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Toxic Substances Control Act (TSCA) Implementation:

New Ways to Promote Occupational Justice and Prevent Worker Exposures From Hazardous Chemicals

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Keywords

chemical policy; occupational health; occupational justice; advocacy

The 2016 Frank Lautenberg Chemical Safety for the 21st Century Act (amended Toxic Substances Control Act [TSCA] [Public Law No. 114–182]) is an important policy tool for primary protection of workers and their families from the myriad of harmful chemicals currently in use in the United States (U.S.; The President's Cancer Panel, 2010). Approximately 9.5 trillion pounds of over 40,000 industrial chemicals are currently in production according to the U.S. Environmental Protection Agency (EPA), yet few are regulated in the workplace (Koman et al., 2019). Workplace chemical exposures such as asbestos, methylene chloride, organic solvents, toxic metals, and halogenated flame retardants can increase the risk of death, cancer, birth defects, and loss of cognitive capacity. According to the U.S. Occupational Safety and Health Administration (OSHA), workers suffer more than 190,000 illnesses and 50,000 deaths annually related to chemical exposures (Steenland et al., 2003). To address these risks, TSCA amendments contained worker protections, but the occupational health community has not yet fully engaged with implementation. Occupational health nurses (OHNs) could play a pivotal role in providing data about working conditions and health effects as well as advocating for health-protective evidence-based risk evaluation.

Amended TSCA requires that the EPA evaluates high-priority chemicals and makes affirmative risk determinations, while considering potentially exposed or susceptible

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Made substantial contribution to the concept and design: P.D.K., R.G., N.C., and T.J.W. Acquired and analyzed data: P.D.K., R.G., and N.C.

Drafted article: P.D.K., R.G., and N.C. Critically revised and approved: P.D.K., R.G., N.C., and T.J.W.

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subpopulations, including workers. EPA must make base decisions on the “best available science” (15 USC §2625 [h]) to evaluate health risks of chemicals and determine if the chemical posed an “unreasonable risk” without consideration of cost. The amended law concentrates many decisions in the federal EPA, an organization largely unfamiliar with worker health. In its initial risk evaluations, EPA has not adequately accounted for the overlapping vulnerabilities of workers (e.g., pregnant workers, older workers with chronic conditions, workers who are also exposed to racial discrimination, or economic stressors) (National Research Council, 2009). Thus, the implementation of amended TSCA is an excellent opportunity for OHNs and other health professionals to present data to EPA about conditions of use of chemicals by workers and data about workers’ susceptibility or exposures on the job, especially for vulnerable categories of workers.

EPA excluded conditions of use of these chemicals (in three out of the first 10 risk evaluations) and exposure pathways (in eight of the first 10); as a result, those risk evaluations systematically understated risk for workers and other susceptible groups. These deficiencies might be countered by the full participation by labor groups most aware of working conditions. OHNs can assist by applying resources, such as Vision Zero frameworks (Vision Zero, 2022; Zwetsloot et al., 2017), OSHA’s Chemical Exposure Health Data (CEHD) (U.S. Department of Labor Occupational Safety and Health Administration, 2022), and NIOSH’s Health Hazard Evaluation program; these data need to be better integrated into EPA’s risk evaluations and risk management approaches.

Exposures to industrial chemicals and their health consequences remain a preventable source of occupational disease. To systematically address worker risks, amended TSCA authorities are important tools toward health-protective national policy (Sutton et al., 2012).

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