Challenges of advance directive planning in critically ill patients with COVID 19 infection

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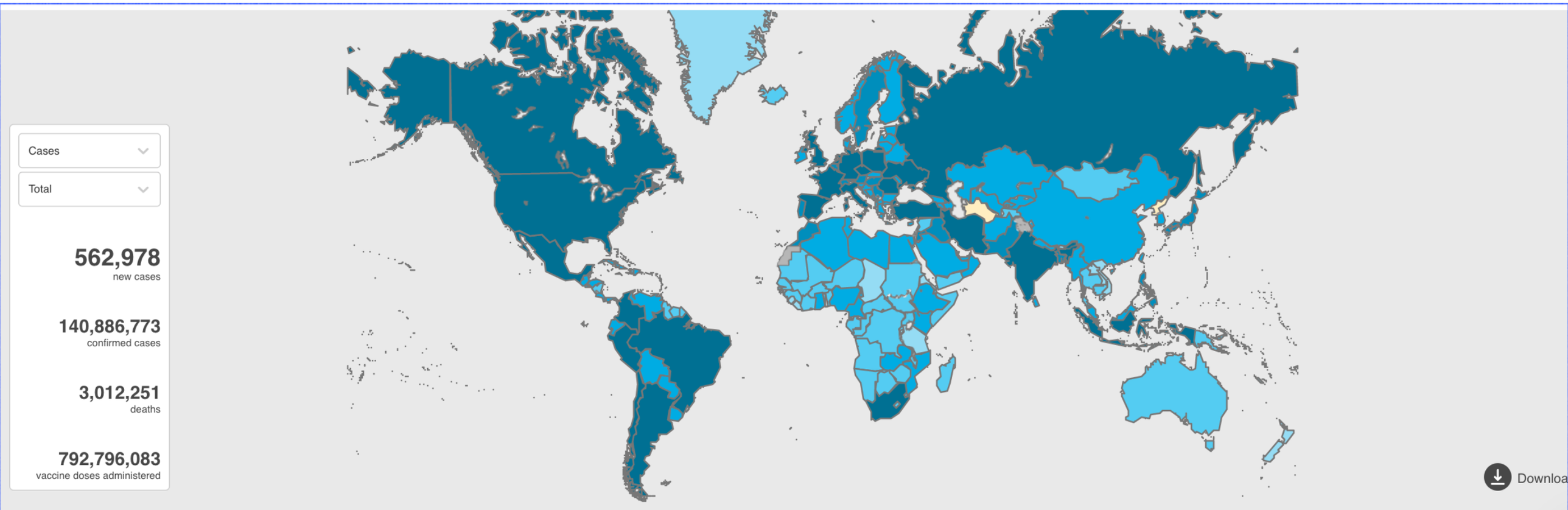
Internal Medicine Consultant
Critical Care Consultant

Objectives

- Coronavirus (COVID-19) Pandemic introduction.
- Ethical implications of advanced directive planning.
- Approach to advanced directive planning in Critical care.
- COVID 19 infection severity score.
- Triage of critically ill patients with COVID-19.

World Health Organization

WHO Coronavirus (COVID 19) Dashboard



Globally, as of **10:33am CEST, 19 April 2021**, there have been **140,886,773 confirmed cases** of COVID-19, including **3,012,251 deaths**, reported to WHO. As of **19 April 2021**, a total of **792,796,083 vaccine doses** have been administered.

Introduction

- The novel CoronaVirus disease 2019 (COVID-19) is placing a tremendous stress on health care system worldwide.

- **There are many appropriate responses to the pandemic including:**

1. Public heath measures to reduce the extent of the spread

2. Ensure that clinicians have high quality discussion about goals of care in community settings or after hospitalization.

Ethical implications of advanced care plannin

- The Ethical challenge is regarding rationing health care in the context of scarce resources and crisis capacity.
- Promoting public good.
- Respecting patient autonomy.
- Balancing patient harm with anticipated benefits.

Continuation…..

