FOR the management of many medical conditions, such as stroke or myocardial infarction, high-volume centers tend to have better outcomes than low-volume centers. This appears to be related to experience gained over time and associated services and infrastructure. Such volume–outcome relationships are also well established for surgical procedures, such as cardiac surgery, where a combination of surgical experience and protocolized care pathways are important for optimal outcomes. In recent years, frailty—a state of diminished physiologic reserve leading to vulnerability and propensity for adverse outcomes—has become a focus of attention for many patient groups. For surgical patients, a state of preoperative frailty has been shown to be an important predictor of postoperative mortality, hospital length of stay, and discharge to long-term care institutions. These patients may have their own specific care needs after surgery, such as requirements for more aggressive physical therapy, or increased risk of adverse reactions to polypharmacy. If we, therefore, consider frailty as a pathologic state with its own specific care needs, centers that care for a higher volume of frail patients may provide better or more comprehensive care geared for this patient group, leading to better outcomes. In this issue of Anesthesiology, McIsaac et al. present the results of a population-level retrospective study, assessing the volume–outcome relationship for frail patients undergoing moderate- to high-risk surgical procedures in Ontario. The authors included all adult patients having selected surgeries between 2002 and 2014 and identified those in a frailty state using the Johns Hopkins Adjusted Clinical Groups frailty-defining diagnoses indicators. They stratified the frail patients into five groups based on the volume of frail surgical patients cared for in the hospital where the surgery took place. It is important to note that they did not restrict their population to only elderly patients, recognizing that a frail state can occur in younger individuals as well. The results showed a higher risk of death and failure to rescue when frail patients were operated on in centers with an overall low volume of frail surgical patients. Moreover, they found that there appeared to be a threshold effect above which higher volumes were not associated with better outcomes. The authors were also careful to distinguish their finding of a volume–outcome relationship for frail patients from more general volume–outcome relationships; postoperative outcomes were not associated with the total hospital surgical volume, but rather with the volume of frail surgical patients seen at each center. Overall, the findings of this study are an important first step toward elucidating best care options for frail patients who require surgery. More than a dozen frailty assessment tools have been described, and there is no consensus on which are best. Furthermore, scales like the Clinical frailty scale and the Fried phenotype require direct patient contact. Identifying frailty status using administrative data remains a challenging task. The John Hopkins Adjusted Clinical Groups index, used in this study, is a validated tool based on the diagnosis of geriatric syndromes from previous health encounters, such as weight loss, falls, and malnutrition. This use of a validated tool is a strength of the study. However, the limitation is that studies...
clearly needed in this evolving area of frailty research in the United States: Implications for comprehensive stroke center designation. Stroke 2012; 43:1309–14