

Improving the Safety and Quality of Cancer Care

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The Institute of Medicine's (IOM) 1999 report, *Ensuring Quality Cancer Care*, stated, "We all want to believe that when people get cancer—including ourselves and our relatives—they will get health care of the highest quality."¹ The report called for improvements in clinical care, for a greater use of evidence to direct care, for the implementation of electronic health care systems to capture data and monitor performance, for developing quality measures, for improving access to care and the ability to afford care, and for providing better end-of-life care. This report was the first in a series of IOM reports highlighting the importance of improving medical care and recommending fundamental changes to the US health care system.^{2,3}

Implementing the IOM's recommendations has been a slow process. The development and use of cancer safety and quality measures are a good example of the time and effort required to improve care. By 2009, 5 consensus standards had been developed through a collaboration of the American College of Surgeons, the American Society of Clinical Oncology, and the National Comprehensive Cancer Network.⁴ The National Quality Forum endorsed 16 measures that were adopted by the Centers for Medicare and Medicaid Services.⁵ However, the measurement gaps were enormous, not only in terms of the cancer types and stages, but also with regard to outcomes, structures, process, efficiency, cost of care, and patients' perception-of-care measures.⁶ Furthermore, outcomes were not risk-adjusted to account for the severity of disease and comorbid conditions.⁷ Finally, there was no unified approach to measure creation, which led to confusion and reduced their usefulness.^{8,9}

In 2013, the IOM issued a second cancer report entitled *Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis*,¹⁰ which assessed cancer quality since its 1999 report. This report stated that "The growing demand for cancer care, combined with the complexity of the disease and its treatment, a shrinking workforce, and rising costs, constitute a crisis in cancer care delivery."¹⁰ The report did not say that oncology had not made significant progress in improving its ability to deliver high-quality care. Rather, it found that as the oncology community learned more about cancer safety and quality, it became clear that the domain was larger and more complex than had been anticipated and that cancer was changing at an ever-increasing rate. Furthermore, the report found that the importance of safety and quality will continue to increase as the US population ages, as cancer complexity continues to grow, as cost containment pressures intensify, and as performance standards rise.

Although safety and quality are acknowledged to be important and although there has been some research in this area, in terms of the pervasiveness of cancer and in relation to the tremendous amount of cancer research performed every year, relatively little time and money have been devoted to safety and quality. For example, I examined the relative frequency of medical error research in cancer, as indexed by PubMed. There are 2,822,819 human publications indexed under the search terms "cancer" or "oncology," 558,508 of which (20%) were published within the last 5 years. When the term "medical errors" was included in the search, a total of 687 articles were found, 270 of which (39%) were published within the last 5 years. Of the articles published within the last 5 years, 37 were reviews and 5 were clinical trials. The term "medical errors" occurred in the title of only 1 review and 1 clinical trial. In terms of relative frequencies, medical errors represented 0.024% of all cancer publications and, within the last 5 years, its representation had doubled to 0.048%. This example does not represent the entire literature regarding cancer safety and quality, but it does suggest a relative paucity of publications in a critically important area.

There are several reasons for the relative scarcity of safety and quality research. First, although the field has been growing, safety and quality remain nascent domains across all of medicine. Second, the primary focus of cancer researchers has been on discovering mechanisms of disease and on effective ways of treating the cancer. Third, the very enormity and

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The views expressed in this paper are those of the author and do not necessarily reflect those of the United States Department of Defense.

DOI: 10.1002/cncr.30438, **Received:** October 13, 2016; **Accepted:** October 14, 2016, **Published online** December 2, 2016 in Wiley Online Library (wileyonlinelibrary.com)

complexity of cancer makes it difficult to develop safety and quality research projects.¹⁰ Fourth, few cancer journals have made safety and quality a publication priority.

There are many cancer safety and quality issues that need to be addressed, including how to reduce medical errors; how to provide evidence-based care; how to use information technology to improve communication and decision making; how to use precision medicine to improve diagnoses and treatment; how to implement shared decision making; how to deliver value-based care; how to improve the quality of life of patients and their caregivers; how to strengthen a culture of safety; how to measure current performance and guide performance improvement; how to improve multidisciplinary teamwork; how to provide high-quality care while meeting cost-containment goals; how to engage patients to improve their health behaviors; how to increase the efficiency of the cancer care delivery system; how to improve access to care and reduce disparities; how to enhance workforce training; how to make the field of oncology a high-reliability learning organization; how to improve the patient and family experience with their cancer care; and how to enhance end-of-life care consistent with patients' needs, values, and preferences. This is not meant to be an exhaustive list, but it does demonstrate the breadth and depth of safety and quality cancer research.

Approximately 40% of the US population will be diagnosed with cancer during their lifetime, and their diagnosis will affect not only the patients but also their families, friends, and coworkers. It is critical that we provide our patients with the highest quality, safest care. To do so, we must dramatically increase our safety and quality research. Furthermore, these studies must be published so that the entire cancer community can benefit from their findings. We welcome submissions that address improving cancer care.

FUNDING SUPPORT

Supported by the Patient Safety and Quality Academic Collaborative, a joint Defense Health Agency - Uniformed Services University program.

CONFLICT OF INTEREST DISCLOSURES

The author made no disclosures.

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