- Upholding our duty of care.
- Protecting health care providers.
- Equity.
- Promoting trust with patients, family members and the heath care providers.
- Using limited health care resources responsibly.

Initiation of Advanced directive planning

- Initial step can take place in outpatient settings or Online resources.

- **Importance of initiation of goals of care discussion:**

1. Patient: To avoid unwanted intensive life sustaining treatment.

2. Health Care system: Avoid nonbeneficial high intensity care.

3. Families, patients and health care professionals: Avoid putting them at high risk of disease transmission.

Components of advanced Care Planning

- Cardiopulmonary resuscitation (CPR).
- Organ Donation.
- Continue life support.
- End of life comfort measures.

Cardiopulmonary resuscitation (CPR)

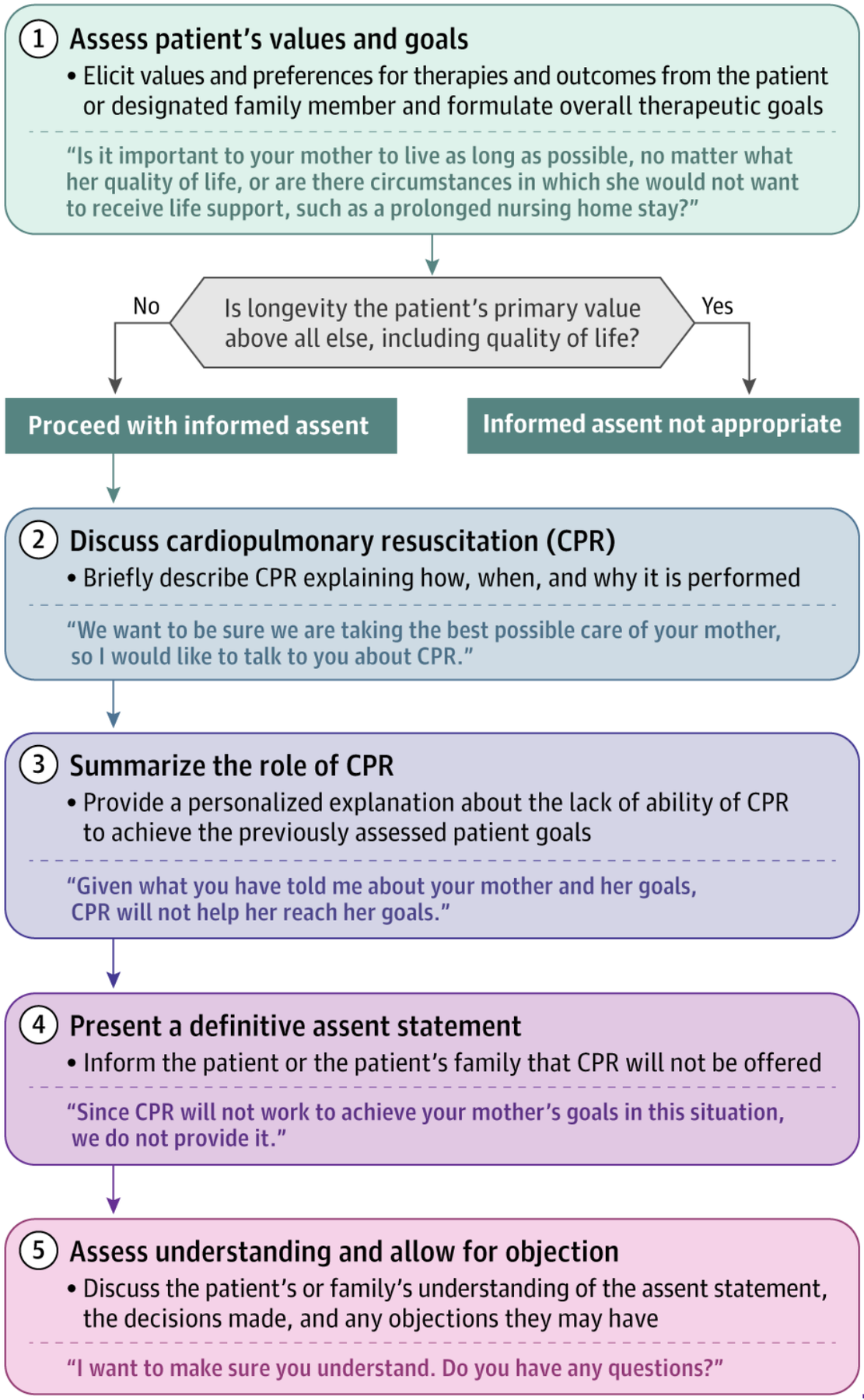
- **Inpatient approach is essential in nonbeneficial situations:**

