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Clinical Guidance:

Assessing whether COVID-19 patients will benefit from critical care, and an objective approach to capacity challenges

Endorsed by:

Royal College of Physicians (London)
Scottish Intensive Care Society
Welsh Intensive Care Society
All-Wales Trauma and Critical Care Network
National Critical Care Networks of England
Critical Care Network Northern Ireland

Appendix 1. Capacity Management: CRITCON-PANDEMIC Levels

This is a significant adaptation of language and concept from existing CRITCON-WINTER definitions

The CRITCON-PANDEMIC matrix allows available resources to be fairly reflected in individualised decision making, and if applied correctly **prevents** inappropriate recourse to triage whilst resources are available, maintaining existing legal and ethical best practice.

CRITCON-2020	Definition	Organisational Responsibility (Trust/Health Board, Network, Region)	Clinician responsibility
0 – NORMAL	Able to meet all critical care needs, without impact on other services. Normal winter levels of non-clinical transfer and other 'overflow' activity.	Routine sitrep reporting Match critical care capacity to demand. Consistent implementation of legal and professional best practice.	Apply usual ethical and legal principles. Use Decision Support Aid (Appx 2) to assess benefit. Apply existing best practice in implementation, discussion and documentation Deliver best available care both to infected patients, and non-infected patients indirectly affected by changes to normal services. Lead and participate fully in reporting, shared awareness of the evolving situation, data collection, and research.
1 PREPARATORY	Significant expansion/multiplication of bed capacity, supported by extensive redeployment of staff and equipment from other areas.	Plan and make physical preparation for large-scale critical care expansion. Prioritisation and reduction of elective work. Identify regional mutual aid systems and patient flows. Ensure good awareness of and engagement with local capacity reporting mechanisms including CRITCON Build resilience in data collection and research capacity.
2 SUSTAINED SURGE	System at full stretch, both in ventilator capacity and/or staffing levels, with staff working outside usual role. but adherence to usual clinical practice goals wherever possible Other resources may be becoming limited e.g. oxygen, renal replacement therapy.	Mutual regional aid in place and active. Escalate and ensure maximum awareness of 'hot spots' at regional and national level. CRITCON 2 should be the target state during the high-intensity stage of the pandemic. Units still in CRITCON 1 may need to step up to CRITCON 2 to aid others and minimise the occurrence of CRITCON 3. Ensure good governance and support for clinical staff working flexibly. Ensure rapid data collection and research participation.
3 SUPER SURGE	Some resources starting to be overwhelmed. Full use of stretched staffing ratios and cross-skilling. Delivery of best available care but not usual care, for the majority of patients.	Whole hospital response. Active decompression of hot sites. High-volume transfers within and across regional boundaries. Maximum co-ordinated effort to prevent any individual site progressing to CRITCON 4
4 CODE RED: TRIAGE RISK	Services overwhelmed and delivery of critical care is resource limited. This stage should never be reached at any site unless regionally & nationally recognised and declared.	Full engagement between clinical frontline, Trust/Health Board, Region and national/political leadership, under 12 hourly review.	Focus on **minimising loss of life.** Use Decision Support Aid to assess benefit and prioritise

Usual legal and ethical frameworks

Extremis

Shared operational/clinical responsibility

For implementation across the Four Nations please refer to relevant Surge Plans and CMO/Regional teams.

Appendix 2 – COVID-19 Decision Support Aid

Only valid if used as part of 'Clinical Guidance: assessing whether COVID-19 patients will benefit from in critical care, and an objective approach to capacity challenges', ICS 2020.

COVID-19 DECISION SUPPORT AID

AGE	CLINICAL FRAILTY SCALE	CO-MORBIDITY in six months prior
16-39	**VERY FIT** - people who are robust, active, energetic and motivated. These people commonly exercise regularly. They are amongst the fittest for their age.	**CARDIAC ARREST** from any cause in last 3 years
40-39	**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)	**CHRONIC CONDITION** causing: • ≥ 3 hospital admissions in the last year • ≥ 4 weeks continuous admission for current inpatients.
50-59	**MANAGING WELL** - people whose medical problems are well controlled, but are not regularly active beyond routine walking.	**CONGESTIVE HEART FAILURE** with symptoms at rest or on minimal exertion.
60-69	**VULNERABLE** - while not dependent on others for daily help, often symptoms limit activities. A common complaint is being 'slowed up', and being tired in the day.	**CHRONIC LUNG DISEASE** with symptoms at rest or on minimal exertion.
70-79	**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.	Severe and irreversible **NEUROLOGICAL CONDITION** including moderate to severe dementia.
80+	**MODERATELY FRAIL** - people who 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.	**CHRONIC LIVER DISEASE** with Child-Pugh score ≥ 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).	**END STAGE CHRONIC RENAL FAILURE** requiring renal replacement therapy.
	VERY SEVERELY FRAIL - completely dependent, approaching end of life. Typically, they could not recover even from a minor illness.	**MALIGNANCY** haematological or metastatic with distance metastases
	TERMINALLY ILL - approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail.	**IMMUNOCOMPROMISE** congenital, acquired, or secondary to Rx (last 6/12)

Decreasing likelihood of benefit (AGE)

Decreasing likelihood of benefit (CLINICAL FRAILTY SCALE)

One or more = less likelihood of benefit (CO-MORBIDITY)

Note (i) this is not a ranked list, and (ii) inclusion on list does not imply equal weighting.

Outcomes in critical care

AGE	DIED
16-39	22.1%
40-49	26.6%
50-59	42.3%
60-69	57.4%
70-79	68.6%
80+	67.3%

Source: www.icnarc.org
Interim data 17 Apr 2020 showing deaths to date of report, not final mortality

Caveat: interpretation of frailty scale in people under 65, or in those of any age with stable disability

The Clinical Frailty Score is a global clinical measure of frailty in older people, reflecting a lifelong accumulation of physiological insults that leads to reduced physiological reserves, associated with poor outcomes.

It has not been validated for use on people under the age of 65, and when used in this context, is more likely to reflect a person's disability.

Therefore individual assessments must be made on the case of people under 65, or those of any age with stable disability (e.g. cerebral palsy) and learning disabilities or autism. In these contexts, dependency on carers or diminished ability to mobilise or exercise may not be an accurate indicator of poor biological reserve or capacity to recover from acute illness.

Outcomes in critical care

Any severe comorbidity*	Died (COVID-19 2020 to date)	Died (viral pneumonia 2017-19)
No	50.2%	19.3%
Yes	60.7%	33.9%

*Indicative information only, list of conditions may differ.
Source: www.icnarc.org

Interim data 17 Apr 2020 showing deaths to date of report, not final mortality

Use decision support aid + clinical judgement to assess likely outcome:

Expected to survive / Likely to survive / Outcome uncertain / Not Likely to survive / Not expected to survive

Apply in the context of a recognised decision-making frameworks[1,2] to identify, communicate and document treatment goals, alternative treatment options, timeline for review of goals, and additional support requirements.
Ensure current CRITCON-PANDEMIC level is accurate, and seek colleague and Trust support as needed.

1. https://www.nice.org.uk/guidance/ng159 (accessed 20 Apr 2020)
2. www.criticalcarenice.org (accessed 20 Apr 2020)