A RISK ANALYSIS METHOD TO EVALUATE THE IMPACT OF A CHEMOTHERAPY COMPOUNDING WORKFLOW MANAGEMENT SYSTEM ON CANCER PATIENTS' SAFETY

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OBJECTIVES

Background: The implementation of technology for chemotherapy compounding is recommended by several organizations to improve patient safety. However, a careful evaluation of their benefits and risks is needed.

PURPOSE: To evaluate the safety before and after the implementation of an imaged-based volumetric compounding workflow software system (PhocusRx®), and stratification of residual risks to drive future developments.

METHODS

Setting: Chemotherapy compounding pharmacy unit of a 1300-bed tertiary teaching hospital provided with a Computerized Prescription Order Entry program, online pharmacy validation and online printing of compounding order sheets. In the before phase, quality control was made by a pharmacy technician who verified starting products, number of vials used, aspect of the final product and label accuracy.

Design: Comparative risk analysis of the chemotherapy compounding process before and after the implementation of PhocusRx®, according to the Failure Modes, Effects and Criticality Analysis method.

Measurements: The failure modes were defined and their critically index (CI) calculated on the basis of the likelihood of occurrence (O), detection probability (D) and potential severity (S) for patients (CI = O × D × S). CI of the before and after phases were compared, and new measures were proposed.

RESULTS

PhocusRx® implementation has increased the safety of the compounding process in the pharmacy department. FMECA is a useful method for evaluating the impact of compounding technology implementation and identifying further improvement strategies.

CONCLUSIONS

PhocusRx® implementation has increased the safety of the compounding process in the pharmacy department. FMECA is a useful method for evaluating the impact of compounding technology implementation and identifying further improvement strategies.

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