

## Measuring, Monitoring, and Improving the Quality of Cancer Care: The Momentum Is Building

In 1999, the Institute of Medicine's National Cancer Policy Board issued a report titled *Ensuring Quality Cancer Care*.<sup>1</sup> This report is widely acknowledged to be among the first publications to call attention to problems with the quality of cancer care. One of the report's main conclusions was that "for many Americans with cancer, there is a wide gulf between what could be construed as the ideal and the reality of their experiences with cancer care." Reviewing the limited evidence then available, most of which concerned breast cancer, the report identified several common problems, including underuse of screening methods to detect cancer, lack of adherence to standards for diagnosis, inadequate patient counseling regarding treatment options, and underuse of radiation therapy and chemotherapy after surgery. The report's principal recommendations to address these and other problems included a call for the development of systems to measure and monitor the quality of cancer care and the use of quality benchmarks by hospitals, provider groups, and managed care systems. The report also called for research sponsors, such as the National Cancer Institute, to invest in clinical trials and other forms of research designed to identify optimal cancer care management strategies.

The articles in this issue of *Cancer Control* attest to the tremendous progress that has been made in recent years in fulfilling these recommendations. Key accomplishments include numerous efforts at local, regional, and national levels to measure, monitor, and improve the quality of cancer care. Among these projects are several major initiatives directed or funded by professional societies and governmental bodies that are described in this issue. The progress made in just a few years has, in turn, stimulated considerable interest in the quality of cancer care among clinicians, researchers, patients, payors, and policy makers. Taken together, these developments are building momentum for the measurement, monitoring, and improvement of quality to become a routine part of the delivery of cancer care in every treatment setting.

Leading off this issue is an article by Dr Clauser that provides an overview of the research partnerships the National Cancer Institute (NCI) has established to pursue quality of care research. These partnerships are specific and formal research collaborations with public and private organizations that pay for, regulate, and deliver cancer services and with agencies that fund research targeted to these organizations. They can be grouped into three major categories. One category consists of efforts to improve measurement of quality of cancer

care. A notable example is the NCI-funded Cancer Consortium for Outcomes Research and Surveillance, a prospective cohort study of 10,000 patients with newly diagnosed lung and colorectal cancer. The data generated by the study by recruiting and following patients from diverse geographic regions and health care delivery systems will provide valuable information about sources of variations in the quality of cancer care. A second partnership category consists of efforts to build data infrastructures that can be used to monitor the quality of cancer care. Important initiatives in this area include linkage of Surveillance, Epidemiology, and End Results Program cancer registries with insurer data, including those from the Medicare program. This project has resulted in over 250 peer-reviewed publications in the past 10 years on the quality and cost of cancer care. The third partnership category described in the article is composed of efforts to develop practice-based partnerships for monitoring and improving the quality of cancer care. Among the many examples is the Cancer Research Network, a consortium of 14 major integrated health care delivery systems that has conducted quality of care research across the cancer continuum from prevention to survivorship.

Legislative initiatives and other trends in the United States portend major changes in government monitoring and oversight of the delivery of health care. As providers, payors, and policy makers debate the need for health care reform, it is useful to consider examples of how governmental bodies can function effectively to promote improvements in the quality of care. The article by Ms Duvalco and colleagues provides an overview of Cancer Care Ontario, a provincial government agency with responsibility for continually improving cancer services. Applying lessons learned from the United Kingdom's National Health System, Cancer Care Ontario has created a governance framework in which clinical accountability for treatment decisions is integrated with administrative accountability for performance, quality, and cost control, and with public accountability for performance. After describing the structures and processes through which the governance framework operates, the authors illustrate how it has functioned to improve the quality of cancer care. One notable example involved a project designed to improve the quality of colorectal cancer treatment. Specifically, the goal was to improve adherence to a clinical practice guideline recommending that a minimum of 12 lymph nodes be removed and examined at the time of surgery in order to adequately stage colon and rectal cancer. Following implementation of a variety of quality improvement methods, rates

of adherence to this guideline increased from 60% in 2004 to 77% in 2006 and approached 100% in 2008.

In the next article, Dr Matula and associates expand on the example above by providing a history and an overview of efforts to improve the quality of surgical oncology care. The authors describe the key role played by the American College of Surgeons in studying and improving surgical oncology quality care through the formation of its Commission on Cancer and the development of the National Cancer Database in partnership with the American Cancer Society. Their overview is organized based on a commonly used framework that conceptualizes quality of care in terms of structural, process, and outcome measures. Structural measures focus on the environment in which care was delivered and could include whether or not care is provided at accredited cancer centers. Process measures describe what providers do to or for a patient and could include whether or not a sentinel lymph node biopsy was performed when clinically indicated. Finally, outcome measures capture the results of what happens to patients during the course of care and could include information about surgical complications and cancer recurrence or mortality.

