A TEAM-BASED EARLY ACTION PROTOCOL TO ADDRESS ETHICAL CONCERNS IN THE INTENSIVE CARE UNIT

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Background  Ethical conflicts complicate clinical practice and often compromise communication and teamwork among patients, families, and clinicians. As ethical conflicts escalate, patient and family distress and dissatisfaction with care increase and trust in clinicians erodes, reducing care quality and patient safety.

Objective  To investigate the effectiveness of a proactive, team-based ethics protocol used routinely to discuss ethics-related concerns, goals of care, and additional supports for patients and families.

Methods  In a pre-post intervention study in 6 intensive care units (ICUs) at 3 academic medical centers, the electronic medical records of 1649 patients representing 1712 ICU admissions were studied. Number and timing of family conferences, code discussions with the patient or surrogate, and ethics consultations; palliative care, social work, and chaplain referrals; and ICU length of stay were measured. Preintervention outcomes were compared with outcomes 3 and 6 months after the intervention via multivariate logistic regression controlled for patient variables.

Results  The odds of receiving a family conference and a chaplain visit were significantly higher after the intervention than at baseline. The number of palliative care consultations and code discussions increased slightly at 3 and 6 months. Social work consultations increased only at 6 months. Ethics consultations increased at both postintervention time points. Length of ICU stay did not change.

Conclusions  When health care teams were encouraged to communicate routinely about goals of care, more patients received needed support and communication barriers were reduced. (American Journal of Critical Care. 2020;29:49-58)
Ethical conflicts during the provision of care for critical and chronic illness occur for multiple reasons: advancing technologies, extended lives, the public’s high expectations of medical care, increasing cultural and religious diversity, the patients’ rights movement, and health care financing shifts, along with limited resources. In the Conflictus study, 71.6% of 7498 intensive care unit (ICU) nurses and physicians in 24 countries reported a perceived ethical conflict in the week before the survey day. In 255 ethics consultation cases, researchers found that most involved multiple ethical conflicts including staff disagreement with plan of care (76%), end-of-life issues (60%), and treatment decision-making concerns (54%). Forty percent involved critical care patient situations.

Ethical conflicts can emerge from intractable treatment disagreements or “when patients, surrogates, or clinicians perceive their goals related to care and outcomes are being thwarted by the incompatible goals of others.” The primary ethical conflicts perceived in the ICU relate to medical decision-making and treatment goals, especially regarding the benefit or harm of aggressive treatment. Shared decision-making requires accurate information exchange and astute communication. However, communication problems between surrogates and clinicians are frequently evident.

In California, 48% of ICU clinicians reported communication difficulties between families and ICU teams, and 68% believed that they could not influence a situation when asked to provide potentially inappropriate treatments. Discordant expectations about prognosis between surrogates and physicians were apparent in 53% of 229 ICU situations. Delaying or avoiding conversations about prognosis and treatment options appears to increase the probability of continuing aggressive and sometimes unwanted treatments for patients with serious and life-limiting conditions.

For example, patients with heart failure are often not referred for palliative care services until the last month of life because advance care planning is frequently delayed. Other researchers found that Medicare recipients with cancer received high-intensity treatments relative to their poor prognosis in the last weeks of life. Providing intensive therapies may certainly be indicated in some cases; however, when patients know that medical interventions are not likely to improve their condition, they often refuse or decrease intensive measures.

Ethical conflicts contribute to distress and anxiety among patients and their family members. A systematic review of 40 studies involving 2854 surrogates revealed that making difficult decisions had a negative emotional impact on at least one-third of respondents, and the impact was often reported as substantial and lasting months to years. Poor decisional support, inadequate or conflicting information, the emotional burden of caring for a critically ill family member, and inadequate sleep can result in a family ICU syndrome that impairs family members’ comprehension of complex medical information and rational decision-making.

Research on team-based interventions to prevent ethical conflicts in the ICU is limited. In a multicenter randomized trial, ethics consultations were effective in decreasing conflicts. A systematic review and meta-analysis of ethics consultations in adult ICUs showed that ethics consultations increased the probability of reaching decision consensus and shortening ICU stay. The Veterans Health Administration has called for a more systematic and proactive approach to managing ethical conflicts. Other researchers have urged quality improvement and system redesign to prevent ethical conflicts.

We evaluated the effectiveness of a proactive, team-based ethics protocol to promote ethics-related discussion and activate early family conferences and

**Most ethical conflicts in intensive care units pertain to medical decision-making and treatment goals.**
referrals for additional support services in 6 ICUs at
3 academic medical centers. We hypothesized that
this intervention would increase the number of and
shorten the time to family conferences and code dis-
cussions and provide additional support for patients
and families as they adjusted to critical illness, possi-
bly shortening the ICU stay.

Methods

This quasi-experimental, pre-post (3 and 6
months) study was undertaken to investigate the
effect of an ethics intervention on primary and sec-
ondary clinical outcomes and clinician outcomes.
Clinical outcomes are reported in this article. At least
1 nurse researcher was responsible for study proce-
dures at each hospital. The institutional review board
at each medical center approved the study.