1. Increasing psychological distress on the families.

2. Increasing psychological distress on the health care workers and increase risk of exposure.

3. Increase strain on personal protective equipment

Proposed approach to having an informed assent discussion with a patient or family member



JAMA. 2020;323(18):1771-1772. doi:10.1001/jama.2020.4894

Scoring system

- Development and validation of the ISARIC 4C Deterioration model for adults hospitalized with COVID-19: a prospective cohort study

- Rishi K Gupta, MRCP, Prof Ewen M Harrison, PhD, Antonia Ho, PhD, Annemarie B Docherty, PhD, Stephen R Knight, MBChB, Maarten van Smeden, PhD, et al.

- January 11, 2021:10.1016/S2213-2600(20)30559-2

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South Asian	3520 (5·3%)	1010 (7·6%)	479 (3·2%)	1992 (5·4%)	39 (5·1%)
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Missing	8519	1780	1680	4832	227
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4C Mortality Score	Risk Group	Inhospital Mortality
0-3	Low	1.2 - 1.7%
4-8	Intermediate	9.1-9.9%
9-14	High	31.4-34.9%
≥15	Very High	61.5-66.2%

Critical care Triage

[Critical Care Special Features]

CHEST

Triage of Scarce Critical Care Resources in COVID-19 An Implementation Guide for Regional Allocation

An Expert Panel Report of the Task Force for Mass Critical Care and the American College of Chest Physicians

Ryan C. Maves, MD, FCCP; James Downar, MD; Jeffrey R. Dichter, MD; John L. Hick, MD; Asha Devereaux, MD, MPH, FCCP; James A. Geiling, MD, MPH, FCCP; Niranjan Kissoon, MBBS; Nathaniel Hupert, MD, MPH; Alexander S. Niven, MD, FCCP; Mary A. King, MD, MPH, FCCP; Lewis L. Rubinson, MD, PhD; Dan Hanfling, MD; James G. Hodge Jr, JD, LLM; Mary Faith Marshall, PhD; Katherine Fischkoff, MD; Laura E. Evans, MD, FCCP; Mark R. Tonelli, MD, FCCP; Randy S. Wax, MD, MEd; Gilbert Seda, MD, PhD, FCCP; John S. Parrish, MD, FCCP; Robert D. Truog, MD; Charles L. Sprung, MD, FCCP; and Michael D. Christian, MD, FCCP; on behalf of the ACCP Task Force for Mass Critical Care

Endorsed by the American Association of Critical-Care Nurses and the Society of Critical Care Medicine

Substantive values to guide ethical decision-making

- Individual Liberty
- Protection of the public from harm
- Proportionality
- Privacy
- Duty to provide care
- Reciprocity
- Equity
- Trust
- Solidarity
- Stewardship

Procedural values to guide ethical decision-making

- Reasonableness
- Transparency
- Inclusiveness
- Responsiveness
- Accountability

Ethical principles possible to inform triage

- Utilitarian: “greatest good for the greatest number”
- Egalitarian: “allocation based upon need”
- Libertarian: “protection of individual liberty & patient choice” Social benefit
- Communitarian: “respect for social & cultural values”
- Life cycle: “fair innings or years life saved”

Triage Decision Algorithm

Step 1: Does this patient meet criteria for critical care services (i.e., need for mechanical ventilation or circulatory support)?

