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## Revisiting the equity debate in COVID-19: ICU is no panacea

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3 1 **Revisiting the equity debate in COVID-19: ICU is no panacea**  
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8 3 **Abstract**  
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10 4 Throughout March and April 2020, debate raged about how best to allocate limited intensive  
11 care unit resources in the face of a growing COVID-19 pandemic. The debate was  
12 dominated by utility-based arguments for saving the most lives or life-years. These  
13 arguments were tempered by equity-based concerns that triage based solely on prognosis  
14 would exacerbate existing health inequities, leaving disadvantaged patients worse off.  
15 Central to this debate was the assumption that ICU admission is a valuable but scarce  
16 resource in the pandemic context.  
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19 11 In this paper, we argue that the concern about achieving equity in ICU triage is problematic  
20 for two reasons. First, ICU can be futile and prolong or exacerbate suffering rather than  
21 ameliorate it. This may be especially true in COVID-19 patients with emerging data showing  
22 that most who receive access to a ventilator will still die. There is no value in admitting  
23 patients with poor prognostic indicators to ICU to meet an equity target when intensive  
24 critical care is contrary to their best interests. Second, the focus on ICU admission shifts  
25 focus away from important aspects of COVID-19 care where there is greater opportunity for  
26 mitigating suffering and enhancing equitable care.  
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29 19 We propose that the focus on equity concerns during the pandemic should broaden to  
30 include providing all people who need it with access to the highest possible standard of end  
31 of life care. This requires attention to culturally safe care in the following interlinked areas:  
32 palliative care, communication and decision support and advanced care planning.  
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## 25 Introduction

26 As COVID-19 spread internationally, healthcare services in many countries became  
27 overwhelmed. One of the main manifestations of this was a shortage of intensive care beds,  
28 leading to urgent discussion about how to allocate these fairly. In the initial debates about  
29 allocation of scarce ICU beds, there was optimism about the 'good' of intensive care unit  
30 (ICU) access. However, rather than being a life-saving intervention, data began to emerge in  
31 mid-April showing that most critical COVID-19 patients who receive access to a ventilator do  
32 not survive to discharge. The minority who survive leave the ICU with significant morbidity  
33 and a long and uncertain road to recovery. This reality remains under-recognised in the  
34 bioethics literature on ICU triage. Throughout March and April 2020, debate raged about  
35 how best to allocate limited intensive care unit resources in the face of the growing COVID-  
36 19 pandemic. Central to this debate were two assumptions: first, that ICU admission was a  
37 valuable but scarce resource in the pandemic context; and second, that both equity and  
38 utility considerations were important in determining which patients should have access to  
39 ICU. In this paper we explain how scarcity and value were conflated in the early ICU COVID  
40 triage literature, leading to undue optimism about the 'good' of ICU access, which in turned  
41 fuelled equity-based arguments for ICU access. In the process, ethical issues arising  
42 regarding equitable access to end of life care more broadly were neglected.

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44 Equity requires the prevention of avoidable or remediable differences among social,  
45 economic, demographic, or geographic groups.<sup>(1)</sup> How best to apply an equity lens to  
46 questions of distribution will depend on the nature of the resource in question. Equitable  
47 distribution of ICU beds is significantly more complex than equitable distribution of other  
48 goods that might be scarce in a pandemic, such as masks or vaccines if available. ICU

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4 49 (especially that which involves intubation and ventilation i.e. mechanical ventilation) is a  
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6 50 burdensome treatment option that can lead to significant suffering – both short and long  
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8 51 term. The degree to which these burdens are justified depends on the *probability* of benefit,  
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10 52 and this depends on the clinical status of the patient. People are rightly concerned about the  
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12 53 equity implications of excluding patients from ICU on the grounds of pre-existing co-  
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14 54 morbidities that directly affect prognosis, especially when these align with and reflect social  
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16 55 disadvantage. But this does not mean that aged, frail or comorbid patients should be  
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18 56 admitted to ICU on the grounds of equity, when this may not be in their best interests.  
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### 34 61 **ICU triage debate**

