The dangers associated with unintentional exposure to chemotherapy date back more than three decades, when it was discovered that urine from nurses administering these drugs tested positive for mutagenicity (Falck et al., 1979). Subsequent studies have shown widespread environmental contamination during compounding and administration (Connor, 1999, 2006; Connor et al., 2010; Hon, Teschke, Demers, & Venners, 2013; Hon, Teschke, Demers, & Venners, 2014; Hon, Teschke, Shen, Demers, & Venners, 2015), which contributes to human uptake and subsequent chromosomal damage and reproductive disorders (Hon et al., 2014, 2015; Labuhn, Valanis, Schoeny, Loveday, & Vollmer, 1998; McDiarmid, Oliver, Roth, Rogers, & Escalante, 2010; Shortridge, Lemasters, Valanis, & Hertzberg, 1995; Valanis, Vollmer, Labuhn, & Glass, 1993a, 1993b, 1997; Valanis, Vollmer, & Steele, 1999). Reproductive effects include infertility, miscarriages, stillbirths, menstrual cycle changes, ectopic pregnancies, spontaneous abortions, low birthweight infants, congenital anomalies, learning disabilities in children of exposed mothers, and pre-term birth (Fransman, Huizer, Tuerk, & Kromhout, 2007; Hemminski, Kyyronen, & Lindbohm, 1985; Lawson et al., 2012; Lorente et al., 2000; Saurel-Cubizolles, Job-Spira, & Estryn-Behar, 1993; Shortridge et al., 1995; Valanis et al., 1997, 1999).

The term hazardous drug (HD) is commonly used to include antineoplastic chemotherapy and other nononcologic agents (e.g., antivirals) that pose similar risks to healthcare workers (Power, 1990). HDs are defined as having any of the following properties: carcinogenicity, teratogenicity or other developmental toxicity, reproductive toxicity, organ toxicity at low doses, and genotoxicity. Structure and toxicity profiles of new drugs that mimic existing drugs are determined to be hazardous by this criteria (Connor, MacKenzie, DeBord, Trout, & O’Callaghan, 2016).

**Guidelines**

Guidelines for handling HDs were first published by the American Society of Hospital Pharmacists (ASHP) in 1981. ASHP (subsequently renamed the American Society of Health-Care Pharmacists) has issued several updates, most recently in 2006. The Occupational Safety and Health Administration (OSHA) and the Oncology Nursing Society (ONS) also published guidelines in the mid-1980s. ONS has updated its publication several times (Polovich, 2011). After more than 15 years of conspicuous silence, OSHA updated their