# Recent Advances in the Patient Safety and Quality Initiatives Movement
## Implications for Neurosurgery

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**KEYWORDS**

• Quality initiatives • Quality • Safety • Cost • Neurosurgery

**KEY POINTS**

- A large proportion of morbidity and mortality due to medical errors contribute to unnecessary medical costs within the United States health care system.
- Quality initiatives and cost control can be improved if started from within individual departments on the local scale.
- Neurosurgery has the opportunities to become a leader in quality improvement, cost control, and patient satisfaction.

### INTRODUCTION

It is widely recognized that the United States' (US) healthcare system faces a number of challenges in medical errors, leading to increasing costs, which are unsustainable and threaten the national economy. In November 1999, the Institute of Medicine (IOM) published the landmark report, *To Err is Human*,[1] which placed the issues of patient safety and medical errors in the US health care system under the national spotlight. This report estimated that medical errors were responsible for up to 98,000 deaths annually in hospitals across the nation, at a cost of $17 billion to $29 billion per year.[1] However, this conservative estimate did not include outpatient medical errors or morbidities from lapses in the quality of medical care.

Quality improvement initiatives must be implemented and reformed at the local level within individual departments, understanding the challenges of health care at a national scale with the challenging movements for large-scale reform. It is imperative that our physician leaders understand the need to reform health care from within, beginning from their own departments, to improve quality and control cost. In this article, we review the quality improvement initiative and analyze the opportunities within the field of neurosurgery for individual neurosurgery departments to integrate initiatives

Disclosures: The authors have no conflicts of interest to disclose.
I. Yang (senior author) was partially supported by a Visionary Fund Grant, an Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research UCLA Scholars in Translational Medicine Program Award, the Jason Dessel Memorial Seed Grant, the UCLA Honberger Endowment Brain Tumor Research Seed Grant, and the STOP CANCER Research Career Development Award.
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Neurosurg Clin N Am 26 (2015) 301–315
http://dx.doi.org/10.1016/j.nec.2014.11.017
1042-3680/15/$ – see front matter 

promoting quality improvement and patient safety into their institutional and departmental priorities.

## THE NATIONAL PROBLEM

Although the United States is a leader in creating innovative technologies and treatments, the progress has not translated to overall higher quality health care. Since the release of the IOM report in 1999, the National Institutes of Health has doubled its budget and invested more than $32.2 billion to advance medical research.[2,3] Recently, the McKinsey Global Institute and the Kaiser Family Foundation report that the United States spends more per capita and spends a higher percentage of its national gross domestic product (GDP) on health care than any other country listed under the Organization for Economic Cooperation and Development.[4–6] In 2007, US health expenditures increased to $2.3 trillion, accounting for nearly 17% of the nation's GDP, and are expected to reach more than 20% of the nation's GDP by the end of 2015.[7,8] Despite these increasing expenditures, the United States fairs poorly compared with other nations in multiple health metrics. The World Health Report 2000 states that despite spending the highest percentage of its GDP on health care, the United States is ranked 37th for its health care performance.[9] The United States fares worse than 46 countries in infant mortality and 48 countries in life expectancy.[10] In a 2003 study by McGlynn and colleagues,[11] roughly only half of all recommended preventative, acute, and chronic care were received by Americans with significant variability based on the medical condition, ranging from 11% to 79% of recommended care. There is a large discrepancy between the quality of care that Americans receive and their cost.

Medical errors and system inefficiencies not only decrease the quality of health care that patients receive but also come at a huge cost to the nation by compromising the nation's economy, limiting access to health care, and threatening the security of present and future generations. Increasing health care costs threaten the sustainability of government programs like Medicare and force employers to cut coverage or shift part of the financial burden onto their employees. The increasing costs are shifting health care patterns, and hospitals are seeing decreases in admissions and increases in uncompensated care.[12,13] However, some estimates project that almost 30% of health care costs can be decreased without compromising the quality of health care delivered.[7,14] Thomson Reuters[4] estimate that wasted health care expenditures account for between $600 million and $850 billion annually, with 40% of wasteful spending attributed to the overuse of unnecessary services or procedures. Of the 6 categories of waste identified in this report, medical errors and unsafe clinical practices accounted for $25 billion to $50 billion annually, an increase from the IOM's initial annual figure of $17 billion to $29 billion.[1] However, medical errors negatively affect more than mere health care costs and may lead to further readmissions, additional procedures, complications that compromise quality of life, and increase overall mortality.[4,15,16]

Now, more than a decade after the IOM *To Err is Human* report, there seems to be little progress in patient safety reform and quality control to make health care safer, more cost effective, and more assessable for the American public. The obstacles to controlling costs, ensuring patient safety, and improving health care quality are rooted in a highly fragmented and complicated health care system.[17] In addition, the unsustainable health care expenditure growth is fueled by several factors, including technological innovations, for which cost-effectiveness and comparative clinical usefulness and evidence are not readily available, and an expanding aging population with chronic medical conditions who require costlier end-of-life care.[7] With more than 40 million Americans uninsured,[2] equitable access to quality and efficient care also remains elusive.

## NATIONAL INITIATIVES: LEGISLATIVE REFORM AND THEIR CHALLENGES

Some national initiatives have been initiated, and several system-wide solutions have been proposed to address health care safety and quality. One of the key recommendations in the IOM's *To Err is Human* report[1] included creating a comprehensive national reporting system that is mandatory, validated, and public. In light of the ongoing deficits in patient safety and quality initiatives, there is a need for an adequate and universal system of metrics that can track and follow progress. However, there is still no consensus on which metrics should be focused on or what should be measured. One potential metric is patient outcomes, which examines aspects including patient mortality and morbidity. Another aspect of quality improvement is processes of care: the services and therapies that physicians or hospitals provide to their patients. For example, patients with myocardial infraction treated with aspirin, which has been correlated to improve patient survival, could be a process measure.

With this aim, several different groups have made fragmented progress toward creating process measures to assess a provider's performance.