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How M.D. Anderson Guards Against Chemotherapy Errors

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The Children's Cancer Hospital at the University of Texas M.D. Anderson Cancer Center in Houston has implemented the safeguards recommended by the Institute for Safe Medication Practices in Huntingdon Valley, Pa. Some of the safeguards have been in place for years, whereas others have been more recent. One recent change is the use of preprinted chemotherapy orders, said Susannah E. Koontz, PharmD, BCOP, clinical pharmacy specialist in pediatric hematology/oncology.

"When I first started working here nine years ago, doctors sometimes handwrote chemotherapy orders, but since they don't always have the best handwriting, we moved to a system in which all orders have to be typed out or generated through a repository of online orders," Dr. Koontz said. The online form includes information such as dose, volume of fluid, fluid type, how it will be administered and how long the infusion will be, as well as the patient's height and weight.

After a physician writes an order, another healthcare provider will double check and sign off on it before it goes to the pharmacy. Although prescriptions were double checked by a second person in the past, only in the last 18 months or so has the second person been required to sign off on the order, Dr. Koontz said.

The hospital has long had two pharmacists check every order, she added. "One pharmacist enters the prescription and generates the label, and a second pharmacist double checks it, redoing the calculation." That means that four people have checked every prescription before it goes to the floor.

On the floor, two nurses will check the order, including recalculating the dose. And when the nurse enters the patient's room, he or she will check to make sure the right patient is receiving the right medication along with the second nurse participating in the double check of chemotherapy.

The Children's Oncology Group, as well as the Children's Cancer Hospital, also uses treatment plans, which all healthcare providers involved in a patient's care check to make sure the patient is receiving the right dose at the right time, Dr. Koontz said.

The hospital uses smart pumps for administering infusions. Dr. Koontz was part of a group that last year created "soft" and "hard" limits on the pumps. The soft limits will beep to alert a nurse to a potential error; the nurse can then check with the pharmacist or physician before proceeding. A hard limit will not allow a nurse to proceed with drug administration. "Anecdotally, it seems that the smart pumps have cut down on infusion errors," she said. By this fall, the hospital plans to implement a computerized prescriber order entry system.