Setting and Population

Six ICUs representing 5 specialties in 3 academic
medical centers participated in this study: a surgical/
trauma unit, a cardiac surgery unit, a transplant unit,
a neurologic unit, and 2 medical units. All 5 types
of ICU were included in the preintervention and
6-month postintervention data collection periods.
Data were collected from 3 specialty units (medical,
transplant, and neurologic ICUs) in the 3-month
postintervention period. All ICU admissions during
1 month before the intervention (N = 672) and during
1 month in the 3-month (N = 438) and 6-month
(N = 602) postintervention periods were included in
the study. The total number of admissions was 1712,
representing 1649 patients; 63 patients were read-
mittred during the data collection period. Intensive
care unit admissions rather than patients were used
as the standard of measure because the ethics inter-
vention was initiated for all patient admissions and
not just for first-time admissions.

Intervention

The ethics intervention comprised 3 parts: (1)
completion of a daily Ethics Early Action Protocol
(see Figure 1, available online only at www.ajccon-
line.org) requiring clinicians to analyze patient, fam-
ily, and situational risk factors that, on the basis of
evidence from physicians, nurses, and clinical ethic-
cists,\textsuperscript{26,27} indicate low, medium, or high risk for ethi-
cal conflict, with each risk level accompanied by an
action plan; (2) an interactive, case-based protocol
orientation developed by the authors of this article
and delivered to ICU staff as a 15-minute, online
video module; and (3) an ethics application devel-
ded by 2 of the authors (C.L.P., K.B.-S.) as an
ongoing resource and support for health care teams
as they implemented the ethics protocol, which
defined ethics terms, provided communication
guidelines for educating and supporting patients
and families or surrogates, and offered resources
for clinician and team well-being.

The Ethics Early Action Protocol integrated into
daily care was the central feature of the ethics inter-
vention. It was first pilot tested as a screening tool
in ICU and oncology settings at 2 major medical
centers.\textsuperscript{28} The protocol was refined on the basis of
the results. Subsequently, to establish content valid-
ity, 14 nationally known ethics experts (researchers,
physicians, registered nurses, and social workers)
assessed each protocol item
for its relevance to ethical
conflicts and appropriateness
for follow-up action. Two items in the protocol
were deleted, 1 item was
added, and 5 items were
subsequently revised for
clarity. Nurses in the pilot
study also suggested ongo-
ing educational support,
specifically on ethics-related
communication. The ethics
application was developed
as a ready resource for these
conversations. For the current study, health care teams
were urged to incorporate the protocol into an exist-

We measured number
and timing of family
conference and code
discussions and referrals to support ser-
ices at baseline and 3
and 6 months after the
intervention.

Clinical Outcome Measures

Research team members all used the same defini-
tions for the primary outcome variables: family con-
ferences (ie, formal family meetings), code discussions,
and ethics consultations. Secondary clinical outcomes
included social work, chaplain, and palliative care
consultations, which referred to actual visits from rep-
resentatives of these disciplines. In all settings, pallia-
tive care required physician orders, whereas ethics,
social work, and chaplain referrals could be made by
all members of the health care team.

Data Sources

Using the same data abstraction instrument at
all sites, either the site’s primary investigator, nurse,
or trained research assistant abstracted outcome data
from the electronic health record for 1 month before the intervention and for 1 month at 3 and 6 months after the intervention. Two units abstracted data only before the intervention and at 6 months after the intervention. Information on family conferences and code discussions was extracted from narrative notes made by physicians, nurses, and social workers. The ethics consultation service in each setting provided data on ethics consultations for the ICU site. Poststudy focus groups were held at study sites to identify benefits, challenges, and suggestions for improvement.

**Statistical Analysis**

All data analyses were conducted using SAS, version 9.4. As noted previously, patient ICU admissions (1712) rather than patients (1649) were used as sample units. Additionally, data were analyzed according to type of ICU, so we combined medical ICU data from 2 hospitals. Differences in patients’ demographics between the preintervention and postintervention groups were explored using χ² analyses for dichotomous variables and t tests or analyses of variance for normally distributed continuous variables. To ascertain whether significantly more patient admissions were receiving family conferences, social work consultations, palliative care consultations, code status discussions, chaplain visits, and ethics consultations at follow-up compared with before the intervention, simple bivariate (unconditional) logistic regression analyses were performed comparing preintervention and postintervention time points. Multivariate logistic regressions of the same outcomes comparing preintervention and postintervention time points were also performed, controlling for all patient demographic variables, primary diagnosis, ICU type, and ICU length of stay. Because postintervention data at 3 months represented 3 ICU types, all analyses comparing preintervention with 3 months postintervention were performed for these 3 ICU types. Separate analyses were performed comparing preintervention with 6-month postintervention data for all 5 ICU types. To determine whether the incidence ratio of receiving a family conference differed on any given day between the preintervention and 3-month postintervention and the preintervention and 6-month postintervention time points, survival analyses were conducted by using multivariate Cox regression models, controlling for all patient demographic variables, ICUs, primary diagnoses, and ICU length of stay.

**Results**

The sample consisted of 1712 admissions for 1649 patients who entered the ICU during the data collection time periods: 672 admissions in the preintervention period, 438 in the 3-month postintervention period, and 602 in the 6-month postintervention period. Most patients were admitted for an acute illness. Although some surgical admissions in 1 unit were elective, most of those patients were experiencing life-threatening conditions requiring surgical intervention. Most of the patients were white (74%) and male (56%), and the mean age of the patients was 60 years. Patients in the preintervention and postintervention groups did not differ significantly in terms of demographic variables except for religion, primary diagnosis, and ICU type (Table 1). Additionally, the percentages of patients who had an advance directive (47%, 44%, and 47%), provider or medical orders for life-sustaining treatments (all 7%), or a named surrogate (56%, 52%, and 60%) did not differ significantly among the 3 groups.

