Reviewer's report

Title: Two distinct do-not-resuscitate protocols leaving less to the imagination: an observational study using propensity score matching

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Reviewer: Bregje D Onwuteaka-Philipsen

Reviewer's report:

This is a well-written manuscript on a relevant subject. It is worthwhile to have empirical data on how the two distinct do-not-resuscitate protocols work in practice.

Major compulsory revisions:

1. The research aim is very broad and vague 'examine the specific level and type of medical care provided to DNRCC or DNRCC-Arrest patients'. This does not give much guidance in what to expect in the results. Indirectly the hypothesis (care provided would be consistent with the intent of the two mandated protocols) suggests to me that the study aims at checking whether the treatments the patients get is in accordance with the type of DNR they have. This makes it not logical and relevant to add results on costs. Furthermore it makes me wonder whether propensity score matching is necessary. Regardless of patient characteristics I would like to know whether the people without DNR and people with a DNRCC-Arrest would receive the aggressive treatments (in accordance), and whether the people with a DNRCC would not receive the aggressive treatments (in accordance). Concerning comfort care measures: I would expect them to important in all three groups. In light of this I would like to see more precise research aim that certainly include aggressive treatments, and possibly also comfort care, and health care costs. Especially of health care costs there should be a clear extra rational for including them. These research aims should then be in accordance with the presented analysis and results.

2. For me (and thus probably for more (European?) readers) it is not clear when the two types of DNR types are made. It seems after being admitted to the intensive care, because there is a before and after DNR order being in effect measurement. This procedure should be clearly stated.

3. In light of remark 1, for me the need of the propensity score matching is not obvious. Above that it seems not to be possible optimally because you could not distinguish between aggressive interventions provided before and after initiation of DNRCC (you state that on page 15, although I do not understand why that is the case while you were able to distinguish this in table 3). Either explain better why it is necessary (including adding a more specific research aim that is studied with this analysis) or omit it. An easier option might be to assess the influence of DNR (no / dnrcc-arrest /dnrcc) controlling for several patient characteristics.

Minor essential revision:
From a palliative care perspective I wonder what patients with a DNRCC who do not want to aggressive treatments and only comfort care are doing on an intensive care. I would like some reflection on this.

Discretionary revision:
Provide more information on how many patients were excluded because they changed type of DNR order

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare I have no competing interests