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36 62 The COVID-19 pandemic has generated extraordinary demand for critical care and required  
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38 63 hard choices about who will receive presumed life-saving interventions such as ICU  
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40 64 admission. The debate has focused on whether or not a utilitarian approach aimed at  
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42 65 maximizing the number of lives (or life years) saved should be supplemented by equity  
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44 66 considerations that attempt to protect the rights and interests of members of marginalized  
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46 67 groups. The utilitarian approach uses criteria for access to ICU that focus on capacity to  
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48 68 benefit, understood as survival.(2) Supplementary equity considerations have been invoked  
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51 69 to relax the criteria in order to give a more diverse group of people a chance of entering  
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55 70 ICU.(3,4)  
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4 71 Equity-based critiques are grounded in the concern that a utilitarian approach aimed at  
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6 72 maximizing the number (or length) of lives saved may well exacerbate inequity in survival  
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8 73 rates between groups. This potential for discrimination is heightened if triage tools use age  
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11 74 as a proxy for capacity to benefit or are heavily reliant on QALYs (which will deprioritize  
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13 75 people with disabilities).(5,6) Even if these pitfalls are avoided, policies based on  
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15 76 maximizing lives saved entrench existing health inequalities because those most likely to  
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18 77 benefit from treatment will be people of privilege who come into the pandemic with better  
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20 78 health status than less advantaged people. Those from lower socioeconomic groups, and/or  
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22 79 some ethnic minorities have high rates of underlying comorbidities, some of which are  
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25 80 prognostically relevant in COVID-19 infection. Public health ethics requires that we  
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28 81 acknowledge how apparently neutral triage tools reflect and reinforce these disparities,  
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30 82 especially where the impact can be lethal.(7)

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33 83 But the utility versus equity debate is more complex than it first appears. Both the utility and  
34  
35 84 equity approach to ICU triage start from the assumption that ICU is a valuable good – the  
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38 85 dispute is about how best to allocate it. Casting ICU admission as a scarce good subject to  
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40 86 rationing has the (presumably unintended) effect of making access to critical care look highly  
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43 87 appealing, triggering cognitive biases. Psychologists and marketers know that scarcity  
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45 88 sells.(8) People value a commodity more when it is difficult or impossible to obtain.(9) When  
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48 89 there is competition for scarce resources, people focus less on whether they really need or  
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50 90 want the resource. The priority becomes securing access to the resource.

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54 92 Clinicians are not immune to scarcity-related cognitive bias. Clinicians treating COVID-19  
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57 93 patients are working under conditions of significant information overload but without the high  
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59 94 quality clinical research (generated from large data sets and rigorous methodology) usually  
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4 95 available for decision-making. The combination of overwhelming numbers of patients, high  
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6 96 acuity and uncertainty regarding best practice is highly anxiety provoking. In this context it is  
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8 97 unsurprising that, at least in the early stages of the pandemic, they may not have the  
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10 98 psychological bandwidth to challenge assumptions about the benefits of ICU admission for  
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13 99 patients with severe disease. Zagury-Orly and Schwartzstein have recently argued that the  
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15 100 health sector must accept that doctors' reasoning and decision-making are susceptible to  
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18 101 human anxieties and in the "...effort to "do good" for our patients, we may fall prey to  
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20 102 cognitive biases and therapeutic errors".(10)  
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24 104 We suggest the global publicity and panic regarding ICU triage distorted assessments of  
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27 105 best interests and decision-making about admittance to ICU and slanted ethical debate.  
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29 106 This has the potential to compromise important decisions with regard to patient care in  
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31 107 COVIDD-19 patients  
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### 38 110 **The emerging reality of ICU**

41 111 In general, the majority of patients who are ventilated for COVID-19 in ICU will die. Although  
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44 112 comparing data from different health systems is challenging due to variation in admission  
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47 113 criteria for ICU, clear trends are emerging with regard to those critically unwell and requiring  
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49 114 mechanical ventilation. Emerging data show case fatality rates (CFRs) of 50% - 88% for  
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51 115 ventilated COVID-19 patients. In China(11) and Italy about half of those with COVID-19 who  
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54 116 receive ventilator support have not survived.(12) In one small study in Wuhan the ICU  
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56 117 mortality rate among those who received invasive mechanical ventilation was 86%  
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58 118 (19/22).(13) Interestingly, the rate among those who received less intensive non-invasive  
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4 119 ventilation (NIV)<sup>1</sup> was still 79% (23/29).(13) Analysis of 5,700 patients in the New York City  
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6 120 area showed that the mortality for those receiving mechanical ventilation was 88%.(14) In  
7  
8 121 the UK, only 20% of those who have received mechanical ventilation in the UK have been  
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10 122 discharged alive.(15) Hence, the very real possibility of medical futility with regard to  
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12 123 ventilation in COVID-19 needs to be considered.