NO → Admit to medical ward with supportive care

Step 2: Does the patient (or designated surrogate) agree to receive intensive care?

NO → Admit to medical ward with supportive care
Palliative care consultation
Consider comfort measures

Step 3: Does the patient's expected risk of mortality, based on comorbid conditions and acute illness using standardized assessments, exceed the threshold set by the regional/local triage plan?

YES → Admit to medical ward with supportive care
Palliative care consultation
Consider comfort measures

REASSESS → Periodically consider reallocation of critical care resources based on changes in availability, demand, and patient status

NO → **Admit with intensive care services,** with periodic reassessment and possible reallocation by triage team.

REASSESS → Periodically consider reallocation of critical care resources based on changes in availability, demand, and patient status

Diagram 6.1: CRITICAL CARE TRIAGE PROTOCOL
For all patients requiring treatment in the ICU, whether or not they have COVID-19

Does the patient present with any of the following criteria for inclusion?

- Refractory hypoxemia ($FiO_2 \geq 40\%$ for saturation > 90% for COVID-19 patients or $SpO_2 < 90\%$ with non-rebreathing mask / $FiO_2 > 0.85$ for non-COVID-19 patients)
- Respiratory acidosis with a pH < 7.2
- Clinical signs of imminent respiratory failure
- Inability to protect airway or to keep it open
- Hypotension with clinical shock refractory to reestablishment of fluid volume, requiring vasopressor/inotrope treatment that cannot be dealt with on the unit

NO → Do not admit to ICU

YES

Does the patient present with any of the following criteria for exclusion?

- Score SOFA > 11
- Cardiac arrest: unwitnessed, recurrent, refractory to usual measures; arrest related to trauma
- Metastatic malignity with poor prognosis
- Serious burns: body surface > 40%, severe inhalation injuries
- Organ failure in terminal stage:
  - cardiac: class 3 or 4, New York Heart Association
  - pulmonary: chronic severe pneumopathology with FEV < 25%
  - liver: MELD score > 20
  - renal: requiring dialysis
  - neurological: grave and irreversible neurological event/status with high probability of mortality

YES → Do not admit to ICU

NO

What category is the patient in at this time?

- Blue: High probability of mortality; should not be admitted to ICU or should be discharged from critical care and receive medical treatment and palliative care, if required
  - Initial: Criteria for exclusion or SOFA > 11
  - 72 hours: Criteria for exclusion or SOFA > 11 or SOFA 8 to 11, unchanged
- Red: Highest priority for critical care
  - Initial: SOFA < 7 or failure of one organ
  - 72 hours: SOFA < 11 and declining
- Yellow: Intermediate priority for critical care
  - Initial: SOFA 8 to 11
  - 72 hours: SOFA < 8 with minimal decline (drop of < 3 points in 72 hours)
- Green: Low probability of mortality; put off admission to or discharge from critical care
  - Initial: no major organ failure
  - 72 hours: no longer needs a ventilator

