Randomized Controlled Trial of an Intervention to Improve Nurses’ Hazardous Drug Handling

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OBJECTIVES: To evaluate whether a web-based educational intervention improved personal protective equipment (PPE) use among oncology nurses who handle hazardous drugs.

SAMPLE & SETTING: From 2015 to 2017, the authors partnered with 12 ambulatory oncology settings in the United States to enroll 396 nurses, 257 of whom completed baseline and primary endpoint surveys.

METHODS & VARIABLES: In a cluster randomized controlled trial, 136 nurses in control settings received a one-hour educational module on PPE use with quarterly reminders, and 121 nurses in treatment settings received the control intervention plus tailored messages to address perceived barriers and quarterly data gathered on hazardous drug spills across all study settings. The primary outcome was nurse-reported PPE use.

RESULTS: Control and intervention sites had suboptimal PPE use before and after the intervention. No significant differences were observed in PPE use knowledge or perceived barriers. Participants reported high satisfaction with the study experience.

IMPLICATIONS FOR NURSING: Hazardous drug exposure confers notable health risks to healthcare workers. To improve hazardous drug handling, occupational healthcare workers, health systems, and professional organizations should consider coordinated efforts to implement policy and practice changes.

KEYWORDS: hazardous drugs; personal protective equipment; occupational exposure

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