More than 5.5 million healthcare workers potentially are exposed to hazardous drugs (HDs) in the workplace (Bureau of Labor Statistics, 2010). Although most drugs defined as hazardous are cytotoxic agents used in the treatment of cancer, many drugs used for other indications and in other patient populations are equally unsafe. The Occupational Safety and Health Administration (OSHA) acknowledged that risk and issued recommendations for the safe handling of HDs 25 years ago (OSHA, 1986). The Oncology Nursing Society (ONS) (Polovich, Whitford, & Olsen, 2009) and the American Society of Health System Pharmacists ([ASHP], 2006) maintain published guidelines for HD safe handling. According to the National Institute for Occupational Safety and Health ([NIOSH], 2004), evidence exists that work environments are contaminated with HDs, which increases the potential for exposure of nurses, pharmacists, and other healthcare workers.

Background

The adverse effects of occupational exposure to HDs are well documented in the literature. HD exposure is associated with acute symptoms such as hair loss, abdominal pain, nasal sores, contact dermatitis, allergic reactions, skin injury, and eye injury (Harrison, 2001; Valanis, Vollmer, Labuhn, & Glass, 1993a, 1993b). Nurses working with HDs have experienced adverse reproductive outcomes, including fetal loss, miscarriage, or spontaneous abortions; infertility (Fransman et al., 2007; Martin, 2003; Valanis, Vollmer, Labuhn, & Glass, 1997); preterm births; and learning disabilities in offspring (Martin, 2003). HD exposure of nurses also has been associated with DNA damage (Fuchs et al., 1995; Yoshida, Kosaka, Tomika, & Kumagai, 1997).