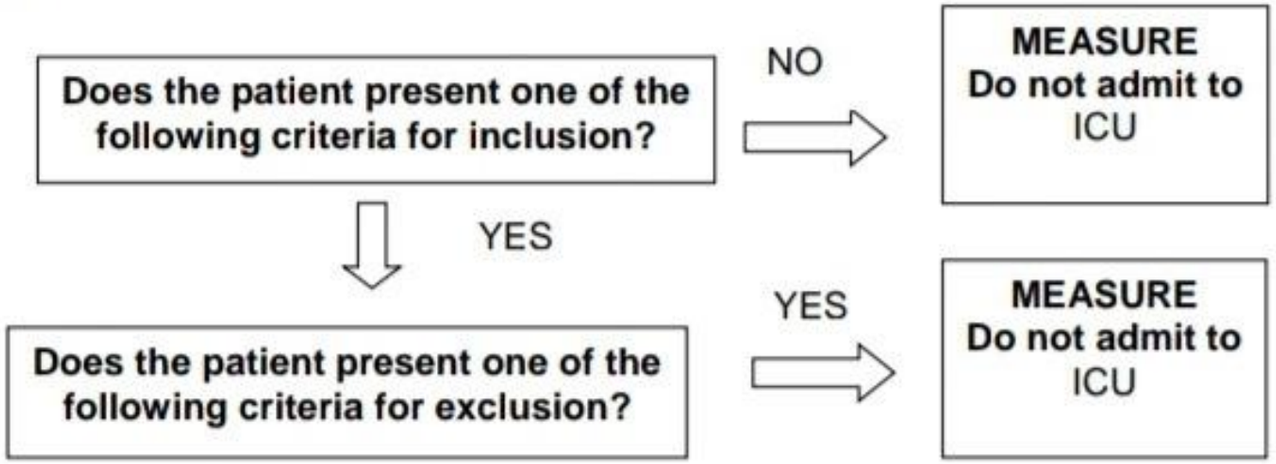
Blue → Do not admit to ICU or discharge from ICU

Red → Administer/continue treatment - High Priority

Yellow → Administer/continue treatment - Low Priority

Green → Discharge from ICU Good prognosis

Tool 6.1, 2nd PHASE: Critical Care Triage Tool



What category is the patient in at this time?

	Initial	72 hours	Priority	MEASURE
BLUE	Criteria for exclusion or SOFA > 11	Criteria for exclusion or SOFA > 11 or SOFA < 8, unchanged	High probability of mortality; should not be admitted to ICU or should be discharged from critical care and receive medical treatment and palliative care, if required.	**Do not admit to** ICU or **discharge from** ICU
RED	SOFA < 7 or failure of one organ	SOFA < 11 and declining progressively	Highest priority for critical care	Administer/continue treatment **HIGH PRIORITY**
YELLOW	SOFA 8 to 11	SOFA < 8 with minimal decline (drop of < 3 points in 72 hours)	Intermediate priority for critical care	Administer/continue treatment **LOW PRIORITY**
GREEN	No major organ failure	No longer needs a ventilator	Low probability of mortality; put off admission to or discharge from critical care	Discharge from ICU **GOOD PROGNOSIS**