**Clinical Outcomes**

In our comparison of preintervention and 3- and 6-month postintervention data, we noted increases in the proportion of admissions with family conferences (12%, 21%, 20%), chaplain visits (23%, 25%, 33%), code discussions (17%, 18%, 21%), social work visits (39%, 35%, 47%), and palliative care consultations (5%, 6%, 7%). Controlling for demographic variables, diagnosis, ICU type, and ICU length of stay, ICU admissions at both 3 months (Table 2) and 6 months after the intervention (Table 3) had significantly higher odds of receiving a family conference, with odds ratios (ORs) of 2.54 (P=.001) for 3 months and 1.77 (P=.001) for 6 months compared with preintervention admissions. The odds of experiencing a chaplain visit significantly increased at both 3 months (OR=1.59, P=.008) and 6 months (OR=1.65, P=.001) after the intervention compared with before the intervention.

The odds of receiving a palliative care consultation or code status discussion did not differ significantly at 3 months (OR=1.12 for palliative care consultation and 1.40 for code status discussion) or 6 months (OR=1.38 for palliative care consultation and 1.33 for code discussion) compared with before the intervention. Admissions at 6 months had significantly higher odds of receiving social work referrals.
### Table 1
Demographic characteristics of 1649 patients at 3 time points

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Timing relative to intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before (n = 660)</td>
</tr>
<tr>
<td>Age, y</td>
<td></td>
</tr>
<tr>
<td>≤40</td>
<td>82 (12.4)</td>
</tr>
<tr>
<td>41-60</td>
<td>200 (30.3)</td>
</tr>
<tr>
<td>61-75</td>
<td>244 (37.0)</td>
</tr>
<tr>
<td>≥76</td>
<td>134 (20.3)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>275 (41.7)</td>
</tr>
<tr>
<td>Male</td>
<td>385 (58.3)</td>
</tr>
<tr>
<td>Race/ethnicity</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>501 (75.9)</td>
</tr>
<tr>
<td>Asian</td>
<td>25 (3.8)</td>
</tr>
<tr>
<td>Black</td>
<td>33 (5.0)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>48 (7.3)</td>
</tr>
<tr>
<td>Other/no report</td>
<td>53 (8.0)</td>
</tr>
<tr>
<td>Religion&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Christian (Protestant)</td>
<td>275 (41.7)</td>
</tr>
<tr>
<td>Catholic</td>
<td>176 (26.7)</td>
</tr>
<tr>
<td>Other</td>
<td>41 (6.2)</td>
</tr>
<tr>
<td>No report</td>
<td>168 (25.5)</td>
</tr>
<tr>
<td>Diagnosis category&lt;sup&gt;c&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Organ failure</td>
<td>202 (30.6)</td>
</tr>
<tr>
<td>Postoperative monitoring and complications</td>
<td>152 (23.0)</td>
</tr>
<tr>
<td>Neurologic/spinal condition</td>
<td>72 (10.9)</td>
</tr>
<tr>
<td>Sepsis/infection</td>
<td>71 (10.8)</td>
</tr>
<tr>
<td>Other conditions</td>
<td>163 (24.7)</td>
</tr>
<tr>
<td>Type of intensive care unit&lt;sup&gt;b,d&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Cardiac surgery</td>
<td>72 (10.9)</td>
</tr>
<tr>
<td>Transplant</td>
<td>70 (10.6)</td>
</tr>
<tr>
<td>Medical</td>
<td>327 (49.5)</td>
</tr>
<tr>
<td>Neurologic</td>
<td>145 (22.0)</td>
</tr>
<tr>
<td>Surgical/trauma</td>
<td>46 (7.0)</td>
</tr>
</tbody>
</table>

<sup>a</sup> Values in last 3 columns are No. (%) of patients.
<sup>b</sup> P < .001.
<sup>c</sup> P < .001.
<sup>d</sup> The χ² test was not reliable because of empty cells.

### Table 2
Time of admission (baseline, 3 months) as predictor of receiving family conference, code status discussion, palliative care consultation, social work consultation, and chaplain visit<sup>b</sup><sup,b</sup>

<table>
<thead>
<tr>
<th>Outcomes at 3 months&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Coefficient</th>
<th>SE</th>
<th>P</th>
<th>Odds ratio</th>
<th>95% CI of odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family conference&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.47</td>
<td>0.10</td>
<td>&lt;.001</td>
<td>2.54</td>
<td>1.72-3.77</td>
</tr>
<tr>
<td>Social work consultation&lt;sup&gt;e&lt;/sup&gt;</td>
<td>−0.03</td>
<td>0.07</td>
<td>.69</td>
<td>0.94</td>
<td>0.71-1.25</td>
</tr>
<tr>
<td>Palliative care consultation&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0.06</td>
<td>0.15</td>
<td>.71</td>
<td>1.12</td>
<td>0.62-2.05</td>
</tr>
<tr>
<td>Code status discussion&lt;sup&gt;g,h&lt;/sup&gt;</td>
<td>0.17</td>
<td>0.10</td>
<td>.08</td>
<td>1.40</td>
<td>0.96-2.04</td>
</tr>
<tr>
<td>Chaplain visit&lt;sup&gt;i&lt;/sup&gt;</td>
<td>0.23</td>
<td>0.09</td>
<td>.008</td>
<td>1.59</td>
<td>1.13-2.23</td>
</tr>
</tbody>
</table>

