

# Feasibility Pilot on Medication Adherence and Knowledge in Ambulatory Patients With Gastrointestinal Cancer

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**T**he increase in development and approval of new oral cancer therapies has changed chemotherapy administration. That shift in the treatment paradigm has led healthcare professionals to address the need for the development of new models of care in patients receiving oral chemotherapy agents. Patients must now assume responsibility and control for self-administration of those agents. Various factors that may be predictors of adherence to the prescribed regimen include patient perceptions; clinician beliefs; economic, disease, and sociodemographic factors; or knowledge deficits (D'Amato, 2008; Given, Spoelstra, & Grant, 2011; Partridge, Kato, & DeMichele, 2009). In addition, self-administration may lead to safety concerns because of errors in administration, exposures related to handling oral chemotherapy agents, drug interactions between chemotherapy agents and other medications, and failure to report side effects (Bartel, 2007; Winkeljohn, 2007). In a survey by Weingart et al. (2007) of 42 U.S. cancer centers, 10 centers reported no formal procedures in place for monitoring adherence. Medication nonadherence also may lead to unnecessary hospitalizations, poor clinical outcomes, and increased healthcare costs (McDonnell & Jacobs, 2002; Senst et al., 2001).

Adherence rates in patients receiving medications vary from lower than 20% to as high as 100% in patients receiving oral chemotherapy (Partridge, Avorn, Wang, & Winer, 2002; Ruddy, Mayer, & Partridge, 2009). Descriptive adherence studies on oral chemotherapy use have demonstrated the extent of the issue (Lebovits et al., 1990; Levine et al., 1987; Partridge, Wang, Winer, & Avorn, 2003). As reviewed by Schneider, Hess, and Gosselin (2011), few interventions have been evaluated

**Purpose/Objectives:** To evaluate the feasibility of face-to-face education, a nurse-initiated telephone call, and patient use of medication diaries to support patients' self-reported medication adherence and knowledge of oral chemotherapy.

**Design:** Descriptive, feasibility pilot study.

**Setting:** An outpatient oncology unit at a National Cancer Institute–designated comprehensive cancer center.

**Sample:** 30 patients with gastrointestinal cancer who were prescribed at least one oral chemotherapy agent.

**Methods:** Participants received verbal and written education and a nurse-initiated educational telephone call within 72 hours of receiving education. Each was asked to complete a medication diary at home during the first cycle and the eight-item Morisky Medication Adherence Scale (MMAS-8) at the end of the first cycle of oral chemotherapy.

**Main Research Variables:** Verbal and written education, telephone contacts, drug diary, self-reported medication adherence, and patient knowledge.

**Findings:** Most patients ( $n = 29$ ) received both verbal and written education, participated by telephone ( $n = 25$ ), and completed the medication diaries ( $n = 21$ ) correctly. Seventeen participants documented side effects within the first 72 hours of treatment initiation, with eight participants needing additional assistance with management of side effects. At the end of the first cycle of therapy, MMAS-8 adherence scores were high ( $\bar{X} = 7.89$ ,  $SD = 0.55$ ).

**Conclusions:** This study demonstrated the feasibility of a nurse-initiated educational and monitoring protocol for patients with gastrointestinal cancer receiving oral chemotherapy. In addition, the adapted MMAS-8 was a feasible adherence measure.

**Implications for Nursing:** Pilot findings support targeted nurse interventions with face-to-face and telephone education to enhance self-monitoring and adherence for patients with gastrointestinal cancer receiving oral chemotherapy.