Reduce Exposure from Hazardous Drugs by Implementing a Closed-System Device
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Problem:
Occupational hazards of antineoplastic drugs have been well documented. Healthcare workers may not be aware that contamination can occur anytime during the chemotherapy process. Our current process does not include the use of a closed-system drug transfer device (CSTD) as recommended by NIOSH.

Evidence:
Potential routes of exposure to hazardous drugs can come through direct or indirect contact. The drugs can be absorbed through the skin, mucous membranes, through needle sticks, contaminated containers, aerosols, dust and or droplets. NIOSH and ASHP guidelines recommend the use of a closed-system transfer device to limit unnecessary exposure of these drugs to healthcare workers.

Strategy:
A pre-survey was conducted to establish oncology nurses perceptions and confidence regarding the possibility of exposure during chemotherapy administration. Identified issues included high number of chemotherapy agents administered with leaks from the tubing leading to undocumented skin exposure. Closed system drug transfer devices were evaluated to protect healthcare workers.

Practice Change:
To protect workers from exposure, a closed-system transfer device was implemented to be used throughout the entire chemotherapy process of drug preparation, transport, administration and disposal. Training and education for healthcare workers involved was provided.

Evaluation:
After six months, a review with pharmacy revealed an issue with the closed system process and was corrected. Nurses were re-surveyed to re-assess their perceptions and confidence regarding exposure after the implementation of the new process.

Results:
The post survey revealed a high number of chemotherapy drugs given in the last six months. Only one undocumented exposure and one leak were reported. One nurse identified that up to five times an exposure was caught before a spill occurred.
Recommendations:
Ensure all parts of the closed-system are implemented and periodic audits of the process performed to monitor compliance. Resurvey the nursing staff again in six months to identify issues.

Lessons Learned:
Assure all pieces of the closed system are implemented and used consistently. Educate healthcare workers involved annually on the closed-system.

Bibliography


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