<sup>a</sup> Data from multivariate logistic regression models, with demographic characteristics, intensive care unit length of stay, diagnosis, and intensive care unit specialty controlled for.
<sup>b</sup> Includes data from medical, neurological, and transplant (not surgical/trauma or cardiac surgery) intensive care units.
<sup>c</sup> Compared with before intervention.
<sup>d</sup> Area under receiver operating characteristic curve = 0.74, Hosmer-Lemeshow P value = .66.
<sup>e</sup> Area under receiver operating characteristic curve = 0.68, Hosmer-Lemeshow P value = .28.
<sup>f</sup> Area under receiver operating characteristic curve = 0.77, Hosmer-Lemeshow P value = .53.
<sup>g</sup> Additional controlled for code status at admission.
<sup>h</sup> Area under receiver operating characteristic curve = 0.74, Hosmer-Lemeshow P value = .76.
<sup>i</sup> Area under receiver operating characteristic curve = 0.69, Hosmer-Lemeshow P value = .49.
The odds of receiving a visit from a chaplain increased significantly at 3 and 6 months after the ethics protocol was implemented compared with before the intervention.

Table 3
Time of admission (baseline, 6 months) as predictor of receiving family conference, code status discussion, palliative care consultation, social work consultation, and chaplain visit

<table>
<thead>
<tr>
<th>Outcomes at 6 months&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Coefficient</th>
<th>SE</th>
<th>P</th>
<th>Odds ratio</th>
<th>95% Cl of odds ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family conference&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.29</td>
<td>0.09</td>
<td>.001</td>
<td>1.77</td>
<td>1.27-2.48</td>
</tr>
<tr>
<td>Social work consultation&lt;sup&gt;d&lt;/sup&gt;</td>
<td>0.15</td>
<td>0.06</td>
<td>.02</td>
<td>1.34</td>
<td>1.05-1.70</td>
</tr>
<tr>
<td>Palliative care consultation&lt;sup&gt;e&lt;/sup&gt;</td>
<td>0.16</td>
<td>0.13</td>
<td>.20</td>
<td>1.38</td>
<td>0.84-2.25</td>
</tr>
<tr>
<td>Code status discussion&lt;sup&gt;f,g&lt;/sup&gt;</td>
<td>0.14</td>
<td>0.08</td>
<td>.08</td>
<td>1.33</td>
<td>0.97-1.81</td>
</tr>
<tr>
<td>Chaplain visit&lt;sup&gt;h&lt;/sup&gt;</td>
<td>0.25</td>
<td>0.07</td>
<td>.001</td>
<td>1.65</td>
<td>1.23-2.21</td>
</tr>
</tbody>
</table>

<sup>a</sup> From multivariate logistic regression models, controlling for demographic characteristics, diagnosis, and intensive care unit specialty.
<sup>b</sup> Compared with before intervention.
<sup>c</sup> Area under receiver operating characteristic curve = 0.70, Hosmer-Lemeshow P value = .49.
<sup>d</sup> Area under receiver operating characteristic curve = 0.70, Hosmer-Lemeshow P value = .50.
<sup>e</sup> Area under receiver operating characteristic curve = 0.70, Hosmer-Lemeshow P value = .73.
<sup>f</sup> Area under receiver operating characteristic curve = 0.71, Hosmer-Lemeshow P value = .41.
<sup>g</sup> Additionally controlled for code status at admission.
<sup>h</sup> Area under receiver operating characteristic curve = 0.67, Hosmer-Lemeshow P value = .84.

(OR = 1.34, P = .02) compared with before the intervention. The number of ethics consultations was low before the intervention (N = 6) and increased to 14 at 3 months and 14 at 6 months after the intervention. The number of ICU admissions with “code status not discussed” was 136 (20%) before the intervention and decreased to 27 (6%) at 3 months and 64 (11%) at 6 months after the intervention.

To ascertain whether time to first family conference differed significantly between the preintervention period and each of the postintervention periods, we performed survival analysis using Cox regression models, controlling for all patient demographic variables including primary diagnosis and ICU type. At any particular time, with all covariates controlled for, a little more than twice as many admissions from the 3-month postintervention period received a family conference compared with preintervention admissions (hazard ratio [HR] = 2.22, P < .001; Table 4). At 6 months, this ratio decreased slightly to 1.73 (P < .001), indicating 73% more admissions receiving a family conference on a certain day compared with preintervention admissions, with all other covariates controlled for (Table 5). Kaplan-Meier survival graphs 1 and 2 (Figures 2 and 3, available online only) illustrate these findings. No significant differences were found for other timing variables or ICU length of stay.

