

THE EFFECTIVENESS OF NURSE LED PATIENT TEACHING THAT PROMOTES OUTPATIENT ORAL ANTICANCER MEDICATION ADHERENCE IN CANCER PATIENTS 18 YEARS AND OLDER

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ABSTRACT

Patients are now self-administering oral chemotherapy treatment at home rather than intravenous therapy in outpatient facilities. A vital issue in the shift from intravenous to oral anticancer medication is patient self- management education. In home self-administration of oral chemotherapy encompasses treatment regimens and symptoms management. There is a plethora of data related to patient satisfaction and adherence to the treatment regime. The aim of this qualitative study is to identify the effectiveness of specific education modalities currently in use. This study, utilized a prospective literature review of nurse-led patient teaching, to determine personal patient reasons for poor adherence to oral anticancer medication in the home setting. The data collected from this study will be use to survey nursing comprehensive standardized teaching plan, and exam guidelines and expected competences to facilitate best practice for positive patient outcomes. The dramatic shift to outpatient cancer care created a need for effective nurse-led teaching tailored to each patient. Given the pivotal role of nurses, this research examines present nursing competencies for guidelines on the use of tailored patient teaching. Therefore, the secondary aim of this study is to identify the success of competent nurse-led patient education that promotes outpatient oral anticancer medication adherence.

KEYWORDS: Oncology nurse competence, patient adherence, oral anticancer medication.

INTRODUCTION

Newly developed cancer medications, spur a shift from intravenous cancer medication to outpatient orally self-administered cancer treatment. This paradigm shift changed patient cancer care to outpatient self-administration and monitoring. This practice change triggered reflective insight into how limited nurse-led interactive chemotherapy teaching affects patient outcome. Certainly, there are time constraints on face-to-face therapeutic patient teaching^[1] such as travel and ongoing support availability. However, the change almost eliminated nurse-led patient interactive chemotherapy teaching. Meager attention to emotional and physical readiness and level of comprehension, ultimately affects patient adherence and outcome of treatment. The difficulties patients face during self-administration include complicated treatment regimens and symptoms management.^[3-5] Nurses are competent leaders in educating patients with cancer about oral anticancer medication management in the outpatient setting³. Yet, cancer patients' self-management remain poor.^[1-2] There is little discussion on the effectiveness of individualized patient teaching and the management of the personal reasons for poor adherence.

The nursing profession recognized the necessity for special competency and practice change to maintain the effectiveness of nurse-led patient teaching to cancer patients.^[2,3,6,11,12] The shift to outpatient oncology treatment has triggered insight into a new trend in cancer care. Patient teaching must fully accommodate the new shift in care. The goal is for outpatient cancer care to effectively benefit oncology patients' adherence and improve patient outcome.^[1-24] This study is jointly concern with the examination of practice base nursing competences for OAM patient teaching, and the effectiveness it has on patient OAM adherence. Findings also associate nurses' expertise with current knowledge and skills that provide synergy to,^[11] improve care outcome in the outpatient setting.^[13-20]

METHODOLOGY

This qualitative study, utilized a prospective literature review of nursing competences and nurse-led patient teaching to determine personal patient reasons for poor adherence to oral anticancer medication in the home setting. The literature search included nursing regulatory bodies, and databases such as Medline and PubMed. The study carried out analysis of relevant published studies,

and information on oncology nursing competencies. The research examined oral anticancer patient adherence, and nurse-led patient teaching on the effectiveness of oncology patient self-management in the home. The literature identified that, at home, patients with cancer are having difficulty adhering to treatment regimen and symptom management.^[3-23]

Problem

Patients taking OAMs in their home are consuming drugs with a high potential for toxicity.^[1,14] OAMs can cause intolerable side effects and adverse effects that necessitate ongoing monitoring of toxic drug interaction. Extremely complicated regime places increased stresses on the patient causing mismanagement of dose, schedule, and dangerous self-administration of chemotherapy medications.^[14] Newly diagnosed oncology patients experience psychological and physical stress, which affects their ability to think about and articulate how they think about a problem. Face with a new and frightening situation, many oncology patients do not handle self-administering their oral anti-cancer medication well.^[14] They associate their lack of compliance with provider blame. They get frustrated, (“the information is not clear.”); (“What if I make a stupid mistake and take the wrong dose?”). They lay self-blame in their frustration, (“They gave me too much information too fast.”). This thwarting can lead to unsafe care and problems with adherence. For oncology patients, the stress of illness compounded by the stress of everyday life. Often cultural influences results in difficulties in assimilating a large amount of treatment information.^[8,13,14] At best, patients may go to the internet or struggle through the management of side effects until their next clinic appointment. Very few patients urgently make a phone call to tell someone that they do not understand “how to follow their treatment information.” They fear being misunderstood.¹⁹ If the self-administration of oral anticancer medication is inadequate, it creates poor adherence, which results in decreased drug target capabilities and bioavailability.^[14] The paradigm shift opened the need for effective nurse-led patient teaching on how safe cancer patient self-administers their OAM in the outpatient setting.^[18]

