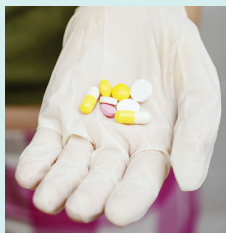


# Oral Agents for Cancer: Safety Challenges and Recommendations

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**Background:** The lack of knowledge and standardization of safety practices related to prescribing, dispensing, administering, and monitoring oral agents for cancer (OACs) has created significant safety challenges for patients and healthcare providers. Problems identified with the use of OACs include possible medication errors, increased potential for toxicity, unintentional exposure of hazardous medications to healthcare providers and informal caregivers, and possible pollution of the environment.

**Objectives:** The purpose of this review is to provide information about the current state of knowledge and recommendations in the literature regarding safety concerns with OACs and strategies for risk reduction.

**Methods:** Articles published from 2003–2014 were retrieved using PubMed, CINAHL®, and the Cochrane Library.

**Findings:** As the number of OACs continues to increase, existing standards related to medication errors and safety will require ongoing revision to lessen the risks and hazards for patients, caregivers, and healthcare providers.

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The use of oral agents for cancer (OACs) requires patients and families to self-manage medications that have a narrow therapeutic window and the potential for adverse effects in the community setting (Moody & Jackowski, 2010). OACs have many benefits for patients, including ease of administration, needleless administration, the body's continuous and prolonged exposure to chemotherapy, and improvement in quality of life (Bartel, 2007; Birner, 2003; Trovato & Tuttle, 2014). However, these benefits are accompanied by risks. Because OACs are self-administered, the responsibility of the "five rights" (i.e., right medication, right dose, right time, right route, and right patient) shifts from nurses to patients and caregivers (Roop & Wu, 2014). Problems identified with this shift in responsibility include a possible rise in medication errors; increased potential for toxicity; unintentional exposure of hazardous medications to family, friends, and pets; and possible pollution of water supply and landfills (Bartel, 2007; Roop & Wu, 2014).

Patients typically feel a false sense of safety regarding OACs. In a study by Held, Ryan, Champion, August, and Radhi (2013)

involving 50 patients, 40% reported that they felt OACs were safer than treatments administered via IV. Patients often believe that OACs are not as toxic or potent as IV therapy (Roop & Wu, 2014). Trovato and Tuttle (2014) also documented this perception and found that 79% of 45 patients surveyed said they believed OACs were very safe. Although these studies have limitations, this false impression of safety is well documented, indicating that patients may not understand the seriousness of the medication (Held et al., 2013; Trovato & Tuttle, 2014).

Safe handling of parenteral chemotherapy has been a topic of interest since 1985, when the American Society of Health-System Pharmacists first provided guidelines for the handling of hazardous drugs (Held et al., 2013). In the past decade, various organizations, including the American Society of Clinical Oncology (ASCO), National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration, and Oncology Nursing Society (ONS), have offered professional standards and guidelines to address the prescription, preparation, and administration of antineoplastic agents. These standards only marginally address the use of OACs (Neuss et al., 2013).