The Value of Quality-Adjusted Life Years: Commentary on Séguin et al.

Thomas J. Esposito, MD, MPH

From the Loyola University Medical Center, Maywood, Illinois.

As we struggle to master the complex maze of providing clinical care in a business environment with varied resources, we seek ways to justify what we do and to do it better. The quality-adjusted life year statistic is one of these attempts. More intrigue is added to the quest when we try to define "better" or "quality" care according to diverse or absent standards, and according to whose interests and outcomes are at stake. The old adage still rings true: Quality is like pornography—you can't define it, but you know what it is when you see it. The study by Séguin et al. brings out some specific and global issues associated with quality of life assessments applied to outcomes research. It adds to and ups the ante by factoring in cost, ultimately trying to serve as an estimate of the value of trauma center care. This may further smooth or muddy the philosophic and methodologic waters.

In reference to this particular study, the lack of a true comparison group or matched cohort at a nontrauma center is a serious flaw if the goal is to demonstrate a difference in efficacy between trauma center and nontrauma center care. The conclusion the authors draw here is based on an assumption of improved survival at trauma centers rather than on concrete information. The data driving these assumptions, particularly that which quotes specific rates and uses them in mathematic calculations, needs to be verified and standardized or controlled for using regional, local, or national data. Only then can conclusions be considered as accurate, and only then can this methodology be used widely without specific comparison groups. The incremental analysis strategy or worst/best scenario bounding schemes are a weak bolster to imprecise data.

The authors and their hospital are to be congratulated for the availability and appropriate use of cost accounting and cost data. The reality is that this type of accounting strategy is rudimentary, if present at all, in many health care institutions at this time. The inclusion of services in these trauma cost centers may also vary depending on a number of factors, such as institutional definitions of trauma centers, services, and patients. The difference in fixed and variable cost is an issue, and how these are factored into an individual institution's calculation of costs associated with trauma patient care (particularly in the emergency department) is a factor to be reckoned with and standardized. Although we know that charges are quite variable as a result of different practices in different markets, do some of these influences affect a difference in cost as well? Do we need to verify this and perhaps control for it in comparison studies or multicenter studies?

In the same vein of cost, especially in relation to quality of life, it appears only acute care costs were used in the calculations. It seems the postacute costs of inpatient and outpatient rehabilitation, psychosocial, and other services should also be included. Exclusion of physician costs is also a serious concern with this study and in designing a methodology that seeks to accurately account for this large component of care.
The issues of acquiring the data to calculate this information and weighing it appropriately are also problematic. More work must be done in this area to standardize such incorporations into the methodology.

Perhaps from more of a philosophical or accounting perspective, does this study and the methodology in general examine only one side of the balance sheet? Are costs made up or justified by gains-exhibited in financial, quality, patient, or provider satisfaction indicators? These would fall under the category of early and sustained return to gainful employment and contribution to the tax base. On the other end is the often less widely and more quietly discussed issue of losses incurred or not incurred by burden on the resources. It has been said that death is cheap, and rehabilitation is expensive.

On the subject of quality assessment, several scales already exist (i.e., Euroqol 19, Health Utilities Index, Sickness Impact profile, SF-20 and SF-36, Quality of Well-Being Scale). In fact, two were used in this study. The validity and agreement between these various tools for assessing quality, specifically in the injured patient, must be further researched. Particular questions exist regarding self-administration versus administration by another, administration to family or care-taker versus patient, timing of administration, and multiple administrations over the course of recovery. Some subjects, as noted at least once in this study, will not be able to participate in such assessments. This is perhaps because of head injury, which is a major diagnosis among the injured population to be assessed. What does this say about the quality of life? Another question is whether these tools are culturally or educationally sensitive. A standard tool and administration process must be developed and validated if we are to trust and appropriately use the results.

Finally, is it wise to consider all injured patients equal with regard to these evaluations? Is someone with a head injury different than someone with a spinal cord injury or someone with a gunshot to the abdomen? Does perception of quality differ on the basis of gender; age; urban or rural residence; ethnicity; mechanism of injury; severity, type and multiplicity of injury; number and types of complications encountered; previous health and economic status; or similar factors? To what degree are these factors influential, neutralizing, synergistic, or additive in quality assessments? How do we control for them or stratify?

In summary, the whole area of outcomes research is in an exciting time of high profile and high expectations but low experience. This study is timely and important from a number of standpoints as we look to evaluate the multiplicity of outcomes of injury management. Perhaps I am left with two major questions. First, can we take one person's, or a diverse group of persons', views of their lot in life at a particular moment in time or at one point in a disease process and hold it out to society as justification for clinical practice or health care policy? Second, is the population at risk for injury, the injuries sustained, the phases of care, the course of disease and health care encounter, and the data required to monitor these, too broad and diverse to assess reliably through a quality and quality for costs methodology? Answering these questions is one of the challenges we in the discipline of injury control face in the new millennium.

Address for reprints: Loyola University Medical Center, 2160 South First Avenue, Maywood, IL 60153; Fax: 708-327-2813; E-mail: tesposi@luc.edu.