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16 124 It is also important to consider the complications and side effects that occur in an ICU  
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18 125 context. These patients are vulnerable to hospital acquired infections such as ventilator  
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20 126 associated pneumonias (VAP) with high mortality rates in their own right (16), neuropathies,  
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22 127 myopathies (17) and skin damage. Significant long term morbidity (physical, mental and  
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24 128 emotional challenges) can also be experienced by people who survive prolonged ventilation  
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26 129 in ICU.(18,19) Under normal (non-emergency) circumstances, many patients experience  
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28 130 significant muscle atrophy and deconditioning, sleep disorders, severe fatigue (20), PTSD  
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30 131 (21), cognitive deficits (22), depression, anxiety, difficulty with daily activities and loss of  
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32 132 employment (23). Although it is too soon to have data on the long term outcomes of ICU  
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34 133 survivors in the specific context of COVID-19, the UK the Chartered Society of  
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36 134 Physiotherapy predicts a “tsunami of rehabilitation needs” as COVID patients begin to be  
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38 135 discharged.(24) The indirect effects of carer-burden should also not be underestimated as  
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40 136 research shows that caring for patients who have survived critical illness results in high  
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42 137 levels of depressive symptoms for the majority of caregivers.(25)

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50 138 The emerging mortality data for COVID-19 patients admitted to ICU – in conjunction with  
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52 139 what is already know about the morbidity of ICU survivors – has significant implications for  
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54 140 the utility-equity debates about allocating the scarce resource of ICU beds. First, they

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60 <sup>1</sup> NIV does not require a general anaesthetic and intubation. Patients receive airway pressure support and oxygen but they remain conscious.

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4 141 undermine the utility argument as there seems to be little evidence that ICU admission leads  
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6 142 to better outcomes for patients, especially when the long term morbidity of extended ICU  
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8 143 admission is included in the balance of burdens and benefits. For some patients, perhaps  
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10 144 many, the burdens of ICU will not outweigh the limited potential benefits. Second, the poor  
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13 145 survival rates challenge the equity-based claim for preferential access to treatment for  
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15 146 members of disadvantaged groups. In particular, admitting frailer or comorbid patients to ICU  
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18 147 to fulfill equity goals is highly unlikely to achieve greater survival for these population groups,  
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20 148 but will increase their risk of complications and may ultimately prolong their suffering.  
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25 150 The high proportions of people who die despite ICU admission make it particularly important  
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27 151 to consider what might constitute better or worse experiences of dying with COVID-19, and  
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30 152 how ICU admission affects the likelihood of a “good” death. Critical care may compromise  
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32 153 the ability of patients to communicate and engage with their families during the terminal  
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34 154 phase of their lives – in the context of an intubated, ventilated patient this is unequivocal.  
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37 155 Given the high rates of medical futility with COVID-19 patients in ICU, the very significant  
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40 156 risks for further suffering in the short and long term and the compromise of important  
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42 157 psychosocial needs – such as communicating with our families – in the terminal phase of life,  
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45 158 our ethical scope must be wider than ICU triage. Ho and Tsai argue that “In considering  
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47 159 effective and efficient allocation of healthcare resources as well as physical and  
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50 160 psychological harm that can be incurred in prolonging the dying process, there is a critical  
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52 161 need to reframe end-of-life care planning in the ICU.”(26) We propose that the focus on  
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54 162 equity concerns during the pandemic should broaden to include providing all people who  
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57 163 need it with access to the highest possible standard of end of life care. This requires  
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4 164 attention to minimising barriers to accessing culturally safe care in the following interlinked  
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6 165 areas: palliative care, and communication and decision support and advanced care planning.  
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10 167 **1. Palliative care**

