

The Hidden Surcharge Americans Pay for Hospital Errors



THE **LEAPFROG** GROUP

Updated October 28, 2013

www.leapfroggroup.org



The Hidden Surcharge Americans Pay for Hospital Errors

The Leapfrog Group thanks the following individuals for assisting in development of this white paper:

Armstrong Institute for Patient Safety and Quality at Johns Hopkins Medicine: Matt Austin and Vipra Ghimire

Leapfrog staff: Leah Binder, Melissa Danforth and Samantha Hawkins

We also thank Al Lewis, president of the Disease Management Purchasing Consortium, for assistance in developing these estimates in compliance with standards for the [Gold Standard](#) designation by the Disease Management Purchasing Consortium International, Inc.

A High Price in Lives and Dollars

According to a 2010 intensive audit by the U.S. Office of the Inspector General, one in four Medicare beneficiaries admitted to a hospital suffered some form of unintended harm. Every year, up to 440,000 people die from hospital-acquired infections (HAIs), errors, accidents and injuries. However, not all hospitals provide the same quality of care – the rate of unintended harm to patients is lower in some hospitals than in others. In 2012, in an effort to inform Americans about which hospitals are safest, The Leapfrog Group (Leapfrog), a hospital quality advocate with a membership of purchasers and consumer advocates, launched the Hospital Safety Score (www.hospitalsafetyscore.org). Using letter grades of “A,” “B,” “C,” “D,” or “F,” the Hospital Safety Score rates the patient safety efforts and outcomes of more than 2,500 general acute care hospitals across the United States. These letter grades are available to the public, both through a website (www.hospitalsafetyscore.org) and a mobile phone app.



Unintended harm in hospitals can result in both patient suffering and the loss of human life. But as the literature shows, the financial costs of patient harm are high, as well. Worse, health care purchasers, such as employers, unions and consumers, pay a premium for each error that is harmful or fatal to a patient. We refer to this premium as a “hidden surcharge for hospital errors.”

The Hidden Surcharge for Hospital Errors

Unintended harm in hospitals can result in the loss of human life

This white paper uncovers the hidden surcharge Americans pay for hospital errors. We examine the costs purchasers incur at hospitals with a grade of “A,” compared with hospitals that have lower grades. On average, we estimate a commercially insured patient admitted to a hospital with a grade of “C” or lower will pay a hidden surcharge of \$7,920. If the same patient was admitted to a hospital with a grade of “A,” the hidden surcharge for medical errors would be \$6,962, for a

savings of \$958. It is worth noting that even “A” hospitals have patient safety challenges and are not exempt from this hidden surcharge.

Consider, as an example, a medium-sized, self-insured company that provides health coverage for 10,000 people. Each year, this company pays for 1,000 hospital admissions, of which 450 are surgical admissions. If all of these admissions occurred in hospitals with a grade of “C” or lower, that company could expect to pay almost \$8.8 million in hidden surcharges. On the other hand, if all of the admissions were in “A” hospitals, the hidden surcharge would “only” be around \$6.9 million. The company would save more than \$1.9 million by steering employees to safer hospitals.

Purchasers as a group are paying billions of excess dollars for unintended harm in hospitals. Leapfrog has developed a calculator that purchasers can use to estimate their hidden surcharge, available on our website: www.LeapfrogGroup.org/HiddenSurchargeCalculator. The calculator also provides detailed tables outlining how the surcharge amounts were derived. We hope that by understanding the hidden surcharge they pay, purchasers can act to protect their employees (and dependents) from hazards in hospitals.

How the Estimates Were Derived

Leapfrog reviewed literature on the costs of errors, accidents and injuries occurring in U.S. hospitals. We divided the cost estimates into two categories: disclosed and undisclosed errors. Disclosed errors are those publicly reported to the federal government by hospitals. As the Hospital Safety Score only uses publicly available measures, the disclosed errors category was restricted to the 28 measures used to calculate the Hospital Safety Score letter grades.

Undisclosed hospital errors are those errors not reported by the federal government, but sometimes reported by states and individual hospitals. The rates of these errors are unavailable for use in the Hospital Safety Score because the Score only uses hospital data available at the national level.

However, as described below, our analysis has found that Hospital Safety Score letter grades, on average, predict hospital performance on several key, undisclosed hospital errors.

*Purchasers
as a group
are paying
billions
of excess
dollars for
unintended
harm*

Methods for estimating costs for adverse events tallied under safety measures in the Hospital Safety Score (“Disclosed Errors”)

With guidance from its expert panel, Leapfrog identified 28 safety measures for which national data were publicly available.¹ [To estimate the hidden surcharge](#), we calculated the mean value for each measure in the Score by grade level. For the outcome-focused patient safety measures, we reviewed the literature for data on the rate of adverse events and the dollar value associated with each avoidable adverse event. For the process and structural measures, we reviewed the literature for the data on the rate of adverse events that occur before and after implementation

In general, “A” hospitals had lower rates of health care acquired infections than hospitals with lower grades

of the identified process/structure and the dollar value associated with the avoidable adverse event. We calculated the number of patient safety adverse events that would occur at an “A” hospital compared with a combined “C,” “D” and “F” hospital. The result was the hidden surcharge associated with hospitals in each grade level for each patient safety measure. Where we found no cost evidence in the literature for a particular safety measure, we assumed no hidden surcharge.

