

EDITORIAL

First do no harm

D. van Dijk

Department of Intensive Care, University Medical Centre Utrecht, Utrecht University, Utrecht, the Netherlands

Correspondence

d.vandijk@umcutrecht.nl

Keywords - elderly, ethics, decision making

In this issue of the Netherlands Journal of Critical Care, Haas et al. report outcomes of intensive care unit (ICU) patients who are older than 80 years of age.^[1] These patients are often referred to as VOPs, i.e. very old ICU patients. Amongst others, the authors present data from the Dutch National Intensive Care Evaluation (NICE) registry.

On average, the outcomes that we achieve in VOPs are not great. Their hospital mortality is twice as high as that of younger patients (25% versus 13%). Many surviving VOPs suffer from functional decline and cannot be discharged home. The one-year mortality of VOPs with a medical admission diagnosis is 50%. On a positive note, however, the one-year survival of these patients is also 50%, which is still much better than 0%. Also, the survival of VOPs has significantly improved in the Netherlands over the last decade. More specifically, the outcomes of VOPs admitted after planned surgery are fairly good, with a hospital survival of 92.5%.

The decision to admit a VOP to the ICU can be difficult and may provoke lively discussions in the team about proportionality of ICU care. We do not want to deny a patient a chance of recovery based on old age alone, but speaking for ourselves, most of us would also prefer to die at home in our own bed, and not in an ICU.

In medical ethics, there are four leading principles to guide treatment decisions.^[2] The first principle is 'non-maleficence' which is also incorporated in Hippocrates' oath: 'first do no harm'. The second principle is 'beneficence' i.e. to promote healing and recovery from a disease. The third principle is respect for the patient's autonomy, and the fourth is distributive justice, i.e. using limited resources in a meaningful and just way. A difficulty is that these principles are often in conflict with each other. Although there are treatments that are beneficial without side effect or high costs, this is usually not the case in the ICU. The principle of non-maleficence, for example, is usually violated by invasive treatments such as central venous catheterisation, immobilisation, and intubation. These

treatments necessarily inflict harm, but they need to be applied in the ICU for the sake of beneficence. The justification for violating the principle of non-maleficence is that the intended benefit of these measures is expected to outweigh the harm.

For an individual patient, it can be difficult to determine the benefit of undergoing ICU treatment. To a certain extent, this is the result of prognostic uncertainty that pertains to medicine in general. In most ICU patients, no 'net harm' is caused, because the benefit is clearly greater than the harm that is inflicted. However, this is not evident in VOPs. Although the harm caused by the ICU treatment may be similar to the suffering of a younger patient in the ICU, the benefit of the ICU treatment is often much smaller: not only hospital survival is lower in VOPs than in younger patients,^[3] but also the number of life years that can be gained in the long term is smaller.^[4] In addition to lower survival rates, VOPs also have a higher risk than younger patients of functional decline after ICU admission.^[4]

With regard to the principle of patient autonomy, the assessment of a tolerable degree of suffering, and acceptable outcome of ICU treatment is in the eye of the patient, rather than that of the treating team. Many elderly patients prefer care focused on 'quality of dying' and relieving pain and discomfort over life-extending treatment.^[5,6] It is therefore not obvious that old patients will choose to be admitted to the ICU when their life is in danger.

Because the ethical principles of avoiding (net) harm and respect for patients' wishes are easily violated in older patients, special care should be taken when decisions need to be made about ICU treatment of these patients. In the July 2019 issue of this journal, Evert de Jonge proposed a framework to decide on withholding intensive care in older patients.^[7] This decision framework is based on explicit estimations of baseline physical and cognitive status, subjective quality of life, the likelihood of long-term survival and acceptable functional performance, individual preferences, and the burden of treatment.

Physicians are obliged not to provide treatment that is not for the patient's good, especially if that treatment is burdensome. First do no harm. Keep this principle in mind, particularly when treating a VOP. Some VOPs unmistakably benefit from an ICU treatment, especially after planned surgery. However, old patients have in common that their life expectancy is limited and the risk of functional decline higher. The balance between potential benefits and burden of treatment is often more negative than in younger patients. Interestingly, from 2004 to 2013 the percentage of ICU admissions attributable to VOPs remained stable in the Netherlands at 14%, despite a significant increase in the percentage of hospital admissions of very old patients.^[8] This finding could be explained by more strict ICU admission policies or more proactive treatment restrictions set on the wards. It might illustrate a changing opinion about the balance between harm and benefits of ICU treatment of the very elderly.

References

1. Haas LEM, Kerckhoffs MC, Bakhshi-Raiez F, Emmelot-Vonk MH, De Lange DW. The admission of very old patients to our intensive care units: a review. *Neth J Crit Care.* 2020;28:6-11
2. Beauchamp TL, Childress JF. *Principles of biomedical ethics* (7th ed.). Oxford, Oxford University Press, 2013.
3. De Rooij SE, Govers A, Korevaar JC, Abu-Hanna A, Levi M, de Jonge E. Short-term and long-term mortality in very elderly patients admitted to an intensive care unit. *Intensive Care Med.* 2006;32:1039-44.
4. Heyland DK, Stelfox HT, Garland A, et al. Predicting Performance Status 1 Year After Critical Illness in Patients 80 Years or Older: Development of a Multivariable Clinical Prediction Model. *Crit Care Med.* 2016;44:1718-26.
5. Fried TR, Bradley EH, Towle VR, Allore H. Understanding the treatment preferences of seriously ill patients. *New Engl J Med.* 2002;346:1061-6.
6. Philippart F, Vesin A, Bruel C, et al. The ETHICA study (part I): elderly's thoughts about intensive care unit admission for life-sustaining treatments. *Intensive Care Med.* 2013;39:1565-73.
7. De Jonge E, Mooijaart SP. Framework to decide on withholding intensive care in older patients. *Neth J Crit Care.* 2019;27:150-4.
8. Haas LEM, Karakus A, Holman R, Cihangir S, Reidinga AC, de Keizer NF. Trends in hospital and intensive care admissions in the Netherlands attributable to the very elderly in an ageing population. *Crit Care.* 2015;19:353.