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15 169 Scaling up palliative and hospice care is an essential component of the COVID-19 pandemic  
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17 response. Avoiding non-beneficial or unwanted high-intensity care is critical when the  
18 170 capacity of the health system is stressed.(27) Palliative care focuses on symptom  
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20 171 management, quality of life and death, and holistic care of physical, psychological, social  
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22 172 and spiritual health.(28) Evidence from Italy has prompted recommendations that  
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24 173 “governments must urgently recognise the essential contribution of hospice and palliative  
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26 174 care to the COVID-19 pandemic, and ensure these services are integrated into the health  
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28 175 care system response.” (29) Rapid palliative care policy changes were implemented in  
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30 176 response to COVID-19 in Italy, including more support in community settings, change in  
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32 177 admission criteria, and daily telephone support for families.(29) To meet this increased  
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34 178 demand, hospice and palliative care staff should be included in PPE allocation and provided  
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36 179 with appropriate infection preventing and control (IPC) training when dealing with COVID-19  
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38 180 patients or high risk areas.  
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49 183 Attention must also be directed to maintaining supply lines for essential medications for pain,  
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51 184 distress and sedation. Patients may experience pain due to existing co-morbidities, but may  
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53 185 also develop pain as a result of excessive coughing or immobility from COVID-19. Such  
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55 186 symptoms should be addressed using existing approaches to pain management.(28) Supply  
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57 187 lines for essential medications for distress and pain management, including fentanyl and  
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3 188 midazolam are under threat in the United States and propofol – used in terminal sedation –  
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6 189 may also be in short supply.(30) The challenges are exacerbated when people who for  
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8 190 various reasons eschew or are unable to secure hospital admission decline rapidly at home  
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10 191 with COVID-19 (the time frame of recognition that someone is dying and then of the dying  
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12 192 process may be shorter than that through which hospice at home services usually support  
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14 193 people).There is growing debate about the fair allocation of novel drugs – sometimes  
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16 194 available as part of ongoing clinical trials –to treat COVID-19 with curative intent.(2,31) But  
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18 195 we must also pay attention to the fair allocation of drugs needed to ease suffering and dying.  
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## 28 198 **2. Communication and end of life decision-making support**

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33 200 End of life planning can be especially challenging because patients, family members and  
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35 201 health care providers often differ in what they consider most important near the end of  
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37 202 life.(32) Less than half of ICU physicians — 40.6 % in high income countries and 46.3 % in  
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39 203 low-middle income countries — feel comfortable holding end-of-life discussions with patients'  
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41 204 families.(26) With ICUs bursting and health providers under extraordinary pressure, their  
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43 205 capacity to effectively support end of life decisions and to ease dying will be reduced.  
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47 206 This suggests a need for specialist COVID-19 communication support teams, analogous to  
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49 207 the idea of specialist ICU triage teams to ensure consistency of decision making about ICU  
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51 208 admissions/discharges, and to reduce the moral and psychological distress of health  
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53 209 providers during the pandemic.(33) These support teams could provide up to date  
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55 210 information templates for patients and families, support decision-making, the development of  
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57 211 advance care plans (ACPs), and act as a liaison between families (prevented from being in  
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3 212 the hospital), the patient and the clinical team. Some people with disabilities may require  
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6 213 additional communication support to ensure the patients' needs are communicated to all  
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8 214 health providers, for example using whiteboards to display critical medical  
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10 215 documentation.(34) This will be especially important if carers and visitors are not able to be  
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13 216 present.

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16 217 To provide effective and appropriate support in an equitable way, communication teams will  
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18 218 need to include those with the appropriate skills for caring for diverse populations including:  
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20 219 interpreters, specialist social workers, disability advocates, and cultural support liaison  
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22 220 officers for ethnic and religious minorities. Patient groups that already have comparatively  
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24 221 poor health outcomes require dedicated resources. These support resources are essential if  
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26 222 we wish if we wish to truly mitigate equity concerns that arise in the acute setting. See Box 1:  
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28 223 *Supporting communication and compassionate care during pandemic* for examples of  
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30 224 specific communication and care strategies to support patients.  
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### 38 226 **3. Advance care planning**