The incidence of having a family conference differed significantly across ICU types. At 3 months, both transplant ICU and medical ICU admissions had HRs more than twice that of neurologic ICU admissions. At 6 months, HRs ranged from 2.99 for the surgical/trauma ICU to 5.09 for the cardiac surgery ICU compared with the neurologic ICU, indicating that neurologic ICU admissions had the lowest likelihood of receiving family conferences among all the ICU types. Patients’ age also differed significantly in the comparison between baseline and 6 months, with all other variables in the model controlled for. Patients older than 75 years were significantly more likely to receive a family conference than those in younger age groups, with HRs ranging from 0.32 for the 40 years or less age group to 0.54 for the 61 to 75 years age group (Table 5).

Discussion

This study offers some evidence that routine implementation of a team-based ethics intervention can provide additional resources to patients and families during critical illness. The Ethics Early Action Protocol resulted in more formal communication with family members and increased attention to spiritual care needs. We also found that code status was discussed more often, which could indicate that the ethics protocol increased awareness and improved documentation regarding code status. Because moral distress is associated with delays in end-of-life conversations, opportunities to have these team discussions seem essential.

Although the number of patients who received chaplain visits at all 3 time points was low in our study (23% before the intervention, 25% at 3 months after the intervention, and 33% at 6 months after the intervention), the protocol significantly increased these visits. Evidence from other studies indicates that although physicians and nurses value spiritual care, providers rarely explore patients’ spiritual needs, despite evidence of the benefits of spiritual care such as improved quality of life and increased satisfaction of patients. Routinely assessing patients’...
and families’ spiritual needs and providing support may be an overlooked aspect of critical care.

In our study, the number of ICU admissions that included at least 1 family conference increased significantly with protocol use. Evidence from other studies indicates that families not only benefit from family conferences but also value the opportunity, especially if provided time to share their perspectives. Communication with patients and their families is a cornerstone of shared decision-making and provides an opportunity for clinicians to prepare surrogates for informed decision-making. Improving family-clinician communication increases family members’ confidence in treatment decision-making and shortens the duration of life support among patients who die in the ICU, promotes earlier consensus on goals of care for trauma patients and liver transplant patients, and improves family satisfaction with end-of-life care in the ICU.

Another important resource for patients and families during critical illness is team collaboration. Teamwork is associated with factors that decrease inappropriate treatments, increase information exchange among teams, and decrease moral distress. In our study, the protocol prompted routine, team-based conversations about ethics-related aspects of care such as patients’ preferences, family perspectives, treatment benefits and burdens, and goals of care. Nurses who participated in poststudy focus groups at study sites indicated that proactive, team-based communication guided by the ethics protocol helped to clarify care goals, identify different viewpoints, coordinate care, and initiate early actions that provided multidisciplinary care for patients and offered informational and emotional support for families.

Our study also revealed potential gaps in ICU care. For example, very few ICU patients received palliative care consultation. Evidence suggests that patients with advanced heart failure who receive usual care plus a palliative care intervention manifest less anxiety and depression and enhanced spiritual well-being compared with similar patients who

Table 4
Proportional hazard of receiving a family conference at 3 months after the intervention compared with before the intervention, using Cox regression model

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Coefficient</th>
<th>SE</th>
<th>P</th>
<th>Hazard ratio</th>
<th>95% CI of hazard ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of admission&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 months after intervention</td>
<td>0.80</td>
<td>0.18</td>
<td>&lt;.001</td>
<td>2.22</td>
<td>1.56-3.15</td>
</tr>
<tr>
<td>Age, &lt;sup&gt;b&lt;/sup&gt; y</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤40</td>
<td>−0.52</td>
<td>0.31</td>
<td>.09</td>
<td>0.60</td>
<td>0.33-1.09</td>
</tr>
<tr>
<td>41-60</td>
<td>−0.56</td>
<td>0.25</td>
<td>.03</td>
<td>0.57</td>
<td>0.34-0.94</td>
</tr>
<tr>
<td>61-75</td>
<td>−0.39</td>
<td>0.24</td>
<td>.11</td>
<td>0.68</td>
<td>0.43-1.09</td>
</tr>
<tr>
<td>Female sex&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0.12</td>
<td>0.17</td>
<td>.46</td>
<td>1.13</td>
<td>0.81-1.58</td>
</tr>
<tr>
<td>Race/ethnicity&lt;sup&gt;d&lt;/sup&gt;</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>0.26</td>
<td>0.33</td>
<td>.44</td>
<td>1.29</td>
<td>0.67-2.48</td>
</tr>
<tr>
<td>Black</td>
<td>0.32</td>
<td>0.30</td>
<td>.28</td>
<td>1.38</td>
<td>0.77-2.47</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.27</td>
<td>0.26</td>
<td>.29</td>
<td>1.31</td>
<td>0.79-2.17</td>
</tr>
<tr>
<td>Other/no report</td>
<td>−0.14</td>
<td>0.29</td>
<td>.64</td>
<td>1.15</td>
<td>0.65-2.04</td>
</tr>
<tr>
<td>Type of intensive care unit&lt;sup&gt;e&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transplant</td>
<td>0.72</td>
<td>0.40</td>
<td>.08</td>
<td>2.05</td>
<td>0.93-4.52</td>
</tr>
<tr>
<td>Medical</td>
<td>0.95</td>
<td>0.39</td>
<td>.02</td>
<td>2.58</td>
<td>1.19-5.57</td>
</tr>
<tr>
<td>Religion&lt;sup&gt;f&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>−0.39</td>
<td>0.25</td>
<td>.12</td>
<td>0.68</td>
<td>0.42-1.10</td>
</tr>
<tr>
<td>Christian (Protestant)</td>
<td>−0.04</td>
<td>0.22</td>
<td>.84</td>
<td>0.96</td>
<td>0.63-1.47</td>
</tr>
<tr>
<td>Other</td>
<td>0.22</td>
<td>0.30</td>
<td>.45</td>
<td>1.25</td>
<td>0.70-2.23</td>
</tr>
<tr>
<td>Primary diagnosis&lt;sup&gt;g&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurologic/spinal</td>
<td>−0.31</td>
<td>0.39</td>
<td>.43</td>
<td>0.74</td>
<td>0.34-1.58</td>
</tr>
<tr>
<td>Organ failure</td>
<td>−0.30</td>
<td>0.26</td>
<td>.25</td>
<td>0.74</td>
<td>0.45-1.23</td>
</tr>
<tr>
<td>Postoperative monitoring and</td>
<td>−0.72</td>
<td>0.36</td>
<td>.04</td>
<td>0.49</td>
<td>0.24-0.98</td>
</tr>
<tr>
<td>complications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>−0.10</td>
<td>0.29</td>
<td>.73</td>
<td>0.91</td>
<td>0.52-1.59</td>
</tr>
</tbody>
</table>

