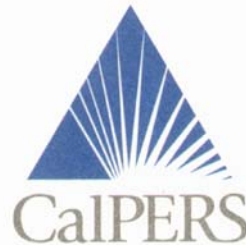




PBGH
Pacific Business
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CalPERS

Hospital Cost Efficiency Measurement: Methodological Approaches Report Highlights – January 2006

The Pacific Business Group on Health (PBGH) and the California Public Employees' Retirement System (CalPERS) commissioned a report on *Hospital Cost Efficiency Measurement: Methodological Approaches* in order to provide a framework for discussing and selecting measures of hospital efficiency. The report was authored by J. William Thomas, Professor Emeritus from the University of Michigan, and a noted authority in the field. It introduces the reader to the arena of cost–efficiency – defining terminology and summarizing the various approaches and challenges to sound measurement.

For more than 15 years, PBGH and its members, including CalPERS, have advocated for the increased availability of health care performance information at all levels of the delivery system. Performance information not only enables purchasers and consumers to make value–based choices, but also stimulates improvements in quality and efficiency of care through increased accountability on the part of health plans and providers. Our performance measurement efforts have rested on three principles: (1) measures should be valid and scientifically sound; (2) measures should be standardized across payers and providers, and impose as little burden as possible on those being measured; and (3) information on both quality and efficiency is necessary for consumers and purchasers to make true value–based buying decisions and for providers to use for quality improvement.

We encourage you to read the full report [<put link here>](#), which outlines the parameters for the valid measurement of hospital cost–efficiency. Included in the report are the following key observations:

The term cost–efficiency may be defined from different perspectives. As used by purchasers of health care, cost–efficiency measurement compares providers on the relative total cost paid by patients and their insurers for the treatment of specific conditions, regardless of the clinical outcomes resulting from that treatment. This is in contrast to the hospital industry use of the term, in which measurement is intended to capture the operational costs incurred by a hospital to produce the services, or the economists' term of efficiency, which refers to the relative quantity, mix and cost of clinical resources used to achieve a given level of quality.

Evaluating cost–efficiency in terms of both resource use and unit price provides insight into the drivers behind the total cost of hospital care to payers: It is useful to partition cost efficiency into resource use, which reflects provider variation in the quantity and mix of services rendered (e.g., the number and type of tests, procedures, and bed days), and unit price, which relates to

relative prices paid for those services (e.g., cost per bed day). In managing a patient's care, two hospitals might utilize exactly the same quantity and mix of resources, but one charges higher unit prices for each service and is thereby less cost efficient. Alternatively, the two hospitals might be paid exactly the same prices for each service type, but one is less cost efficient because it utilizes more services (or most costly services) than the other.

Valid measurement methods are vital for ensuring accuracy: Valid measurement consistently and accurately distinguishes among efficient, average, and inefficient hospitals, and has the potential to steer patients to high performance hospitals and minimize hospital expenditures. To maximize validity, it is important to:

- Apply adequate risk-adjustment so that hospitals treating patients who are more severely ill—and thus consume more resources—don't appear inefficient simply as a result of their patient mix; and
- Maximize reliability (the likelihood that an indicator will yield the same result each time it is assessed) by using a large enough sample of cases to ensure consistency of results. A cost-efficiency result based on 100 cases will be more reliable than one based on 10 cases.

Claims data are generally a better source for generating cost-efficiency metrics: When evaluating relative cost to payers, claims databases generally provide greater amounts of information than the discharge summary data maintained by many states. Claims databases include records for both outpatient and inpatient services, allow for breakdowns by service line (e.g. cardiac cases), allow for delineation of resource use versus unit price, and include cost to payers, rather than just charges.

Using different units of analysis provides different types of information: comparing the hospital stay vs. longitudinal episode of care as the unit of analysis: Cost-efficiency analyses can be conducted by looking solely at the cost of care accrued during the hospital stay, or can be expanded to evaluate the total cost of health care across the entire episode of an illness or condition (e.g., stroke) including costs for outpatients visits and services and re-hospitalizations when they occur. Analyses based on the inpatient hospital stay are useful for assessing variations in hospital pricing and use of resources during the inpatient stay. Episode-based analysis provides the larger view of the total cost of care for that episode. For example, some hospitals may admit patients for relatively short hospital stays, resulting in the hospital looking cost-efficient on the inpatient scale, but their patients are more likely to require a second hospitalization, which would be captured in the episodic analysis and result in their looking less cost-efficient.

Cost efficiency is just one component of the larger value equation that purchasers use when evaluating hospital performance: When making cost efficiency comparisons across hospitals, one cannot assume the same level of quality is provided for any given level of cost-efficiency. Both cost-efficiency and quality information should be used when assessing hospital performance whenever possible. In addition, the report observes the importance of considering the potential impact on cost efficiency of hospital structure, mission and communities served.