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45 229 Advance care plans (ACPs) aim to honour decisions made by autonomous patients if and  
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47 230 when they lose capacity. However, talking to patients and their loved ones about clinical  
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49 231 prognosis, ceilings of treatment and potential end of life care is challenging even in normal  
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51 232 times. During COVID-19 the challenges are exacerbated by uncertainty and urgency, the  
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53 233 absence of family support (due to visitor restrictions), and the wearing of PPE by clinicians  
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55 234 and carers. Protective equipment can create a formidable barrier between the patient and  
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57 235 the provider, often adding to the patient's sense of isolation and fear. An Australian palliative  
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4 236 care researcher with experience working in disaster zones, argues that the “PPE may  
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6 237 disguise countenance, restrict normal human touch, and create an unfamiliar gulf between  
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8 238 you and your patient.”(35) The physical and psychological barriers of PPE coupled with the  
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10 239 pressure of high clinical loads do not seem conducive to compassionate discussions about  
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12 240 patients’ end of life preferences. Indeed, a study in Singapore during the 2004 SARS  
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14 241 epidemic demonstrated the barrier posed by PPE to compassionate end of life care.(36)  
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18 243 Clinicians may struggle to interpret existing ACPs in the context of COVID-19, given the  
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20 244 unprecedented nature and scale of the pandemic and emerging clinical knowledge about the  
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22 245 aetiology of the disease and (perhaps especially) about prognosis. This suggests the need  
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24 246 for COVID-19-specific ACPs. Where possible, proactive ACPs should occur with high-risk  
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26 247 patients, the frail, those in residential care and those with significant underlying morbidities.  
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28 248 Ideally, ACP conversations should take place prior to illness, involve known health providers  
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30 249 and carers, not be hampered by PPE or subject to time constraints imposed by acute care  
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32 250 contexts. Of note here, a systematic review found that patients who received advance care  
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34 251 planning or palliative care interventions consistently showed a pattern toward decreased ICU  
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36 252 admissions and reduced ICU length of stay.(37)  
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## 254 Conclusion

51 256 How best to address equity concerns in relation to ICU and end of life care for COVID-19  
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53 257 patients is challenging and complex. Attempts to broaden clinical criteria to give patients  
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55 258 with poorer prognoses access to ICU on equity grounds may result in fewer lives saved  
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57 259 overall – this may well be justified if access to ICU confers benefit to these “equity” patients.  
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4 260 But we must avoid tokenistic gestures to equity – admitting patients with poor prognostic  
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6 261 indicators to ICU to meet an equity target when intensive critical care is contrary to their best  
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8 262 interests. ICU admission may exacerbate and prolong suffering rather than ameliorate it,  
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10 263 especially for frailer patients; and prolonging life at all costs may ultimately lead to a worse  
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12 264 death. The capacity for harm not just the capacity for benefit should be emphasized in any  
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14 265 triage tools and related literature. Equity can be addressed more robustly if pandemic  
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16 266 responses scale up investment in palliative care services, communication and decision-  
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18 267 support services and advanced care planning to meet the needs of all COVID-19 patients.  
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20 268 Ultimately, however, equity considerations will require us to move even further from a critical  
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22 269 care framework as the social and economic impact of the pandemic will disproportionately  
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24 270 impact those most vulnerable. Globally, we will need an approach that doesn't just stop an  
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26 271 exponential rise in infections but an exponential rise in inequality.  
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Box 1: Supporting communication and compassionate care during pandemics

Despite the sometimes overwhelming pressure of the pandemic, health providers continue to invest in communication, compassionate care, and end of life support. In some places, doctors have taken photos of their faces and taped these to the front of their PPE so that patients can “see” their face.(38) In Singapore, patients who test positive for coronavirus are quarantined in health facilities until they receive two consecutive negative tests. Patients may be isolated in hospital for several weeks. To help ease this burden on patients, health providers have dubbed themselves the “second family” and gone out of their way to provide care as well as treatment. [see comic below, we have permission to use this, to be discussed with JME editors] Elsewhere, medical, nursing and multi-disciplinary teams are utilising internet based devices to enable ‘virtual’ visits and contact between patients and their loved ones.(39) Some centres are providing staff with masks with a see-through window panel that shows the wearer’s mouth, to support effective communication with patient with hearing loss who rely on lip reading.(40)





\*Usually 14 - 18 days. Or until there are 2 negative swabs.

view Only

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Compassionate care during COVID-19. With thanks to the NUS Medicine Covid-19 Chronicles strips.

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