- Compared with before intervention.
- Compared with age > 75 years.
- Compared with male sex.
- Compared with non-Hispanic white.
- Compared with neurologic intensive care unit.
- Compared with no religion.
- Compared with sepsis or infection.
receive only the usual, standard treatment for heart failure. Positive outcomes have also been noted for patients diagnosed with metastatic non–small cell lung cancer who receive standard oncology care plus palliative care, compared with those who receive standard care alone. The palliative care plus standard therapy group had significant improvements in perception of quality of life and mood, received less aggressive care at the end of life, and lived longer. On the basis of its effectiveness, proactive palliative care is now recommended. In our study, palliative care was an underused resource for ICU patients. Very few ethics consultations occurred during the study period. Similarly, a prospective study conducted in an oncology ICU revealed that only 1% of ICU admissions had an ethics consultation; when implemented, ethics consultation reduced surrogate-clinician disagreements and increased referrals to palliative care and chaplain services. Proactively offering valuable ethics-related resources to patients, families, and health care providers may improve patient outcomes such as quality of life, promote family trust and satisfaction with care, and prevent provider disengagement.

Limitations
A nonrandom and relatively small (3 months of patient admissions) sample naturally limits the study findings. The quasi-experimental, pre-post design does not account for variables that may have changed during the study time period, such as staffing changes. However, collecting data in 3 different settings and geographic regions helps to offset design limitations.

The protocol prompted routine team-based conversations about ethics-related aspects of care.

Table 5
Proportional hazard of receiving a family conference at 6 months after the intervention compared with before the intervention, using Cox regression model

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Coefficient</th>
<th>SE</th>
<th>P</th>
<th>Hazard ratio</th>
<th>95% CI of hazard ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of admission (^a)</td>
<td>0.55</td>
<td>0.15</td>
<td>&lt;.001</td>
<td>1.73</td>
<td>1.29-2.33</td>
</tr>
<tr>
<td>6 months after intervention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age, (^b)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤40</td>
<td>−1.15</td>
<td>0.29</td>
<td>&lt;.001</td>
<td>0.32</td>
<td>0.18-0.56</td>
</tr>
<tr>
<td>41-60</td>
<td>−0.66</td>
<td>0.20</td>
<td>.001</td>
<td>0.52</td>
<td>0.35-0.77</td>
</tr>
<tr>
<td>61-75</td>
<td>−0.62</td>
<td>0.19</td>
<td>.001</td>
<td>0.54</td>
<td>0.37-0.78</td>
</tr>
<tr>
<td>Female sex(^c)</td>
<td>−0.18</td>
<td>0.15</td>
<td>.23</td>
<td>0.84</td>
<td>0.63-1.12</td>
</tr>
<tr>
<td>Race/ethnicity(^d)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>0.20</td>
<td>0.31</td>
<td>.43</td>
<td>1.23</td>
<td>0.67-2.26</td>
</tr>
<tr>
<td>Black</td>
<td>0.03</td>
<td>0.33</td>
<td>.92</td>
<td>1.04</td>
<td>0.54-1.98</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.35</td>
<td>0.24</td>
<td>0.15</td>
<td>1.42</td>
<td>0.88-2.29</td>
</tr>
<tr>
<td>Other/no report</td>
<td>−0.50</td>
<td>0.31</td>
<td>.11</td>
<td>0.61</td>
<td>0.33-1.11</td>
</tr>
<tr>
<td>Type of intensive care unit(^e)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiac surgery</td>
<td>1.62</td>
<td>0.48</td>
<td>&lt;.001</td>
<td>5.09</td>
<td>1.98-13.06</td>
</tr>
<tr>
<td>Transplant</td>
<td>1.26</td>
<td>0.49</td>
<td>.01</td>
<td>3.54</td>
<td>1.36-9.19</td>
</tr>
<tr>
<td>Medical</td>
<td>1.40</td>
<td>0.46</td>
<td>.002</td>
<td>4.07</td>
<td>1.65-10.02</td>
</tr>
<tr>
<td>Surgical/trauma</td>
<td>1.09</td>
<td>0.54</td>
<td>.04</td>
<td>2.99</td>
<td>1.03-8.69</td>
</tr>
<tr>
<td>Religion(^f)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>−0.23</td>
<td>0.21</td>
<td>.26</td>
<td>0.79</td>
<td>0.53-1.19</td>
</tr>
<tr>
<td>Christian (Protestant)</td>
<td>−0.02</td>
<td>0.19</td>
<td>.91</td>
<td>0.98</td>
<td>0.67-1.43</td>
</tr>
<tr>
<td>Other</td>
<td>0.11</td>
<td>0.28</td>
<td>.71</td>
<td>1.11</td>
<td>0.64-1.92</td>
</tr>
<tr>
<td>Primary diagnosis (^g)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurologic/spinal</td>
<td>0.46</td>
<td>0.34</td>
<td>.18</td>
<td>1.58</td>
<td>0.81-3.08</td>
</tr>
<tr>
<td>Organ failure</td>
<td>0.10</td>
<td>0.23</td>
<td>.68</td>
<td>1.10</td>
<td>0.70-1.74</td>
</tr>
<tr>
<td>Postoperative monitoring and complications</td>
<td>−0.35</td>
<td>0.30</td>
<td>.24</td>
<td>0.70</td>
<td>0.39-1.27</td>
</tr>
<tr>
<td>Other</td>
<td>0.09</td>
<td>0.26</td>
<td>.73</td>
<td>1.10</td>
<td>0.66-1.83</td>
</tr>
</tbody>
</table>

