# Nonurgent Care in the Emergency Department: Can We Save by Shifting the Site of Care?

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Emergency departments (ED) hold a place in the delivery of health care beyond the obvious role of treating true health emergencies. They also serve as a substitute for primary care for several types of patients. Since 1986, the role of EDs as the de facto safety net provider for uninsured patients has been codified into federal law by the Emergency Medical Treatment and Active Labor Act (EMTALA).[1] In addition, many persons covered by Medicaid, which traditionally has reimbursement rates that are lower than those of private payers, are more likely to access nonurgent care through EDs[2]; this is also true for patients who live in areas where few primary care physicians are available, as is often the case for many racial and ethnic minorities and the poor.[3] The expansive role of EDs in the current health care financing system is reflected in the approximately US$28 billion in ED expenditures by the noninstitutionalized population in 2002, which was about 8% of all hospital-based expenditures for that year.[4] A recent report by the National Center for Health Statistics also shows that approximately 49% of all ED visits are for nonurgent or nonemergency reasons and that the utilization rate of ED services has increased in recent years.[5] An obvious question that health policy analysts ask when examining the current use of ED resources is: could the care that is being delivered to nonemergency patients in EDs be provided at a lower cost in a primary care setting? The answer to this question has been "yes," almost by assumption, because the average cost of a visit to an ED is greater than the average cost of a primary care visit.

However, when determining how much could be saved from shifting nonemergency ED visits to primary care, examining differences in the average cost of care is not the appropriate measure. The appropriate measure requires calculating the change in the cost of care as the number of nonemergency visits to the ED are reduced—what economists call the marginal cost of care. When viewed this way, it is not as clear that ED care is necessarily much more expensive than primary care. This is because the costs that matter when calculating the marginal cost of care are costs that change as the amount of care provided changes. If a large share of the cost of providing ED care is fixed, then the marginal cost of providing ED care may be low. Indeed, some have argued that EDs are similar to electrical power plants in that most of the costs of the physical plant and staffing are fixed, so that while the average cost of service is high, the marginal cost is low.[6] Although these arguments are conceptually straightforward, the only way to determine the actual marginal cost of ED care involves an empirical question that is not simple to answer. For example, if one attempts to measure marginal cost from hospital accounting data, the analyst must separate total costs into costs that are fixed and costs that are variable. This is difficult to do in practice for many reasons, including the difficulty of directly measuring the resources used in a visit and determining the appropriate decisionmaking time frame for allocating hospital resources.

The study by Bamezai et al[7] in this issue of *Annals* has made a major contribution toward answering this question. This study is an improvement over previous estimates in several ways. First, the authors examine a large number of hospitals (N=280) over a relatively long period of time (7 years). Secondly, they use statistical techniques that allow them to account for observed differences in these hospitals, as well as for unobserved differences that do not change over time. Finally, they measure the effect of outpatient ED visits on hospital total cost using econometric methods that are the standard methodology recognized by economists. These statistical methods allow them to measure the change in overall hospital costs as the number of outpatient visits to the ED increases, holding other factors constant. It is important to note that this methodology does not require the authors to determine which costs are fixed and which are variable, but allows them to measure how all costs change as the number of visits changes.

Bamezai et al[7] show that the vast majority of ED cost involves personnel and not capital. They also show that the average cost of ED outpatient care does not decline as the number of patients cared for increases. Both of these facts argue against the notion that most ED costs are fixed. Finally, the authors estimate that the marginal cost of an outpatient ED visit is almost US$300 in nontrauma EDs and more than US$400 for trauma EDs. As the authors point out, these estimates are higher than those arrived at by some other attempts to measure ED marginal cost, especially the study by Williams.[6] How, then, should we view the validity of the estimates presented here? The study by Bamezai et al[7] is superior to the study by Williams[6] in terms of sample size and the amount of time the hospitals were observed. The Williams[6] study also did not use standard econometric techniques for estimating marginal cost, but calculated marginal cost as a fixed ratio of average costs. The

relationship between marginal and average cost is not fixed, however, but varies with the level of patient visits. For these reasons, in my opinion, the results of the study by Bamezai et al[7] should be given greater weight than previous estimates.

There are, though, several limitations of this study that should be recognized. First, although the sample is relatively large, it contains only hospitals in California and is not necessarily representative of the marginal cost of outpatient ED care nationally. Second, because of data limitations, the authors are unable to control for the severity of the condition that caused the outpatient ED visit or the timing of the visit. For the purposes of policy analysis, the measure we are most interested in is the marginal ED cost for a patient who had a condition that could have reasonably been treated in a primary care office setting. This does not equate to all outpatient ED visits, however. Many outpatient ED visits may be for urgent causes that will not lead to an inpatient hospitalization, such as a fracture. Some visits may also be for conditions that are not immediately urgent, but for which the patient is unwilling or unable to wait to be seen in a primary care setting, such as an episode of acute bronchitis that occurs on the weekends or after hours when the patient's primary care office is closed. Finally, although it is beyond the scope of this study, for policymakers to correctly determine the cost reduction potential of shifting nonurgent care from EDs to primary care settings, the marginal cost of treating the patient in primary care must be estimated as well.

Even with the limitations of this study, there is information here that will be important to policymakers at the national, state, and hospital level. The relatively high marginal cost of ED care does suggest that there are potential cost savings to shifting nonurgent care to the primary care setting. This is important as we consider health care reform proposals that would expand coverage to the uninsured. At present, EMTALA is essentially an unfunded mandate for hospitals to provide at least a minimal level of care regardless of ability to pay. When evaluating the cost of extending coverage to the uninsured, therefore, it will be important to incorporate the reduction in ED cost that would come from increasing access to primary care for the uninsured. The high cost of ED care is already reflected in many current policies. In the past decade, several states have implemented primary care case management in their Medicaid programs.[8] One of the main rationales for primary care case management was to provide a primary care physician to Medicaid beneficiaries to improve the continuity of care and to reduce reliance on the ED for nonurgent care. Private health plans have also attempted to reduce ED use in recent years by increasing copayments for ED visits. The results that Bamezai et al[7] present give support to these policies as cost reduction measures, although they do not address differences in the quality of care received.

A final note of caution should always be kept in mind when looking at shifting ED patients into primary care. The tools that are at the disposal of policymakers, such as increased copayments or requirements to obtain care from a primary care provider, may have the negative side effect of discouraging patients from seeking care in the ED when they actually need it. Any discussion of changing the site of care must not only consider cost, but health outcomes as well.

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