Nursing policy implications

Nurses are essential partners in patient education. Rather than assuming that patients are too frustrated to be compliant with OAM self-administration. Nurses recognized the importance of individualized patient teaching. What is needed is a better understanding of the at home difficulties patients experience while self-administering their OAM.^[18] Newly developed OAM has not only spur the shift from intravenous cancer medication to outpatient orally self-administered cancer treatment, it has created new expectations for the nurse as an oncology patient educator. Opportunities for practices change came when the Institute of Medicine (IOM) visionary study saw nurses as one of the change agent in safe effective patient care.^[1,3,9] The IOM made

recommendations on how the profession can improve specialty and patient focus care within nursing practice (IOM, 2011, p.6). The Oncology Nursing Association (ONA) answered this call for practice change by revising their competences and amplifying opportunities for the ONA to develop specialized teaching in the area of oncology patient care.^[3,5,7,10,13] The ONA and later the Oncology Nursing Society (ONS) redefined nursing competency to the highest level of proficiency in nursing skills, critical thinking, reflections, and interpersonal oncology care.^[3,4,6,12,18,20] these new standards can be especially acquired through national nursing associations^[10] such as the ONA and the ONS.^[3,5,7,10,13] Both nursing organizations recognized the significant influence nurses have on patient adherence; and seized the opportunity to update nursing standards and competencies to ensure safe care. ONA’s response to the landmark report from the IOM study^[1,5] is to align specialized nurse-led patient teaching with effective oncology care. An evidence-based schema on OAM adherence in the outpatient setting was developed.^[2,3,6,11,12] Competences were design around specialized teaching on how patients can safely self-administer their oral cancer treatment.^[11] Nurses identified the need for practice change that will deliver a nurse-led interactive approach to cancer therapy self-management in the outpatient setting.^[2,3,5] The revised ONA competency standards might open the way for oncology nurses to address OAM adherence. The diagnosis of cancer presents with social, financial, and cultural challenges. Nursing competencies already addresses most of this needs,^[3-15] having competencies concentrated on specific areas of personal stressors will benefit patient adherence and better treatment outcome.

The pivotal role of nurses

Nursing competences serve as a guide to best practice and standards.^[3,2,6,11,12] Nursing leaders efficaciously assess professional strengths in patient care and areas of weakness within nursing. Professional competences are design to regulate gaps in patient care. Nursing education has experienced changes over the past decade. Apparent changes include the revision of standards.^[2,3,5,6,7,11,12] Less obvious, but most important, are the changes in concepts that open the door for competency based nursing education. The aim is regulation that promote life-long learning that is appropriate to the changing needs of oncology patient care.^[3,5,6,9] The published report from the Institute of Medicine (IOM, 2011, p.6); promote lifelong learning that is consistent with the theory of constructivism.^[7,8] The IOM shepherded opportunities to improve nursing education through a concept of novice to expert strategies in the area of patient outcome.^[1,2 7,9,17] Oncology nurses identified a need for practice change and a panel of oncology nurse experts created competencies it made nurses essential partners in oral anticancer medication (OAM) outpatient adherence.

