ONCOLOGY NURSING SOCIETY
2009–2013 RESEARCH AGENDA

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Nursing-Sensitive Patient Outcomes (NSPOs)

F.1. Evaluate the effect of nursing care on promoting and maintaining treatment adherence.

F.1.1. Understand predictors (risk model), costs, settings, side effects, educational approaches, population, health literacy, and cognitive changes associated with adherence to oral chemotherapeutic agents.

F.1.2. Evaluate strategies for various innovative models of care (e.g., APN-led teams, patient-centered medical home, chronic care models) and the cost effectiveness related to adherence of care issues.

F.1.3. Explicate the issues of adherence in all aspects of a plan of care, including clinical trial participation, medications such as oral chemotherapeutic agents, diet, and self-care strategies.

F.1.4. Evaluate strategies for the identification and prevention of adverse events related to treatment, such as vascular devices.

F.1.5. Develop or test interventions that support adherence to care.

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Rationale and Background

F.1. Additional research is needed to fully develop the area of adherence. Adherence to oral chemotherapeutic agents and in all aspects of the care trajectory for patients with cancer, including the setting (inpatient and ambulatory care) and how care is organized and managed (cancer center, hospital, and community setting), is needed to identify patient and care provider obstacles. The barriers to adherence (i.e., side effects, cost, education, care provider approach, health literacy, the patient's cognitive status, and caregiver involvement) need to be considered. Adherence to care is a multifaceted problem. Predictive models of adherence to various aspects of care are not available. Research on the treatment effectiveness of education, both cognitive and behavioral, for various aspects of cancer treatment, remains limited in scope.

Knowledge about education, both cognitive and behavioral, and exercise interventions is more advanced in the area of breast cancer and needs additional development in other types of cancers. The research in the area of breast cancer also needs to be extended, but the body of research to date could be used as a model for extending research into other types of cancer.

As models of all aspects of adherence predictors are developed, future studies could use the data to develop and test interventions for oral medication adherence and an adherence-to-care regimen. The impact of rendering a higher percentage of care in the outpatient setting and the cost-effectiveness of such practices need additional consideration. Beyond adherence to medication, many nursing sensitive interventions that correlate with the recommendations from the ONS PEP resources continue to need additional research.

Progress 2004–January 2011

The NSPO focus on treatment adherence with oral agents was due to the growing number of oral agents available, shifting responsibility from inpatient care to the outpatient setting, and the need for the patient to closely follow-up and adhere to care. Prior to 2005−2009, no studies were funded by the ONS Foundation that targeted specific areas of infection, maintenance or promotion of physical function, functional status, and treatment. In 2004−2005, three studies were funded, with one focusing on prevention of adverse events, one on nursing interventions, and one on prevention of fatigue. Three studies were funded from 2006−2007: one on workforce issues (pain and nursing quality as related to certification) and two on adherence to treatment.
In 2009 and 2010, one study each year focusing on adherence to treatment was funded by ONS Foundation and one study was funded by National Institute of Nursing Research that tests a biobehavioral intervention for patients with breast cancer. From 2009–2011, 19 studies were conducted and published by nurses and other healthcare professionals that addressed various aspects of cancer care and interventions. Several directly measure patient focused interventions (Dodd et al, 2010; Ingersoll et al., 2010; Rustoen, Mayer, & Miaskowski, 2010), whereas others measure interventions with pediatric patients (Ekti et al., 2008; Judge-Santacroce et al., 2010; Kato, Cole, Bradlyn, & Pollock, 2008).

For this updated review, treatment adherence focused on work that has been completed since the last agenda on adherence to oral agents but was expanded to additional nursing outcome efforts that study predictors and correlates of change in physical functioning during cancer treatment and adherence to all aspects of care. Several reviews of adherence research (Kelly & Agius, 2007; Palmieri & Barton, 2008) found the studies reviewed to be deficient in overall quality. Several intervention studies were located that tested different modalities to increase adherence to oral chemotherapeutic agents in adults (Espie et al., 2008) and adolescents (Malbasa et al., 2007) and to pain medication (Valeberg et al., 2008). Several clinical articles were found that would be useful in helping to identify future research studies (Greer, Pirl, Park, Lynch, & Temel, 2008; Lette & Lette, 2008; Miaskowski, Shockney, & Chlebowski, 2008). A variety of studies were located that dealt with adherence to various components of cancer treatment, reflecting a broader range of intervention research (Chung & Hwang, 2008; Daley et al., 2007; Fahey et al., 2008). Since the last review in early 2009, six studies have been conducted by nurses and other healthcare groups that have addressed adherence and various oral medications (Denois et al., 2010, Eliasson et al., 2010, Hawwa et al., 2009, Hubery et al., 2009, Partridge et al., 2010, Partridge, et al., 2008). The majority of these studies, though well developed, were small with both cross-sectional and limited longitudinal data.

From 2005−2009, there was a call for innovative studies possibly using health message education for behavior change. Several studies were found that tested psycho-educational interventions, cognitive and behavioral interventions, nutritional interventions (Demark-Wahnefried & Moyad, 2007; Kangas, Bovjerg, & Montgomery, 2008; Knobf, Insogna, DiPietro, Fennie, & Thompson, 2008; Wyatt et al., 2007), and exercise (Pinto, Rabin, Abdow, & Papandonatos, 2008), but none used health message education. From 2008–2011, Decker et Al. (2009), in a pilot study, assessed the use of an automated voice response system and a nursing intervention to monitor adherence to oral medications. Kimman et al., (2010) explored patient satisfaction with nurse-led telephone follow-up after curative treatment for breast cancer and Curran and Meister (2008) studied a hospital based intervention to decrease distress in patients with cancer. Two studies focused on instrument development. One group developed an instrument to measure adherence to strength training (Huberty et al., 2009) and another a teaching tool for patients receiving oral agents (Kav et al., 2010).

A review of funding by ONS Foundation from 2009– 2010 indicated that of the six studies submitted in 2009 and the eight submitted in 2010, only one small grant was funded in each year. Also, during this period, the PEP resources for prevention and management of bleeding in patients with cancer was released for use.

A priority topic for the NSPO area was treatment adherence with oral agents due to the growing number of oral agents being used and the shifting responsibility from inpatient to outpatient care. This focus in the healthcare system continues to grow, requiring patients and families to increase their responsibility and understanding of self care. For this updated review treatment adherence focused on the work completed since the last agenda publication. Some progress has been made in the area of adherence.

Interesting additions have been in the area of using messages and in instrument development. The review, as the last, included nursing outcome efforts that focused on study predictors and correlates of change in physical functioning during cancer treatment and adherence to all aspects of care.

Underserved or Minority Populations and Treatment Adherence

The 2005−2009 report identified the need to research adherence in minority populations. No studies were found during that timeframe that focused solely on minorities. Three interventions studies were found that focused on screening adherence in urban and minority populations. For the 2009–2011 update, no studies were found that solely focused on minorities. Minority populations are included in all studies, but as a component of the sample. Another issue which needs to be addressed is cultural diversity in the development and use of interventions.

Future (2011–2013)

Strides have been made in studying adherence to oral treatments as well as intervention studies for various aspects of cancer care. The studies typically are small and lack wide representation of various subject groups. As treatments options grow and change, it is important for research to test the nursing sensitive outcomes related to newer treatments in all populations and disease sites. Attention to treatment fidelity within and across demographics, disease, and culturally diverse groups is important. Changes in managed care and reimbursement also require researchers to capture cost-effectiveness of nursing outcomes and interventions.

F. *Nursing-Sensitive Patient Outcomes (NSPOs)*

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