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INVITED COMMENTARY

Patients' Families, Physicians, and Nurses: Trying to See Eye-to-Eye Regarding Prognosis in Neurocritical Care

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Early impressions of prognosis among surrogate decision makers, physicians, and nurses for patients with severe acute brain injury (SABI) are clearly critical to making shared decisions regarding aggressiveness of care. These decisions are much tougher when clinical teams and families are not on the same page. In a recent article, Kiker et al. [1] reported that, among 61% of 193 patients with SABI hospitalized in a single center in Seattle, a physician on the treatment team and a key member of the patient's family had early impressions of how likely the patient was to recover to functional independence that differed by more than 20 points when assessed on a 100-point scale. In this issue of *Neurocritical Care*, the authors continue their analysis and examine degrees of agreement regarding early impressions of prognosis, not just between family members and physicians, but for both groups compared with bedside nurses' impressions, as well [2]. They also report the accuracy of these impressions across all three groups.

As in their earlier article, the authors defined SABI in this study as stroke, traumatic brain injury, or hypoxic-ischemic encephalopathy. For 187 patients, they asked a treating physician, a nurse, and a family member all on the same day to each give his or her opinion on the patient's likelihood of being "independent" at 6 months, scored from 0 to 100 on a continuous visual scale. The median day from admission that this question was

asked was day 4. Similar to their prior study, the authors reported that only 39.6% of physician-family pairs were concordant, or within 20 points of their estimates. In fact, the mean difference in estimates between these two groups was 23.5%, with an optimistic bias for families. Although similar discordance was seen among the nurse-family pairs, a higher percentage of physician-nurse pairs (56.2%) achieved concordance, with these pairs' estimates having a higher intraclass correlation coefficient than those of the physician-family and nurse-family pairs.

Among the 177 patients for whom the authors were able to obtain 6-month functional outcomes, the accuracy of each group's estimates of likelihood of recovery to functional independence was also assessed. This accuracy was similar between physicians and nurses (C statistics 0.80 and 0.74, respectively) but lower among families (0.63). To attempt to control for the self-fulfilling prophecy's role in clinicians' accuracy, the authors repeated these analyses after excluding those patients who were transitioned to comfort measures only (CMO) within 3 days of study enrollment. This analysis resulted in a decrease in accuracy across all groups, but still with the family estimates having the lowest accuracy.

These data provide an insightful snapshot into how discordant a family member's impression of a patient with SABI's prognosis can be compared with those of the clinical team during the first week of an intensive care unit (ICU) admission [3]. In terms of picking a time point to take such a snapshot, selecting the first few days of ICU admission is definitely relevant for the SABI population, for whom the possibility of early limitations of care always looms large. The study is limited, however, in terms of what we can learn regarding how effective physicians and nurses actually are at communicating prognosis

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to families. The timing of formal family meetings during which prognosis was discussed in relation to the timing of study enrollment was not recorded. That is, even assuming a protocol in place for early family meetings, it is quite possible that a fair number of study participants were enrolled before a clinician-family meeting specifically regarding prognosis had even taken place. It is possible that family-clinician discordance in this study would have been significantly less dramatic if the authors had confirmed with the treatment teams that at least one clinician-family meeting regarding prognosis had occurred before patient enrollment.

The definition of functional independence is of interest for this study, as the authors selected a cutoff of 3 or lower on the modified Rankin Scale (mRS). Although the authors make the case that prior SABI studies have used a similar mRS threshold for defining independence, being able to look after one's own affairs without assistance is typically defined as an mRS no higher than 2. It is not clear how using a definition of 0–2 for assessing functional independence at 6 months would have impacted assessments of accuracy among all three groups (family, physician, and nurse); with the use of a narrower definition of independence, accuracy of predictions among all groups might have significantly decreased. Similarly, although performing a sensitivity analysis excluding those patients who were transitioned to CMO within 3 days of enrollment may help make the case that the clinicians' accuracy advantage over that of the families was not due to a self-fulfilling prophesy, future studies might simply ask clinicians at the time of enrollment whether they believe that they will likely be recommending a CMO care plan to the family at any point. Excluding patients for whom clinicians self-report an inclination to recommend CMO may help adjust for the self-fulfilling prophesy, even among those patients whose processes of goals-of-care conversations end up extending for longer than 3 days.

This study does add real-world data to existing literature regarding families' biases toward prognostic optimism in ICUs [4] and emphasizes a need for creative strategies to ensure better concordance between clinicians and families [5]. Future research may also assess prognostic discordance among members of the same family, as surrogate decision makers of patients with SABI often report intrafamily conflict as a large factor in ultimately arriving at a goals-of-care decision [6]. The authors themselves make a key point, as well, in highlighting that, even though physicians and nurses were more concordant with each other than either of them were with the families, they only achieved concordance for only slightly more than half the patients. Putting aside the challenge of designing interventions to get clinicians and families on the same page about how patients are going to recover, it appears there is room for improvement in terms of members of the ICU clinical team even simply taking the time early on to get on the same page themselves.

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