Ethical Withdrawal of ECMO Support Over the Objections of Competent Patients

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In their target article, Childress et al provide a detailed analysis of dilemmas arising from disagreement between an ICU team and a competent patient (Mr J) about dis/continuation of extra-corporeal membrane oxygenation (ECMO) (Childress *et al.* 2023). They identify problems with standard arguments for discontinuing treatment against the patient's objections. Before addressing what we see as the central ethical consideration, we first note the much more common situation of ECMO withdrawal and two arguments that Childress did not identify.

Another case:

> *Mr K is a 45 year old patient in the intensive care unit with severe respiratory failure after COVID-19 infection. He has been sustained on ECMO for more than 60 days, but has been declined for lung transplantation. Sedation weaning has been unsuccessful because of recurrent delirium. The ECMO team believe that it would be inappropriate to continue treatment. However, Mr K's family have expressed their strong belief that Mr K would wish for treatment to continue. When his brother was critically unwell with COVID a year earlier, Mr K had told his family that he would not want them to give up on him if he were similarly unwell. They indicate that Mr K would strenuously object to withdrawal of treatment.*

The first argument that (to our surprise) Childress et al did not mention, is that withdrawing ECMO from a patient who is conscious and competent like Mr J feels like an act of killing. Indeed, in our experience, withdrawal of ECMO from such patients *even with the patient's agreement* is often distressing for the clinical team. Were a patient to be voicing a desire to continue to live, this might feel dangerously close to murder. This is a practically important consideration.[1] However, from an ethical point of view, we should note that stopping ECMO for the conscious Mr J, or the unconscious and incompetent Mr K are fundamentally the same. The actions taken would be identical (except that Mr J would be given some additional medication). The intentions of the clinicians would be identical (to stop non-beneficial or inappropriate treatment). And the consequences for the patient (rapid decline and death) would be the same. In our view, the fact that the patient is conscious should make no difference to whether we classify this as an act of killing or of letting die.[2]

What is important is not the classification of the action – rather, its ethical justification. And here, of course, the fact that Mr J is conscious might be ethically relevant.[3] In our experience, whether in the UK, Australia, or Japan, the most common ethical justification for withdrawing ECMO would be on the basis of the patient's best interests. The relevance of the patient being conscious is that it challenges the best interests argument. It would be, in our view, *paternalistic and deeply problematic* to claim that continued ECMO is not in a

[1] We do not have space to address it here in detail, but psychological support for clinical teams in such circumstances is vital.

[2] One of us has previously argued that withdrawal of life prolonging treatment is killing though it can be permissible (Persson and Savulescu 2005).

[3] One practical point, is that patients with recurrent delirium in the ICU typically have worse prognosis than those patients whose sedation is able to be weaned.

patient's best interests in a situation where the patient themselves is fully aware of their situation and regards the benefits of continued life to outweigh the burdens of treatment. To consider a parallel case, it would be wrong to claim, for a patient in locked-in syndrome who is able to communicate and expresses the wish to continue to live, that it would be in their best interests to die.

Although this conclusion is most striking for competent patients, the same problem arises for patients who lack capacity. Clinicians might claim that continued ECMO would not be in the unconscious Mr K's best interests. However, it is extremely difficult to identify a duration of support at which there is zero chance of recovery. Patients can still be weaned from ECMO successfully after runs of many months (Nelson-McMillan *et al.* 2020; Raza 2017). There are of course situations where patients themselves would not wish continued treatment. However, as our case of Mr K illustrates, there are others where that argument is difficult to sustain because the patient's wishes are unknown, or because they *are* known and it appears plausible that they would want continued treatment. As a consequence, clinicians might resort to arguments like patients' lack of a right to demand treatment, or to professional integrity. Childress et al articulate some of the reasons why such arguments fail to provide clear justification for withdrawing treatment against the objections of a competent patient. However, parallel problems arise when they are used for patients lacking capacity like Mr K.

The strongest ethical basis for withholding or withdrawing "medically inappropriate" or "futile" treatment, is that the treatment would either be harmful to the patient, or to other patients (Wilkinson and Savulescu 2011). Of these, the former (best interests) is often challenging for reasons described above. That leaves the second, and in our view even more important, reason. Distributive justice is critical for a scarce medical resource like solid organs for transplantation. Allocating a heart or a liver to a patient with very low chance of survival, will potentially mean that another patient (with much better chances) dies on the waiting list. That applies similarly to highly resource-intensive, specialised treatments like ECMO. In some countries at least, patients who could potentially benefit from ECMO are regularly denied treatment because of the limited capacity of specialised ECMO centres. Even in those countries with generous ECMO capacity, their ability to cope with demand was tested during the COVID pandemic because of large numbers of patients with refractory respiratory failure (Brodie *et al.* 2022; Levy *et al.* 2021). In such a context, prolonged duration of treatment means that fewer patients are able to access ECMO.

We have elsewhere argued that resource considerations should apply symmetrically to decisions about starting and stopping treatment in intensive care. In other words, if it would be justified to withhold treatment from a patient like Mr J on resource grounds (given a certain chance and magnitude of benefit), it would be equally justified to *withdraw* treatment (Wilkinson and Savulescu 2012). We will not repeat those arguments here, but we note several additional points. The first is that distributive justice arguments in healthcare can be divided into two forms: scarcity and cost. Both of these are highly contextual – they depend on the nature of the healthcare, how it is funded, how it is resourced, and how it is structured. A resource that is too scarce or too costly for one healthcare system may be available and affordable in another. In healthcare systems where or when ECMO capacity is surplus to demand, continuation of treatment for one patient will

not thereby directly harm another patient. This means that the ethical case for withdrawal on resource grounds in an individual case is weakened. However, even in such systems, resources are not infinite, particularly at times (eg during a pandemic). Where ECMO can physically be provided, there may be downstream consequences (eg in specialised centres, need to cancel cardiac surgery, inability to accept transfer of other patients needing care).

The same type of argument can apply to costs. Much of the costs of ECMO are fixed, so continuing an ECMO run for a single patient won't directly affect the budget available to treat another patient. However, it can be a mistake to think about resource considerations in healthcare in this way. Decisions about resources – for example about whether to commence or discontinue ECMO, are iterated. They occur every day and every week in intensive care. If ECMO is prolonged *regularly*, that will inevitably significantly increase the costs of this already highly expensive treatment and impact the affordability of other treatments.[4] How much of a problem this is, will depend on how often patients/surrogates object to discontinuation.

We will close with a pragmatic proposal. It draws on the above discussion as well as our experience. First, it is extremely helpful when commencing ECMO to define a period for review as well as goals and potential limits of treatment. Transparent communication from the outset is critical. Second, if a patient cannot be weaned, at the time of reviewing treatment it is important to separate the potential reasons to discontinue. If it is best interests based, the views of the competent patient should be given considerable weight. Where the reason to withdraw is based on limitation of resources, clinicians should actively assess current availability of resources, including whether any other centres would be willing to continue treatment. If (at a given point in time) there is not acute scarcity and other patients will not be harmed, treatment could be continued for a further defined period. However, where resources are scarce and no other unit is willing to accept care, in our view, it would be ethical to withdraw treatment from either a competent or non-competent patient, even against their or their family's objections. That would have been ethically justified during the pandemic, and in some places would be ethical today. There is a separate question about whether this is possible. We fully accept that in many parts of the world (including those in which we work), the practical and legal obstacles to this are considerable.

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