\(^a\) Compared with before intervention.
\(^b\) Compared with >75 years.
\(^c\) Compared with male sex.
\(^d\) Compared with non-Hispanic white.
\(^e\) Compared with neurologic intensive care unit.
\(^f\) Compared with no religion.
\(^g\) Compared with sepsis or infection.
Even though site investigators worked from common outcome definitions, outcome data were sometimes difficult to extract because electronic health records did not have standardized chart locations for documenting family conferences or code discussions. Instead, investigators had to rely on reading health care providers’ narrative notes. This limitation was in effect at all 3 time points and in all settings. Family conference documentation may account for some of the results, although nurses participating in the focus groups commented frequently on how the protocol increased family conferences. One nurse commented, “Before the protocol, scheduling a family conference was like pulling teeth, putting them back in, and pulling them out again. Now they [family conferences] just happen.” To deepen understandings about the protocol’s impact, direct patient and family outcome measures should be included in future studies, along with direct observations of clinical outcomes such as family conferences. Differences in ICU types also need further exploration.

Conclusion
This study provides some evidence that the team-based Ethics Early Action Protocol increases family conferences, which could provide opportunities for sharing important information about patients. The ethics protocol also offers spiritual resources that could provide valuable support for patients and their families during critical illness. Data from other studies suggest that family conferences, spiritual support, palliative care interventions, and ethics consultations can improve patient experiences and contribute to family-team cohesiveness. 21, 24, 35, 36, 43, 46, 47 In total, these findings suggest that routine efforts such as the Ethics Early Action Protocol to provide more patient care services and promote interprofessional teamwork may be a valuable asset for critically ill patients and their families.

FINANCIAL DISCLOSURES
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REFERENCES
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www.aajcconline.org

To purchase electronic or print reprints, contact American Association of Critical-Care Nurses, 101 Columbia, Aliso Viejo, CA 92656. Phone, (800) 899-1712 or (949) 362-2050 (ext 532); fax, (949) 362-2048; email, reprints@aacn.org.
**Ethics Early Action Protocol©**

This form is intended to be used as a tool to assess potential risk factors for ethical conflict related to health care decision-making and to identify resources for addressing such potential conflict. The form is intended to facilitate conversation and communication among team members, patients, and families and provide possible tools for problem-solving and enhancing health care. The form is not intended to serve as a progress note or the final documentation of a patient's status or medical diagnosis.

### PATIENT SITUATION

**Date:**

**Patient Initials:**

**Hospital Day:**

**Unit:**

<table>
<thead>
<tr>
<th>Patient's Age</th>
<th>Gender</th>
<th>Code#</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td></td>
</tr>
</tbody>
</table>

**Race/Ethnicity**

- [ ] American Indian/Alaskan Native
- [ ] Asian
- [ ] Black/African American
- [ ] Hispanic/Latino
- [ ] Native Hawaiian/Pacific Islander
- [ ] White
- [ ] Middle Eastern

**Religion**

- [ ] Buddhist
- [ ] Christian
- [ ] Hindu
- [ ] Jewish
- [ ] Catholic
- [ ] Muslim
- [ ] No religious affiliation

- [ ] Other (please specify)

**Primary Diagnosis:**

**Other Diagnoses:**

**Patient Situations as Discussed in Multidisciplinary Rounds**

- [ ] Sepsis/infectious process
- [ ] Acute medical deterioration
- [ ] Organ failure (cardiac, respiratory, renal, liver)
- [ ] Stroke/neurologic complications
- [ ] Hemorrhage (GI bleed, DIC)
- [ ] Postsurgical observation
- [ ] Trauma
- [ ] Transplant
- [ ] Drug overdose/poisoning
- [ ] End of life
- [ ] Other (please specify)

