Terminally Ill** - Approaching the end of life. This category applies to people with **a life expectancy <6 months**, who are **not otherwise evidently frail.**

**Scoring frailty in people with dementia**

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

In **severe dementia**, they cannot do personal care without help.

### mMRC Breathlessness Scale

**This score should be used for patients diagnosed with COPD**

| Grade | Grade Description of Breathlessness |
|---|---|
| 0 | I only get breathless with strenuous exercise |
| 1 | I get short of breath when hurrying on level ground or walking up a slight hill |
| 2 | On level ground, I walk slower than people of the same age because of breathlessness, or have to stop for breath when walking at my own pace |
| 3 | I stop for breath after walking about 100 yards or after a few minutes on level ground |
| 4 | I am too breathless to leave the house or I am breathless when dressing |

### New York Heart Association (NYHA)

**This score should be used for patients diagnosed with heart failure**

| Class | Patient symptoms |
|---|---|
| I | No limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitation, dyspnea (shortness of breath). |
| II | Slight limitation of physical activity. Comfortable at rest. Ordinary physical activity results in fatigue, palpitation, dyspnea (shortness of breath). |
| III | Marked limitation of physical activity. Comfortable at rest. Less than ordinary activity causes fatigue, palpitation, or dyspnea |
| IV | Unable to carry on any physical activity without discomfort. Symptoms of heart failure at rest. If any physical activity is undertaken, discomfort increases |

### ECOG Performance Status

**This score should be used for patients diagnosed with a malignancy**

| Class | Patient symptoms |
|---|---|
| 0 | Fully active, able to carry on all pre-disease performance without restriction |
| 1 | Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work |
| 2 | Ambulatory and capable of all selfcare but unable to carry out any work activities; up and about more than 50% of waking hours |
| 3 | Capable of only limited selfcare; confined to bed or chair more than 50% of waking hours |
| 4 | Completely disabled; cannot carry on any selfcare; totally confined to bed or chair |


*Acknowledgements:*

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