Nursing Takes Time: Workload Associated With Administering Cancer Protocols

Johan de Raad, BSc, Kees van Gool, M.Ec, Marion Haas, PhD, Philip Haywood, M.Ec, Margaret Faedo, PhD, Gisselle Gallego, PhD, Sallie Pearson, PhD, and Robyn Ward, PhD

New medicines and therapeutic combinations are tested and marketed every year. Healthcare decision makers have to make explicit choices about adopting new treatments and deal with the resource consequences of their choices. The aim of this article is to examine the nursing workload of administering alternative chemotherapy protocols as a driver of costs. Data collection (focus groups with chemotherapy nurses and a survey of nurse unit managers) was conducted to ascertain the time required to undertake chemotherapy-related tasks and the sources of variability in six chemotherapy centers in New South Wales, Australia. Four task types (patient education, patient assessment, administration, and patient communication) were identified as being associated with administering chemotherapy. On average, patient education required 48 minutes during the first visit and 18.5 minutes thereafter, patient assessment took 20.3 minutes, administration averaged 23 minutes, and patient communication required 24.2 minutes. Each center treated an average of 14 patients per day. Each patient received 3.3 hours of staff time (1.7 hours of direct contact time and 1.6 hours of noncontact time). The result of this research will allow healthcare decision makers and evaluators to predict the amount of nursing time required to administer chemotherapy based on the characteristics of a wide range of chemotherapy protocols.

he field of oncology is a dynamic one. Many new medicines appear on the market every year, and new combination therapies are continually being tested and evaluated. At the same time, chemotherapy is expensive. A healthcare institution's decision makers have to decide whether or not to adopt new treatments and, consequently, analyze and respond to the resource impact of those decisions.

The costs associated with chemotherapy can be grouped into three categories: the cost of the therapeutic agent, the cost of administration, and the cost associated with treating adverse events. Previous research has indicated that the cost of administrating protocols may be an important driver of the overall chemotherapy costs (Danese et al., 2008; Hale, Cohen, Maughan, & Stephens, 2002; Hornberger, Reyes, Lubeck, & Valente, 2008).

At a Glance

- The cost of administrating chemotherapy protocols may be an important driver of overall chemotherapy costs.
- Patient education, patient assessment, administration, and patient communication require an average of 3.3 hours of staff time per patient per visit.
- Nurse unit managers can use information about chemotherapy delivery to examine practice standards, better allocate staff to particular tasks, and advocate for appropriate staffing.

However, most published economic studies of chemotherapy (including cost analyses or economic evaluations) provide very little detail about how the costs of administering chemotherapy

Johan de Raad, BSc, is a master's student in the Department of Pharmaceutical Sciences at the University of Utrecht in the Netherlands; Kees van Gool, M.Ec, is a senior research officer, Marion Haas, PhD, is an associate professor, and Philip Haywood, M.Ec, is a visiting research fellow, all in the Center for Health Economics Research and Evaluation at the University of Technology in Sydney, Australia; Margaret Faedo, PhD, is a program manager in the Adult Cancer Program in the Prince of Wales Clinical School at the University of New South Wales in Kensington, Australia; Gisselle Gallego, PhD, is a lecturer in the Center for Health Economics Research and Evaluation at the University of Technology; and Sallie Pearson, PhD, is a senior research fellow and Robyn Ward, PhD, is a professor of medicine, both in the Adult Cancer Program in the Prince of Wales Clinical School at the University of New South Wales. The authors take full responsibility for the content of the article. The authors did not receive honoraria for this work. The content of this article has been reviewed by independent peer reviewers to ensure that it is balanced, objective, and free from commercial bias. No financial relationships relevant to the content of this article have been disclosed by the authors, planners, independent peer reviewers, or editorial staff. (First submission March 2010. Revision submitted June 2010. Accepted for publication June 3, 2010.)

Digital Object Identifier:10.1188/10.CJON.735-741