### ETHICS ASSESSMENT

**Temporary Advance Directive**

- [ ] Yes
- [ ] No

**Advance Health Care Directive**

- [ ] Yes
- [ ] No

**POLST**

- [ ] Yes
- [ ] No

**Decision-maker/Surrogate**

- [ ] Known
- [ ] Unknown

Name and contact information: ________________

**Code Status**

- [ ] Full Code
- [ ] DNR
- [ ] Partial/DNI

Initial date ordered: ________________

If changed, date of change: ________________

### Risk Factors for an Ethical Conflict

**Patient Risk Factors:**

- [ ] **Is there potential for escalation of nonbeneficial treatment?**
- [ ] **Is there a combination of patient lacking decisional capacity and family conflict?**
- [ ] **Does the patient have compromised capacity and no decision-maker?**
- [ ] **Is the patient suffering? (i.e., physical, psychological, or spiritual pain or high anxiety)**
- [ ] Does the patient appear to be imminently dying?
- [ ] Is the patient vulnerable due to factors such as compromised capacity, mental illness, substance abuse, lack of education/literacy, very old or very young, low socioeconomic status, homeless, and/or inadequate support system?
- [ ] Is the patient vulnerable due to communication concerns, such as non-English speaker, limited English proficiency, limited literacy, blind, deaf, or very hard of hearing?
- [ ] Does the patient have complex health care needs with uncertain prognosis?
- [ ] Have there been a series of unsuccessful treatments and/or a worsening prognosis?
- [ ] Is the patient refusing clinically beneficial treatments?

**Figure 1** Ethics Early Action Protocol completed daily by clinicians.

Abbreviations: DIC, disseminated intravascular coagulation; DNI, do not intubate; DNR, do not resuscitate; GI, gastrointestinal; ICU, intensive care unit; POLST, physician/provider orders for life-sustaining treatment.

Family Risk Factors
- **Is there conflict between family members about the plan of care?**
- **Does a family member have strong beliefs or views about how care should be provided?**
- **Are there cultural or faith beliefs that influence expectations?**
- Are there communication barriers between the family and health care team such as non-English speakers, limited English proficiency, limited literacy, blind, deaf, or hard of hearing?
- **Is there disagreement between the health care team and the family about the plan of care or view of prognosis?**
- Is the family discussing legal action?
- Is the family uncertain about the plan of care?
- **Has family been absent or unavailable?**

Situational Risk Factors
- **Is there a need for conversation about the goals of care and/or for a cohesive plan of treatment?**
- **Is there concern about patient autonomy and/or patient’s known wishes for care?**
- **Is there concern about the patient’s right to information?**
- **Are there signs of moral distress in families and/or clinicians?**
- Is there a need for coordinated communication with patient, with family, or within the health care team?
- Is there compromised trust?
- Is there a need for clarification about standard of care for patient/family?
- Is there a need for better understanding of the condition or prognosis?
- Is there need for clarification of patient preferences (eg, advance directive)?
- **Has conflict been observed?**

**Indicates critical risk factor

Ethics Plan With Suggested Follow-up Actions
(Note whether action is completed, in progress, or not done at this time)
(Ethics assessment and plan conducted within 48 hours of admission to ICU and considered daily thereafter)

Low Risk of Conflict
Ethics conflict unlikely at this time (3 or fewer risk factors checked)

**Actions:**
- Review advance directive/POLST; if none, provide resources.
- Identify whether a surrogate has been named in the event the patient loses capacity.
- Provide daily updates on patient’s condition: offer honest/direct information, use common language, and avoid euphemisms and complex medical terms.
- Discuss with colleague if needed.
- Consult with social worker.
- Consult with spiritual care if appropriate.
- Continue to monitor situation.

Medium Risk of Conflict
Ethics conflict has moderate potential for developing (4-6 risk factors checked)

**Actions:**
- Review advance directive/POLST; if none, provide resources.
- Identify whether a surrogate has been named in the event the patient loses capacity.
- Provide daily updates on patient’s condition: offer honest/direct information, use common language, and avoid euphemisms and complex medical terms.
- Initiate conversation with your leadership (nurse and physician leaders).
- Discuss situation with the multidisciplinary health care team.
- Arrange for surrogate/family conference.
- Consider consultation with ethics service, social worker, palliative care, spiritual care.
- Continue to monitor situation.

High Risk of Conflict
Ethics conflict is likely or very likely to develop (more than 6 risk factors checked or ANY critical risk factor checked)

**Actions:**
- Review advance directive/POLST; if none, provide resources.
- Identify whether a surrogate has been named in the event the patient loses capacity.
- Provide daily updates on patient’s condition: offer honest/direct information, use common language, and avoid euphemisms and complex medical terms.
- Discuss the situation with your leadership.
- Request a meeting with the multidisciplinary health care team.
- Consult with social worker, palliative care, and spiritual care if appropriate.
- Initiate plans for ongoing surrogate/family conferences.
- Call for formal ethics consultation.
- Continue to monitor situation.

Figure 1 Continued
Figure 2 Kaplan-Meier survival graph shows that patients admitted to the intensive care unit 3 months after the intervention was implemented had a higher probability of experiencing a family conference and would have the conference sooner than would patients admitted before the intervention was implemented.

Figure 3 Kaplan-Meier survival graph shows that patients admitted to the intensive care unit 6 months after the intervention was implemented had a higher probability of experiencing a family conference and would have the conference sooner than would patients admitted before the intervention was implemented.