Time to Focus on Inpatient Safety: Revision of the American Society of Clinical Oncology/Oncology Nursing Society Chemotherapy Administration Safety Standards

Joseph O. Jacobson, Dana-Farber Cancer Institute, Boston, MA
Therese Marie Mulvey, Southcoast Hospitals Group, Fall River, MA

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In 2009, the American Society of Clinical Oncology (ASCO) and the Oncology Nursing Society (ONS) jointly published a comprehensive set of chemotherapy safety standards. The project was the end result of a highly structured multistakeholder process and the sole focus was on outpatient chemotherapy administration in the facilities in which most adult cancer chemotherapy is administered. In 2011, ASCO and ONS convened a workgroup to revise the standards. The revised standards are published in the January 2012 issue of Journal of Oncology Practice (JOP). In addition to clarifying language, the workgroup voted unanimously to extend the standards to encompass the inpatient setting. Inpatient chemotherapy administration, especially in the community setting, is believed to pose a silent but growing threat to patient safety.

Most patients with cancer prefer to be managed as outpatients, and ambulatory management of cancer is more cost-effective than inpatient management. Indeed, some insurers now require justification to admit a patient to the hospital solely to receive chemotherapy. The trend, then, of shifting adult medical oncology care from the hospital to the outpatient setting reflects patient-centered, cost-effective care. It has occurred gradually during the last decades of modern cancer chemotherapy, accompanied by shifts in care from academic centers to the community, where it is estimated that at least 80% of adult cancer care is provided. The change reflects at least three major advances. First, medical oncologists have become skilled in the management of highly toxic agents. Predictable toxicities of chemotherapeutic agents have been defined and risk factors have been identified, allowing for the prevention or amelioration of most serious adverse effects. Pretreatment assessment of renal function in conjunction with aggressive hydration, for example, has allowed cisplatin to be routinely administered in the outpatient setting. Second, the availability of highly active antiemetics and better-tolerated chemotherapeutic agents has additionally reduced the need for inpatient administration. Third, technologic advances that enable the safe delivery of continuous chemotherapy infusions in the home permit the ambulatory administration of complex regimens that previously required supervision in an inpatient setting.

Community oncology practices have also become adept at managing the consequences of cancer and cancer treatment on an ambulatory basis. They have developed comprehensive care systems that rely on highly experienced nursing and pharmacy staff. Certification requirements for nursing and pharmacy staff along with the availability of supportive services that include nutritionists and social workers complement these practices. Patients who experience venous thromboembolic events, for example, are routinely managed with low molecular weight heparin as outpatients. Patients with low-risk chemotherapy-induced fever and neutropenia are managed with close observation and oral antibiotics. Patients who experience treatment-related GI toxicity are managed with ambulatory or home fluid resuscitation, and those with hypercalcemia receive potent parenteral bisphosphonates. Each of these patient groups are now routinely spared the risks and inconvenience of hospitalization.

The consequence of these advances in the ambulatory care of patients with cancer is the disintegration of trained, cohesive chemotherapy teams in many hospitals; this problem is compounded by flaws in the transfer of data between outpatient and inpatient systems. Fundamental changes in hospital staffing have occurred, with fewer dedicated nurses and pharmacists who are skilled in chemotherapy protocols and more hospitalists providing inpatient cancer care. Because of declining inpatient censuses and declining revenue, many hospitals have had to eliminate dedicated inpatient oncology units. This scenario may create a perfect storm in which very ill hospitalized patients are exposed to high-risk procedures (chemotherapy) that are provided by staff with diminishing expertise and without the needed infrastructure.
Academic and comprehensive cancer centers have been somewhat insulated from the changes that have affected community practices. Because these centers rely on referral of rare or refractory cancers, and because such cases often require more intensive management, they have been less affected by the shift of chemotherapy administration to the outpatient setting. However, with the increasing ability to manage highly complex therapies on an outpatient basis, academic and comprehensive cancer centers are not immune from concerns related to reduced use of inpatient chemotherapy services.17-21

Patients who are managed in the ambulatory setting have also benefitted from the availability of tools that are designed to make their care as safe as possible. The Quality Oncology Practice Initiative, available as a free service for ASCO members, allows practices to measure the care that is provided to their patients and to compare themselves against national benchmarks.22,23 A Quality Oncology Practice Initiative Certification Program has been in place since January 2010; 92 practices achieved certification as of September 2011.24 Certification is a rigorous process that requires practices to demonstrate that they reliably deliver high-quality cancer care in a safe environment. These tools, which provide standards for documentation, assessment, treatment, and monitoring, must now be implemented for inpatient cancer care.

The January issue of JOP contains the first revision of the ASCO/ONS Chemotherapy Administration Safety Standards (http://jop.ascpubs.org/content/8/1/2.full). Each standard has been modified to be applicable to the inpatient setting. The ASCO/ONS workgroup recognizes that implementation of the standards in hospitals will pose challenges. Community medical oncologists often admit patients to multiple institutions and have variable direct influence over the processes that lead to the delivery of care. Most US hospitals are accredited by the Joint Commission and many are certified by the American College of Surgery Commission on Cancer. To date, these bodies have not focused attention on the safety of patients who are receiving chemotherapy. The modified ASCO/ONS Chemotherapy Administration Safety Standards serve as a call-to-action to these organizations. We encourage medical oncologists to bring the standards to the attention of medical and administrative leaders in their hospitals and to offer their expertise to assist in their implementation. ASCO, ONS, and other organizations must also take the lead to develop quality metrics that are focused on the unique aspects of inpatient medical oncology care.

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