

Linked Dnr And Dni Orders And Factors Associated With Intubation: A Retrospective Chart Review At An Urban Tertiary Care Center

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Rationale Code status discussions often link do-not-intubate (DNI) orders with do-not-resuscitate (DNR) orders, although cardiac arrest accounts for less than 2% of endotracheal intubations. Furthermore, in-hospital cardiopulmonary resuscitation (CPR) is associated with worse outcomes than intubation. DNR orders are more commonly implemented for older patients with more comorbid conditions regardless of the reason for hospitalization, and are associated with withholding treatments outside of the cardiac arrest setting. Given the frequent coupling of DNR and DNI orders, our hypothesis is that the decision of whether to intubate may be associated with similar baseline characteristics and treatment decisions.

Methods This is a retrospective review of the electronic medical record (EMR) of all patients that died on the Bellevue Hospital Medicine Service between January 2012 and December 2013. In addition to code status, demographic data, comorbid conditions, dates of intubation and/or CPR, and records of whether these patients received inotropes, vasopressors, opiates or benzodiazepines during the last 3 days of life were collected (n=106).

Results The majority of patients with advance directives had both DNR and DNI orders (79%; n=81); in 84% of these cases, the orders were placed on the same date. Patients who were never intubated during their hospitalization had a higher median Charlson comorbidity score (8 [7, 11] vs. 5 [2.5, 8], p=0.001); were more likely to have a malignancy (40 vs. 10, p<0.001); and were more likely to have a palliative care consultation (44 vs. 18, p=0.013). In the last 3 days of life, they were more likely to receive morphine (46 vs. 14, p<0.001) or lorazepam (14 vs. 2, p=0.016); and less likely to receive vasopressors/inotropes (3 vs. 7, p=0.038) compared to patients who were intubated during their admission.

Conclusions To our knowledge, this is the first retrospective chart review documenting the association between DNR and DNI orders and identifying factors associated with intubation. DNR and DNI orders are more commonly linked, and implemented on the same date, suggesting that code status discussions may not highlight the inherent differences between these directives, as qualitative studies have shown. We also found that no intubation was associated with increased utilization of palliative care consultation and medications commonly used for palliation, and decreased use of inotropes and vasopressors. A diagnosis of cancer was strongly associated with no intubation. This may be the result of physician awareness that intubation is a predictor of mortality in cancer patients, patient preference, or other factors.

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