Efforts by professional societies to improve quality of care are not limited to surgical oncology. The article by Dr Neuss and colleagues describes the Quality Oncology Practice Initiative (QOPI), a project started by the American Society of Clinical Oncology. QOPI is a practice-based program that allows medical oncology practices to systematically collect data about the quality of care they provide using standardized process indicators and then compare their performance with that of other participating practices. Starting with seven practices in 2003, QOPI has grown to include over 400 practices that are voluntarily conducting quality audits. The number of quality indicators being monitored has also grown considerably over time. Begun with just seven indicators, QOPI now consists of 70 indicators organized into a core module that all participating practices are required to complete and optional models organized around specific diseases and specific aspects of care (eg, symptom assessment). The phenomenal growth of QOPI over a short period of time demonstrates the strong interest that exists among medical oncologists in monitoring and improving quality of care.

Most of the initiatives described above are large-scale projects directed by governmental bodies or professional societies. Local and regional initiatives directed by health care organizations are also likely to play an important role in quality monitoring and improvement. The article by Dr Malafa and colleagues describes one such effort, the Florida Initiative on Quality Cancer Care (FIQCC). This project is coordinated from the Moffitt Cancer Center, which provides the infrastructure and technical training required to conduct the quality audits. The project builds on collaborations to promote cancer prevention and control that the Center began developing in 1999 with strategically located

health care organizations throughout Florida, the state with the second highest death rate from cancer in the United States. The FIQCC currently consists of 11 oncology practices across Florida that actively collaborate on monitoring and improving the quality of care they provide for the treatment of common cancers. The article describes how the initiative was developed, how it monitors quality and provides feedback to practices, and how the practices use discussions at regional meetings to exchange information useful in guiding quality improvement efforts.

Efforts to monitor and improve the quality of cancer care must extend beyond a focus on the appropriate use and delivery of surgical and medical treatments. Psychosocial care is increasingly recognized as an essential component of the comprehensive care of individuals with cancer. Despite this recognition and substantial evidence for the effectiveness of psychosocial care in improving quality of life, many patients who could benefit from this type of care do not receive it. One way to remedy this situation would be to measure and provide feedback to providers about the quality of psychosocial care they provide to their patients. To evaluate this possibility first requires the development of measurable indicators of the quality of psychosocial care. The article my colleagues and I contributed to this issue describes the initial evaluation of quality indicators for psychosocial care developed by the American Psychosocial Oncology Society. Using the resources of the FIQCC, we field-tested these indicators in seven practice sites by reviewing records of colorectal cancer patients seen by medical oncologists. The indicators developed evaluate whether the patient's emotional well-being was assessed within 1 month of the first visit with a medical oncologist and whether action was taken if a problem with emotional well-being was identified. As described in the article, findings show that these indicators can be measured easily and reliably, demonstrate variability across practices that suggests potential for improvement, and yield information that can be used to guide quality improvement efforts.

Rounding out this issue, Dr Tanvetyanon provides a review of reports on quality-of-care indicators specific to non-small cell lung cancer (NSCLC). As the author notes, there are several reasons to survey this literature. First, NSCLC is a major cause of cancer-related mortality, accounting for approximately 144,000 deaths annually in the United States. Second, treatment of NSCLC is complex and typically requires the provision of care by multiple specialists. Third, since several newer diagnostic methods and treatments for NSCLC are quite costly, whether or not they are being used appropriately merits scrutiny. Finally, results of several recent randomized clinical trials provide evidence that can be used to objectively define certain standards of care for this disease. Using the same conceptual framework described previously, the article describes and evaluates structure, process, and outcome measures of the quality of care currently available for NSCLC. The article concludes with examples from published reports of

how these indicators have been used to monitor quality of care in clinical practices.

The quality of cancer care is an issue of importance to a wide segment of society, including those involved in delivering, receiving, and paying for cancer care. These multiple interests will be best served by the further development of a health care system in which the quality of cancer care is routinely monitored and improved upon. The articles in this issue should provide readers with an in-depth understanding of the progress that has been made in this area as well as a sense of the considerable work that still needs to be done.

To close this issue of the journal, the final article pertains more to the principles that underpin clinical research, which are ultimately important for the quality of clinical care, since the basis for optimal clinical care demands information from well-performed clinical research. Dr Djulbegovic's article emphasizes that uncertainty or equipoise on outcomes is required to ensure that randomized clinical trials are ethically developed and performed. These considerations are therefore important to drive the discovery of new and improved treatments. On the other hand, adherence to equipoise will probably limit the proportion and rate of new treatment discoveries — something of a dilemma!

Significant progress has been made on a variety of fronts in measuring, monitoring, and improving the quality of cancer care, as evidenced in the reports included in this issue. The framework is now in place to generate continued improvements in care, efforts to address the challenge are expanding, and the momentum is building.

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## Reference

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