

# Capsule Commentary on Vasunilashorn et al., Quantifying the Severity of a Delirium Episode throughout Hospitalization: The Combined Importance of Intensity and Duration

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Delirium during hospitalization is associated with prolonged length of stay, increased cost, and excess morbidity and mortality.<sup>1</sup> The Confusion Assessment Method (CAM) and Confusion Assessment Method-Severity (CAM-S)<sup>2</sup> scores identify delirium and predict severity. In this issue of the *JGIM*, the CAM and CAM-S investigators provide new data demonstrating that measures combining delirium severity and duration better predict adverse near-term outcomes.<sup>3</sup>

From the Successful AGing after Elective Surgery (SAGES) Study and Project Recovery, two cohorts of over 1500 medical and surgical patients were studied. Delirium was determined by daily CAM scores, delirium intensity by daily 10-item CAM-S scores, and duration of delirium by number of days where delirium was present. The primary outcomes were 30-day mortality, 30-day nursing home residence or mortality, and 30-day readmission or mortality. From a variety of permutations of CAM-S peak and mean scores, the sum of all CAM-S scores was found to have the best predictive value for the outcomes of interest. Two other measures performed similarly: single peak CAM-S score, and mean of all CAM-S scores. Patients with high scores on any of these three measures had a 30-40 % risk of 30 day readmission or death, even higher if delirium was still present at discharge.

How do these findings advance our clinical practice? First, we should appreciate that delirium severity and duration predict serious near-term outcomes, and with this in mind, should be cautious in our use of agents that may reduce delirium severity at the risk of prolonging its duration, e.g., antipsychotics.<sup>4</sup> Second,

we should screen for incipient delirium with CAM scores and calculate a daily CAM-S score thereafter until delirium resolves to better assess individual patient risk. While not tested in this study, the less time-consuming 3-min 3D-CAM score might more efficiently provide similar prognostic information.<sup>5</sup> Third, as a research platform, we should seek to develop interventions to limit delirium along the two axes of severity and duration. Lastly, we should translate the prognostic information we gain into patient-centered conversations with family members to better plan for the days and weeks ahead.

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#### Compliance with Ethical Standards:

**Conflict of Interest:** The author declares that he does not have a conflict of interest.

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