Literature Recommendations

The landmark report from the 2011 IOM study, “the Future of Nursing: Leading Change, Advancing Health”,^[1,2] is a call to redefine nursing professional competencies to support continued education and update professional training. One way to answer the IOM’s call is for oncology nurses to maintain an attitude of continued learning and keep up with the changing demand of oncology care. Another way is to adapt directives to address the shift of chemotherapy treatment from inpatient care to outpatient self-administration.^[3,2,10] ONS competencies might need further revisions in order to meet the emergent advances in outpatient cancer care. Professional development of oncology nursing education are design to meet the demand of the pyridine shift to outpatient oncology care.^[5,13] However, the standards are too general and not tailored to the individual needs of the patient. A review of the ONS’s forum, (Table 1) indicate that oncology nurse standards need to include clear guidelines for structured tailored nurse-led outpatient care that will potentially increase OAM adherence in outpatient cancer treatment. Nurses are already in a position to forge a strategic alliance and accomplish further transformation of the revised competencies to comprise tailored nurse-led patient teaching in outpatient cancer treatment. The literature is rich with the expertise of oncology nurses’ ability to deliver patient education. In the past, oncology nurses created^[11,14,19,20] and made use of the MASCC teaching tool to help educate and enhance adherence in cancer patients’ self-management of oral chemotherapy. Arthurs, et.al 2015 of a descriptive study supports nurse-initiated patient education and the use of MMAS-8 as an adherence measure. The study found that adherence was dependent on face-to face nursing education. A randomized controlled trial involving 75 adult cancer patients used self-reporting as the method of assessment to OAM adherence.^[22] Patients report satisfaction with telephone message (TM) intervention, but study limitations where identified.^[22] Patients left alone to do their self-assessment displayed social desirability bias that resulted in study errors. The study found that TM shows promise in OAM adherence however; due to errors, the study advised additional research before practice use^[22] The existence of studies examining the use of monitoring devices such as pill box, automated responses such as telephone response, and text messages^[11,19,22] supports OAM adherence monitoring. However, none of these studies addresses teaching modalities design to facilitate self-care deficits from the point of view of individual challenges in the home.

Further examination found a systemic review on the association of patient monitoring devices when coupled with standardized patient education in the outpatient setting. (Authors et al. 2015). The 2015 study found that a one-size fit all approach to therapeutic patient education had a negative effect on adherence to OAM. Authors et al. 2015 recognized that after nurse-led tailored patient teaching was used patients who were

self-administering OAM had a greater understanding of their treatment. Arthurs, et.al 2015 review suggested that a standardized approach to therapeutic patient education, might reduce symptomatology, prevent side effects, maximize health outcomes and positively affect the quality of life and survival of adult patients with cancer (2015). Another study produced a qualitative study on adherence profile^[23] determined that activity of daily living affect patient adherence. When information from one on one patient interviews about OAM self-administration was analyze, the results showed that oncology patients are invested self-managers^[23] such patients must be facilitated by a specific standardized educational approach that is based on a methodology of individualized therapeutic patient education.^[14] Therefore, tailoring therapeutic patient teaching to target patient stressors is a useful tool in patient adherence.

RESULTS

Studies exploring the effectiveness of tailored patient education to promote OAM adherence are few. Studies have yet to clearly demonstrate that adherence to self-administration of OAM at home is more dependent on monitoring adherence than trying to personalize management of patient adherence. During OAM self-administration, whenever in home direct nursing assessment is missing, in order to promote adherence some level of nurse-led intervention should be strongly encouraged^[1-23] A disconnect exist between nursing competences and OAM patient education.

Bourmaud, 2015 demonstrated that education and patient monitoring protocol should provide a case-by-case evaluation of the patient’s ability to adhere to the OAM regimen.^[23]

Authors et al, 2015 showed that when it comes to OAM adherence addressing patient needs by using nurse-led tailored therapeutic patient education is a feasible nursing intervention to help patient adherence. This review found modest to low evidence that therapeutic educational interventions support the clinical outcome of oral anti-cancer medicine adherence. Competences that addresses individualize nurse-led teaching on OAM would be beneficial to clinical outcome. Oncology nurses already has the assessment tools to tailored oncology patient education; and nurses are already providing nurse-led intervention to promote patient self-management of OAM, In order to further improve OAM adherence the nuances of personalized patient challenges can benefit from individualized nurse-led patient teaching.

The ONS initiative^[3,6,10] included suggestions for improving clinical practice. Nursing competences vaguely included tailored OAM patient education (Table 1). Competencies specific to tailored OAM should be specifically in cooperated into clinical practice. Nurses with specialized training in one-on-one tailored patient education are an asset to OAM adherence. The data

obtained from this research identified patient life stress, nursing time constraints as critical factors in tailoring patient teaching. Study finding suggest that providing a tailored management plan of care can increase adherence. Continued research is required on the strategies that can greatly increase the inclusion of personal stressor that decreases adherence to self-management of oral anticancer treatment. Examination of patient teaching tailored to meet personalized patient stressors can uncover barriers to treatment adherence that the patients fail to share.

