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# Formal Academic Training on Ethics May Address Junior Physicians' Needs

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**BACKGROUND:** Surveys have highlighted perceived deficiencies among ICU residents in end-of-life care, symptom control, and confidence in dealing with dying patients. Lack of formal training may contribute to the failure to meet the needs of dying patients and their families. The objective of this study was to evaluate junior intensivists' perceptions of triage and of the quality of the dying process before and after formal academic training.

**METHODS:** Formal training on ethics was implemented as a part of resident training between 2007 and 2012. A cross-sectional survey was performed before (2007) and after (2012) this implementation. This study included 430 junior intensivists who were interviewed during these periods.

**RESULTS:** More responders attended a dedicated training course on ethics and palliative care during 2012 (38.5%) than during 2007 (17.4%; $P < .0001$). During 2012, respondents reported less discomfort and fewer uncertainties regarding decisions about limiting life-sustaining treatment (17.7% vs 39.1% in 2007; $P < .0001$) or the triage process (48.5% vs 69.4% in 2007; $P < .0001$). Factors independently associated with positive perceptions of the dying process were physician's age (OR, 1.19 per year; 95% CI, 1.09-1.25) and male sex (OR, 1.61; 95% CI, 1.05-2.47). Conversely, anxiety about family members' reactions (OR, 0.58; 95% CI, 0.0.37-0.87) and lack of training (OR, 0.29; 95% CI, 0.17-0.50) were associated with negative perceptions of this process.

**CONCLUSIONS:** Formal training dedicated to ethics and palliative care was associated with a more comfortable perception of the dying process. This training may decrease the uncertainty and discomfort of junior intensivists in these situations.

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**ABBREVIATIONS:** DLLSTs = decisions about limiting life-sustaining treatment; IQR = interquartile range

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Intensivists seek to provide appropriate levels of care based on prognostic estimations and on the values of patients and their relatives.[1] Withdrawing and withholding life-sustaining therapies, integrating palliative care, and avoiding nonbeneficial ICU admissions are some of the daily tasks that intensivists undertake.[2,3] ICU physicians play a key role in decisions about limiting life-sustaining treatment (DLLSTs); DLLSTs are discussed for as many as 10% of critically ill patients and for up to 90% of patients who die in the ICU.[4-7] Nonetheless, several studies[3] have emphasized physician difficulties in coping with triage and end-of-life care.

Several surveys have highlighted perceived deficiencies in end-of-life care, symptom control, and confidence on the part of medical students and residents of several specialties in dealing with dying patients.[8-13] However, little information is available about the beliefs and needs of junior intensivists regarding ethics, palliative care, or triage decisions.[9,12,14] In addition, the knowledge, skills, and needs of junior intensivists related to these issues have been poorly studied.[8] Several medical school and residency training programs have been implemented to address these issues. Previous studies demonstrated that these programs allow medical students to memorize the core concepts of medical ethics.[15] Other studies demonstrated that brief courses in ethics during medical school may increase the level of comfort of students and residents regarding these specific issues.[16] However, whether these programs meet the needs and beliefs of junior physicians and impact their perception of patient quality of life while making DLLSTs and performing triage remain largely unknown.[14]

Lack of adequate training may contribute to the failure to meet the needs of dying patients and their families.[8,9] The quality of the dying process and the ability of caregivers to meet family needs may limit the occurrence of burnout syndrome among caregivers and may help to increase family satisfaction and/or to reduce the occurrence of post-traumatic stress syndrome in family members.[17-20]

Between 2007 and 2012, specific courses focusing on ethics, palliative care, and triage were implemented in the resident programs for French ICUs. In addition, after 2010, classes of residents underwent a brief program about ethics during medical school. The main objectives of the current study were to investigate junior intensivists' experience with DLLSTs and to assess the impact of formal academic training on the needs of junior physicians.

## Methods

This cross-sectional before/after study was performed from August to October 2007 (period 1) and from August to October 2012 (period 2). Residents and fellows were offered a phone interview based on a predefined questionnaire (e-Appendix 1). According to French law, this study was outside the laws regarding biomedical research, and the need for institutional review board or written consent was waived. However, the purpose of this survey was explained before the interview to residents and fellows approached for study, and none refused to participate (see e-Appendix 1 for additional information).

### Questionnaire

The questionnaire included 67 open, single-choice questions and Likert scale evaluations. These questions fell into five categories: (1) questions about the characteristics of responders and the responders' ICUs; (2) questions about the triage process and factors considered when evaluating patients for ICU admission; (3) questions about usual practices regarding DLLSTs and care in the responders' ICUs; (4) questions specifically designed to assess perceived quality of the dying process; and (5) questions assessing self-perceived satisfaction with the overall process, confidence and comfort with DLLSTs, and self-perceived knowledge about the end-of-life process.

### Definition

Since perception of the overall process for making DLLSTs is multidimensional, we assessed the main criteria of interest with a composite score that included self-assessed knowledge, self-assessed competence, satisfaction with the overall process, and evaluation of the perceived quality of the dying process. Each item was assessed on a Likert scale ranging from 0 to 10.

### Statistical Analysis

Results are reported as medians and interquartile range or as numbers and percentages. Categorical variables were compared using Fisher's exact test, and continuous variables were assessed with the nonparametric Wilcoxon test or the Mann-Whitney test for pairwise comparisons.

We performed logistic regression to identify variables that significantly influenced perception of the overall dying process according to our composite score, as assessed by estimating ORs with their 95% CIs. Variables yielding $P < .20$ in the bivariate analyses were entered into a backward stepwise logistic regression model in which good quality of the dying process (as defined by a score higher than the median score [26/40]) was the outcome variable of interest. Covariates were entered into the model with critical removal of $P > .1$. We planned a priori to force the study period in the final model if this variable was not selected. Colinearity and interactions were tested. The Hosmer-Lemeshow test was used to check the goodness of fit of the logistic regression.

All tests were two sided, and $P < .05$ were considered statistically significant. Statistical tests were performed with the SAS 6.12 software package (SAS Institute).