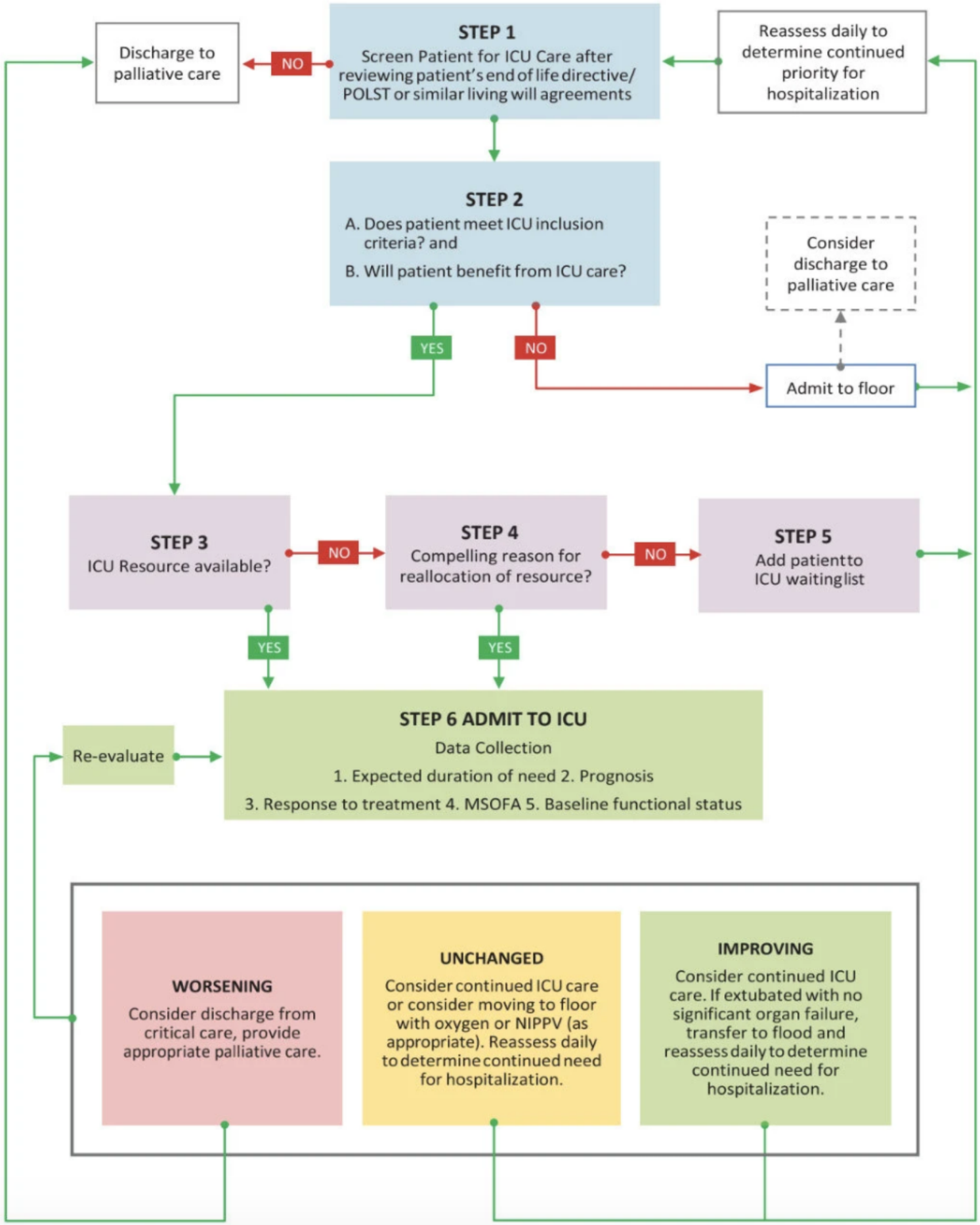
rbidities that restrict ICU admission from the Swiss Academy of Me

Stage A: when beds are available exclusion criteria for ICU admission include any one of:
Severe and irreversible neurological conditions
NYHA class IV heart failure
COPD GOLD grade 4 group D
Liver cirrhosis with Child-Pugh score >8
Severe dementia

Malignant disease with <12 months' life expectancy
End-stage neurodegenerative diseases
Severe circulatory failure
Cardiac arrests which are unwitnessed, recurrent or with no return of spontaneous circulation
Treatment resistant despite increased vasoactive therapy
Estimated survival <12 months

Stage B: when no beds are available exclusion criteria for ICU admission include any one of:
Severe cerebral deficits after stroke
NYHA class III or IV heart failure
COPD GOLD grade 4 group D or COPD groups A–D with either FEV_1<25% or cor pulmonale or home oxygen therapy (long-term oxygen therapy)
Liver cirrhosis with refractory ascites or encephalopathy >stage I
Moderate confirmed dementia

Severe burns (>40% of total body surface area affected) with inhalation injury
Stage V chronic kidney disease (KDIGO)
Age >85 years
Age >75 years and at least one criterion (liver cirrhosis, stage III chronic kidney disease (KDIGO), NYHA class >I heart failure, estimated survival <24 months)



A framework for critical care triage developed in Washington.

Northwest Healthcare Response Network

Conclusion

- Encourage early conversation with patients and families in those with chronic life limiting illness and old age.

- Allows the patient to receive medical care that aligns with their values even when they cannot speak for themselves.

- Implication of 4 C mortality scoring system to all Critically ill patients with COVID 19.

- Triage plan is necessary to ensure the greatest benefit to the greatest number during the Pandemic based on the available resources.