
Clinical Problem

A Systematic Approach to Preparing for Chemotherapy Administration

Nur Akcasu, RN, BSN and Deb Oswald, RN, MSN

Pediatric Oncology Problem

OVER TIME, every hospital experiences a cycle of changing nursing personnel. When that happens, the system must be stretched to meet the educational needs of a large group of new orientees at one time. If at the same time a hospital is making the transition from general care nursing to hematology-oncology nursing, extra effort is needed to help the staff acquire the extensive knowledge base necessary for this specialty area. Mott Children's Hospital, Ann Arbor, MI, was faced with both of these challenges.

Because children with cancer so often are treated according to complex chemotherapy protocols, one of the most urgent educational needs for their nurses is competence in chemotherapy administration. At Mott Children's Hospital, new orientees complete a basic hematology-oncology nursing orientation consisting of 30 hours of didactic instruction and 120 hours of preceptored practice, which includes the components needed for safe chemotherapy administration. It was observed, however, that new orientees consistently displayed a lack of confidence in the latter area. They attributed this lack of confidence to the wide variety of chemotherapeutic agents available and the narrow margin for error associated with the administration of these drugs. Staff nurses at Mott's new hematology-oncology unit also expressed a lack of confidence about chemotherapy, particularly since they had recently assumed responsibility for double-checking protocols, roadmaps, and

dosages with physicians. It became evident that for both groups of nurses, a systematic approach to supplementing their basic chemotherapy knowledge was needed.

Nursing Solution

The authors, both experienced hematology-oncology nurses, developed a chemotherapy administration worksheet to be used as a nursing tool for both orientee and preceptor or other staff nurses (Fig 1). An orientee completes the worksheet for each new chemotherapeutic agent administered to an individual patient. The preceptor and other staff nurses can use the worksheet as a refresher course on the components needed for safe administration of chemotherapeutic agents. The worksheet was not intended to be part of the patient's medical record.

The worksheet addresses several critical areas of chemotherapy administration including calculation of body surface area, protocol information, laboratory and other tests required, major potential side effects, administration (facilitating cross-checking with preceptor or another nurse), and documentation. The worksheet was reviewed by the unit's Nurse Practice Committee before being adopted on the nursing unit. Worksheets were printed on a pad of colored paper and kept in the nursing station where they were easily accessible. The worksheet complements the Children's Cancer Study Group Chemotherapy Guidelines kept as a reference on the nursing unit.

Advantages

The major advantage of the worksheet was the learner's active participation in its completion. As expected, both new orientees and staff nurses became more confident as they became

From Mott Children's Hospital, University of Michigan Medical Center, Ann Arbor, MI.

Address reprint requests to Nur Akcasu, RN, BSN, Mott Children's Hospital, University of Michigan Medical Center, 1500 E Medical Center Dr, Ann Arbor, MI 48109-2407.

*© 1991 by Association of Pediatric Oncology Nurses.
1043-4542/91/0803-0006\$03.00/0*

$$m^2 = \sqrt{\frac{\text{height (cm)} \times \text{weight (kg)}}{3600}}$$

$$\text{Creatinine clearance} = \frac{120 \times \text{urine creatinine}}{m^2 \times \text{serum creatinine}}$$

Drug:	_____
Premedications:	_____
Height:	_____
Weight:	_____
m ² :	_____
Protocol #/Roadmap:	_____

Labwork: CBC/platelets	_____
ANC	_____
Renal	_____
Liver	_____
Other	_____

Tests:	Cardiac	_____	Cumulative dose	_____
	Pulmonary	_____		
	Audiology	_____		
	Other	_____		

Side Effects:	1.	_____
	2.	_____
	3.	_____

Administration:	Right dose	_____
	Right patient	_____
	Right route	_____
	Right drug	_____ Expiration _____
	Right time	_____

Documentation:	Bedside flowsheet	_____
	Chemo administration record	_____
	Chemo administration note	_____

Abbreviations: CBC, complete blood count; ANC, absolute neutrophil count

FIGURE 1. Chemotherapy administration worksheet. (Reprinted with permission of Mott's Children's Hospital, University of Michigan Medical Center, Ann Arbor, MI.)

more experienced, and the worksheet facilitated this process of skill building.

Disadvantages

As the current staff became more experienced in chemotherapy administration, the nursing actions prompted by the worksheet were incorporated into nursing practice. When that level of expertise was acquired, the task of completing the worksheet was not perceived as helpful. Gradually the worksheet became a reference tool as opposed to a teaching tool for the more experienced nurses.

Implications

This "recipe"-style worksheet proved to be quick and easy to complete, and was eagerly

accepted not only by new orientees and preceptors, but also by other nursing staff on an as-needed basis. This same type of systematic approach could be adapted to address other educational needs such as alternate venous access device care, home administration of antibiotics, and discharge teaching for newly diagnosed patients.

Whom to Contact for More Information

For more information, contact Nur Akcasu, RN, BSN, or Deb Oswald, RN, MSN, Mott Children's Hospital, University of Michigan Medical Center, 1500 E Medical Center Dr, Ann Arbor, MI 48109-2407; (313) 764-6170.

Bibliography

Association of Pediatric Oncology Nurses: Scope of Practice and Outcome Standards of Practice for Pediatric Oncology Nursing. Richmond, VA, APON, 1988
Gaddy-Cohen D, Burns L, Wofford L: The development, implementation, and evaluation of a chemotherapy certifica-

tion course for pediatric nurses. *J Assoc Pediatr Oncol Nurs* 3(4):21, 1985
Stam MAA: Rationale and development of an institutional pediatric chemotherapy certification course. *J Pediatr Oncol Nurs* 7(3):109-114, 1990