

The Costs of Providing Nonurgent Care in Emergency Departments

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0196-0644/\$-see front matter

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doi:10.1016/j.annemergmed.2005.03.007

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[Ann Emerg Med. 2005;45:493-494.]

The economic costs and benefits to a hospital of having an emergency department (ED) have been long debated. Although EDs are sometimes thought to be magnets for indigent patients, and thus money-losers, the typical ED patient has insurance and indigent patients do not constitute a disproportionate share of ED patients.¹ An ED's economic worth to a hospital is also related to the number and types of patients admitted to the hospital through the ED, an increasingly important source of admissions at many hospitals.

Because EDs need to maintain a relatively high level of staffing to meet surges in demand, there is the interesting question (at least to health economists) of whether caring for low-acuity patients in "down" times may provide, at the margin, additional revenue for the ED and hospital at a relatively low additional cost. Little information is available, however, about how much it costs to care for the approximately 30% of patients in EDs who have less than urgent or emergent conditions.² In an article published in 1997, Williams³ concluded that, "The true costs of nonurgent care in the ED are relatively low." Studying the same question, but using very different methods, in this issue of *Annals* Bamezai et al⁴ draw a different conclusion, that the marginal cost of treating an additional case is similar to the average cost of all cases and therefore there are no "economies of scale" in EDs.

Why would 2 studies by sophisticated researchers draw essentially opposite conclusions? The devil is in the details. Measuring the costs of a visit to an ED can be quite complex. In economic terms, hospitals are multiproduct or multiservice organizations. Ideally, a hospital's charge for a service would be related to the actual economic cost of producing that service. Such a calculation is relatively straightforward in a single-service organization. In a multiservice organization, however, it can be difficult to account for, and allocate among specific products and services, common costs that support several services and departments.⁵ In hospitals, examples of common costs include housekeeping, information systems, material services, facility maintenance, security, and registration and admissions departments.

Although there are standard accounting rules that define how a hospital should allocate common costs, substantial discretion

is allowed within the rules. The result is that 2 very similar hospitals may choose relatively different, but internally logical and acceptable, methods of allocating common costs between the daily bed charge and ancillary services and among different ancillary and direct service departments. An additional complexity is the need for hospitals to subsidize certain types of discretionary services, such as social work, for which payment may not be received and/or be adequate to cover the true economic costs of producing those services.

There is also the related issue of the allocation of fixed and variable costs. Fixed costs are (relatively) independent of patient volume (eg, the costs of facilities and equipment); variable costs are associated with the volume of services (eg, the cost of supplies). There are also what are sometimes called "semi-variable costs," which are relatively fixed but may vary according to specific patterns of care or other circumstances. Among the most prominent of semivariable costs in a hospital are nursing services, which may vary due to a variety of factors including patient care needs, availability of nurses, and legal staffing requirements. Within hospitals, and especially in the ED with its variable census and acuity of patients, staffing patterns are a key to affecting costs, because staff constitute a significant portion of the costs of providing ED services. The ability and willingness of administrators and their nursing staff to adjust staffing patterns to day-to-day and within-day circumstances may be a key determinant of the financial health of individual EDs.

Thus, determining the true economic costs of providing specific inpatient and outpatient services is less than straightforward. While comparing costs among departments within a specific hospital can be useful to administrators, differences in cost allocation methods and a paucity of good data make many health economists wary of comparing the costs of specific departments and services across multiple hospitals.

Studying actual patient records, as was done by Williams,³ rather than aggregate hospital cost data, allows a much more sophisticated and refined analysis of the true costs of caring for patients of varying levels of acuity. Williams examined the individual records of 24,010 ED visits at 6 community hospitals in Michigan between 1991 and 1993 and measured resource use according to standardized relative values assigned to the actual services received by individual patients. In contrast, Bamezai et al⁴ estimated the average cost of a visit to EDs in

California during the period 1990 to 1998 by dividing the total yearly costs for emergency services as reported by each hospital to the state of California by the total number of "outpatient ED visits" at that hospital.

Essentially, what Bamezai et al⁴ found is a lack of correlation between the estimated average cost per ED visit at a hospital and the total number of ED visits; in other words, adjusted average costs were about the same at hospitals with a low volume of ED visits compared with hospitals that had a higher number of ED visits. Although Bamezai et al⁴ included a variety of adjustments for both hospital and system level characteristics, the departmental costs reported to the state were taken as a given, that is, no attempt was made to adjust for different hospital-specific cost-accounting techniques or cost-allocation practices. Perhaps more importantly, their adjustment for severity of illness was very indirect (measuring the overall severity at the study hospital), and there was no adjustment at all for the acuity of patients admitted to specific EDs. In fact, the Bamezai et al⁴ analysis basically assumes that an ED patient who was not admitted to the hospital did not have an urgent condition (eg, that patients with conditions such as acute asthma episodes, lacerations, or dehydration who were discharged home from the ED could have received adequate care in an outpatient department), a clearly incorrect assumption.

Today's EDs differ substantially from those in the 1990s studied by both Williams³ and Bamezai et al⁴ in ways that may have a substantial effect on costs of care. For example, the marginal cost of an ED visit depends in part on the amount of unused capacity available in an ED. Today, many EDs are crowded to the point of having to add "unofficial" beds, often in the ED's hallway, a condition much less common in the 1990s. A contributing factor is increasing hospital occupancy rates, especially in intensive and critical care units, which tend to lengthen the average time a patient spends in the ED and therefore lessen the availability of ED beds.

The relationship between EDs and ambulatory care has also changed considerably in recent years. A variety of forces has coalesced to increase the use of EDs by patients who might otherwise have used clinics and other ambulatory care settings. These forces include (1) the increasing complexity of care that requires sophisticated diagnostic tests and treatment modalities not readily available in an office setting; (2) the open-door policies of EDs, reinforced by legal requirements⁶ to screen any patient "that comes to the ED," irrespective of the patient's ability to pay; (3) the general dissatisfaction of patients with the use of "gatekeepers,"⁷ which has contributed to the decision by many managed care plans to loosen their restrictions on the use

of EDs; (4) malpractice considerations, which lead to referrals to EDs by risk-averse physicians who otherwise might have recommended that the patient make an office appointment; (5) convenience for both patients and ambulatory physicians; and, (6) the general disarray in the primary care system.⁸

An important lesson is that researchers need to get inside the "black box" of hospital cost accounting. Understanding what is happening inside one hospital, let alone comparing costs among hospitals, requires collection of patient-level cost and clinical data and sophisticated analyses to develop accurate estimates of the true economic costs of providing care. Ultimately, however, decisions about the role of EDs in the provision of nonurgent care may depend more on the organization and effectiveness of our ambulatory care system and on patient preferences than on empiric data about the marginal costs of an ED visit.

Funding and support: The author reports this study did not receive any outside funding or support.

Publication dates: Available online April 2, 2005.

Reprints not available from the author.

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