DISCUSSION

Practice implications

The rise in OAM treatment and its effects on patient non-adherence initiated a need for the update of ONS safety standards.^[12] Specialized education in oncology nursing is a schema that oncology nurses developed, this practice change gives them an educational advantage that have the potential to promote OAM adherence in patients with cancer.^[1-10] Practice benefits for oncology nurses include continued current expertise in new competences, which can improve patient outcome. Other benefit to nursing is that it opens research in OAM adherence monitoring opportunities, and the development of a standardized educational approach specific to individualized tailored oncology patient teaching. Therefore, specialized nursing in this area support the facilitation of positive outcome that promotes OAM adherence. Nursing competencies and standards already provide a framework for innovative patient-centered teaching. Adding individualized tailored patient teaching strategies can promote nurse-led OAM teaching to improve adherence and the outcome of patient safety. Further development of scholarship, in tailored patient teaching for OAM adherence is an opportunity to raise the level of nursing standards in this area. Revising nursing competences and making them specific to tailored OAM patient teaching is an educational resource that could bridge the gap of the present disjointed OAM patient teaching, and promote increase OAM adherence. Designing flexible

competences for continuous practice change is an initiative that can better meet nursing education in tailoring patient care. For example, incorporating guidelines based on Esplen, M.J. 2018, “de Souza model”^[17] of a structured novice to expert specialty training framework; offers the nurse specialized training and at the same time instills a philosophy of continued learning to help nurses keep up with the changing demand of oncology care.^[17,24] This approach may decrease fragmented of oncology outpatient teaching and increase adherence.

CONCLUSION

The establishment of Oncology Nurses Association revised competences and the update of Oncology Nurses Society safety standard is a collaborative effort to improve oncology nurse practice. This process made room for significant practice advances in nurse-led patient teaching on OAM adherence. The competences that fully address the problem of patient self-management of cancer should comprise a tailored approach to the self-management of oral anticancer medication. Collaborative regulatory initiatives, such as the use of existing tools^[10,19,20] can contribute to a more coherent use of adherence tools for patient-teaching specific to individualized cancer care in the home. This study identified that nurses are competent to deliver oncology nurse-led patient teaching.^[1-20] Encouraging tailored individualized patient teaching may be beneficial to meeting self-management needs of outpatient oral anticancer medication adherence.^[14,15] Therefore, investment in continued nursing knowledge is an educational resource that increases expertise. Tailored individualized outpatient teaching is a valuable safety asset in patients’ home setting. Improving patient care delivery through oncology nurse scholarship in competency promotes excellence in outpatient tailored care; and carries great potential for increasing OAM adherence and lower healthcare cost. This primary study encourages further studies to examine nurse-led tailored individualized OAM adherence.

Table: ASCO/ONS Chemotherapy Administration Competency Safety Standard.^[6,11]

Staffing-related standards: Guidelines for practice/institution policies, procedures, and verification of training and continuing education for clinical staff.
Chemotherapy treatment planning: Practice/institution, policies documentation, guidelines for OAM regimen.
Chemotherapy practice standards: Practice/institution chemotherapy safety protocols/guidelines.
Patient consent and education: Patient education regarding diagnosis, goals of therapy, planned duration of chemotherapy, drugs schedule, and adverse effects.
Chemotherapy order/prescription standards: Practice/institution patient education materials that is appropriate for the patient’s reading level/literacy and family-caregiver understanding, drug name, pharmacy
Drug procurement handling and storage: Communicate individual dosing parameters, full generic names and storage standards to patient.
Administration response and toxicity: Regimen, drug-specific risks or symptoms that require notification and emergency contact information, including plan for monitoring and follow-up.
Adherence monitoring and assessment: <i>Documentation should include</i> patient feedback reflecting understanding and engagement does not allow verbal orders.

-----Source: From Oncology Nursing Forum, (2013). Use with permission, 2013 Updated American Society of Clinical Oncology/Oncology Nursing Society Chemotherapy Administration Safety Standards Including Standards for the Safe Administration and Management of Oral Chemotherapy. Available from: jop.ascopubs.org

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