Some measures apply only to certain kinds of admissions, such as surgical admissions or intensive care unit (ICU) admissions. Our estimate of the average surcharge per admission adjusts for this. One measure, Central Line-Associated Bloodstream Infection (CLABSI), is not calculated as incidence per 1,000 admissions. We were able to estimate CLABSI rates by calculating the national pooled mean CLABSI infection rate across all ICU types (infections per 1,000 central line days, with the value based on the Centers for Disease Control and Prevention’s 2010 data) and multiplying that value that by the mean standardized infection ratio for each grade level.

1 A full accounting of the peer-reviewed methodology and panel membership is available at <http://www.leapfroggroup.org/HiddenSurchargeCalculator>.

Methods for estimating costs for errors occurring under other safety measures (“Undisclosed Errors”)

Using publicly reported, health care-acquired infection (HAI) data from California, California hospitals were separated by their Hospital Safety Score grade (i.e., “A,” “B,” or “CDF”) and the median hospital rate of HAIs not used in the Safety Score (i.e., methicillin-resistant staphylococcus aureus [MRSA]; clostridium difficile [CDiff]; and surgical site infections for C-sections, knee prosthesis and hip prosthesis) were calculated. The results of that analysis reflected a general pattern of “A” hospitals performing better than “B” hospitals and “B” hospitals performing better than “CDF” hospitals on these particular HAIs. The one exception to this pattern was hospital performance on CDiff. This general pattern reinforces the assumption that hospitals that have lower rates of “disclosed errors” have lower rates of “undisclosed errors.”

Other verifiable assumptions needed to estimate the hidden surcharge

Leapfrog made two other assumptions based on national data on medical inflation and cost shifting.

1. Medical Inflation

We adjusted cost data found in the literature for medical inflation by the number of years that had lapsed between the literature’s cost estimate and 2013. We used the conservative inflation estimate of [4 percent](#) per year.

2. Cost Shifting

Medical cost data in the literature often reflect reimbursements paid by Medicare. However, private health insurance purchasers typically reimburse at much higher rates than Medicare. In calculating the hidden surcharge, we assumed that the private health insurance purchasers pay two times more than Medicare. In some markets and in some studies, the private purchasers pay as much as 12 times more than Medicare. We assume the lower multiplier to be conservative. The expenditure variation among purchasers’ health insurance plans and Medicare plans are significant; therefore, when using the calculator, purchasers may adjust this multiplier to their own market circumstances.

**Private
purchasers
pay as much
as 12 times
more than
Medicare**

How purchasers can estimate their own hidden surcharge

With Leapfrog's Hidden Surcharge Calculator, purchasers can estimate – using their own claims data as well as the hospital rankings in their area – the hidden surcharge they pay for their employees and dependents because of hospital errors.

This hidden surcharge can be reduced simply by shifting people into “A” hospitals, through a

With Leapfrog's hidden surcharge calculator, purchasers can estimate the hidden surcharge they pay

change in benefits design that encourages the use of these hospitals or by letting employees know of the safety hazards at certain area hospitals.

While these savings are a step in the right direction, it is important to remember that even “A” hospitals are far from immune to these hidden surcharges. To eliminate the surcharges altogether, hospitals would have to be 100 percent error-free. In the long term, purchasers should collaborate with their health plans, benefits consultants or local business coalitions on health to negotiate contracts that do not reimburse for hospital errors. Alternatively, purchasers can negotiate incentives that pay hospitals more when errors are scarce.

Employers and purchasers, visit <http://www.leapfroggroup.org/HiddenSurchargeCalculator> for more information and to calculate your hidden surcharge.

The Hidden Surcharge Americans Pay for Hospital Errors

Errors, accidents, and infections in hospitals are harmful and sometimes deadly to patients, and costly for consumers and employers. The Leapfrog Group developed this tool to calculate the hidden surcharge Americans pay for these errors. For customized calculations and assistance populating this tool with your company's claims data, Leapfrog Members can log in to the [members-only website](#).

	Average US Employer*	Enter Your Company's Information Here
Step 1 Enter the total number of admissions within a calendar year for all covered lives	1000	
Step 2 Enter the total percent of admissions to hospitals with the following Hospital Safety Scores :		
"A" Hospitals	31.0%	
"B" Hospitals	25.0%	
"C", "D", & "F" Hospitals	44.0%	
Step 3 Enter the estimated percent of hospital admissions requiring the following:		
Surgery	45.0%	
Intensive Care Unit (ICU) stay	7.2%	
Step 4 Estimate how much you lose on employee productivity for every dollar spent on inpatient care	\$1.00	
Your Average Surcharge Per Admission This calculation represents, on average, what you pay for each hospital admission based on your network of hospitals with each A, B, C/D/F Hospital Safety Score	\$6,924	
Your Total Surcharge for Hospital Errors This calculation represents the total "tax" you pay for all employees admitted to the hospital based on your network of hospitals with each A, B, C, D, or F Hospital Safety Score.	\$6,923,802	

Leapfrog Members: log in to [Leapfrog's website](#) for assistance with these calculations

To learn how to reduce your hospital error surcharge, click [here](#).

For more information:

- [The Hidden Surcharge Americans Pay for Hospital Errors White Paper](#)
- [Spreadsheet of formulas, assumptions, and sources behind the Hidden Surcharge Calculator Tool](#)

*For the purposes of this calculator, "Average US Employer" reflects a large employer's estimated number of hospital admissions and percentage of Surgical/ICU admissions. The distribution of Hospital Safety Scores reflects the national average.