

# Oral Chemotherapy

## A home safety educational framework for healthcare providers, patients, and caregivers

Cynthia Huff, MSN, RN, OCN®, CRNI®, CNL®



**BACKGROUND:** Hazardous oral anticancer agents (OACs) require the same safe-handling considerations in the home setting as in controlled healthcare environments. Effective home management strategies for OAC administration emphasize caregiver protections, proper storage, safe administration, spill management, and proper waste disposal to reduce the risk for hazardous drug exposure.

**OBJECTIVES:** The purpose of this study was to establish a framework for oral chemotherapy education for healthcare providers, patients, and caregivers using a checklist and teach-back tool focused on OAC safe handling.

**METHODS:** A literature search was performed to establish a framework for education on home administration of OACs. Seven articles were selected to review.

**FINDINGS:** Developing education initiatives aimed at increasing patients' and caregivers' knowledge of and skills and confidence in administering OACs at home can ensure the safe management of treatments. To establish safe-handling practices for OAC home administration, nurses can implement a standard framework for patient and caregiver education.

### KEYWORDS

hazardous drugs; safe handling; oral chemotherapy; patient education

### DIGITAL OBJECT IDENTIFIER

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**BECAUSE MORE ORAL ANTICANCER AGENTS (OACs) ARE AVAILABLE** for the treatment of cancer, hazardous drug (HD) administration is shifting from controlled healthcare settings to the home environment (Polovich & Olsen, 2018). Similar to the IV administration of cancer treatments, anticancer agents administered orally can have adverse health risks with involuntary exposure. The most common source of exposure is skin contact with contaminated surfaces. However, the risk for exposure can be reduced by implementing safe-handling precautions and using personal protective equipment (PPE) (Connor, Zock, & Snow, 2016; Goodin et al., 2011). With patients and caregivers administering HD agents in the home, they are no longer passive participants in their health care; instead, they are responsible for the safe administration of agents, which was previously controlled by the healthcare team (Salgado et al., 2017). Therefore, as the number of patients who are expected to actively manage their health and disease increases, a standard framework for education on OAC administration is needed to enhance patient adherence to treatment and promote safe handling through building patients' and caregivers' knowledge, skills, and confidence.

### Background

OAC exposure can pose significant health risks to those who are handling or disposing of these agents improperly. Similar to IV chemotherapy, some OACs are cytotoxic and can be associated with carcinogenesis, teratogenesis, or reproductive or organ toxicity at low doses (National Institute for Occupational Safety and Health [NIOSH], 2017). Other OAC classifications, such as targeted agents or hormonal drugs, are not cytotoxic but can also have embryogenic or teratogenic effects. Certain OACs can mimic the properties of hazardous chemicals and be toxic, ignitable, corrosive, or reactive.

Although HD exposure is often associated with the development of adverse health issues in healthcare providers, less is known about the short- or long-term health consequences of HD exposure in family caregivers of patients with cancer. In addition, ineffective communication between healthcare providers and patients can contribute to confusion, poor medication adherence, and even death for some patients (Atkinson et al., 2016). OACs also have a narrow therapeutic index. A slight increase in dosing can result in highly toxic effects, whereas underdosing (or poor adherence) can lead to poor outcomes for patients. OACs require consistent and careful monitoring for adverse side effects. Considerations must be made for patients who have difficulty swallowing, particularly if OACs