

## An Evidence-Based Project to Advance Oncology Nursing Practice

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**E**vidence-based practice is a conscious approach to using evidence for clinical decision making and care of patients with the goal of improving patient outcomes (Eaton & Tipton, 2009). The current concept of “best” evidence integrates several forms of knowledge: research, practice, patient and caregiver perspective, and knowledge internal to the context of the practice, such as audit or performance data (Rycroft-Malone et al., 2005).

Various models have been proposed to assess the strength of evidence for clinical practice, but less information is available on the process and outcomes of actual evidence-based projects in nursing (Thurston & King, 2004). This article describes an oncology nursing evidence-based project on chemotherapy-induced nausea and vomiting (CINV) at Yale-New Haven Hospital (YNHH), a National Cancer Institute (NCI)-designated Comprehensive Cancer Center. The project used a model for evidence-based practice (Rosswurm & Larrabee, 1999) (see Figure 1).

### Assess the Need for a Change in Practice

The initial phase of an evidence-based project is to identify the impetus to assess practice and to identify stakeholders. The impetus to assess practice originated with the YNHH Oncology Nursing Council, which is an administratively supported practice council with the goal of advancing the nursing care of patients with cancer. The council is chaired by an oncology clinical nurse specialist (CNS) and has broad oncology nurse representation. Consistent with practice council functions described in the literature (Quinlan, 2006), the council serves as an important infrastructure for evaluating nursing practice. The council surveyed

staff nurses and asked them to list the top three clinical problems that warranted improvement.

The trigger for a need to change practice was based on the survey results, which identified CINV as a priority clinical problem. Three council members (oncology CNSs) agreed to review the literature, observe current nursing practice related to CINV, and report back to the council. The literature suggested that clinicians underestimate the incidence and severity of CINV, and findings from clinical observations indicated that nursing documentation of CINV was incomplete and varied across settings. Thus, a decision was made to initiate an evidence-based project focused on nursing assessment and documentation of CINV. CNSs are well recognized as leaders in integrating evidence into practice at the organizational level (Marshall, 2006), and one CNS (the first author of this article) assumed leadership of the project.

Essential to the initial phase of an evidence-based project is identification of stakeholders and creation of partnerships among the stakeholders (Cooke et al., 2004) (see Figure 2). Early identification of administrative and managerial stakeholders was viewed as critical to the implementation and success of the project. Nurse managers (NMs) have a critical role in evidence-based projects related to the work culture of their units, performance expectations, and resource allocation (Everett & Titler, 2006). Oncology NMs were council members and were supportive of the project. However, the project team leader met with each NM to secure specific support for at least one staff nurse from each practice site to be involved, specifically committing to attending one-hour meetings every other week, collecting data, and serving as project “champions” with staff

nurse colleagues during all phases of the project.

CNSs have the knowledge and skill to provide leadership, assess and navigate the organizational system, mentor, and role model for staff; thus, they are considered “opinion” leaders (Cooke et al., 2004; Miller et al., 1999). Having adult, pediatric, and inpatient/outpatient oncology CNSs in the settings provided considerable strength and support to a project. Engaging staff nurses early in the project has been identified as a key strategy to reduce resistance to change, enhance their perception of the ability to influence practice, and empower them as equal members of the team (Fink, Thompson, & Bonnes, 2005; Thurston & King, 2004).

### Link to Interventions and Outcomes

A review of the existing standard for assessment and documentation of CINV across settings and an audit of current documentation by nurses were identified as initial activities. The results revealed that the existing CINV standard was incomplete, lacked specificity, and showed significant variation in documentation across settings. The targeted outcomes included a revised CINV standard and development of an assessment documentation tool that would provide consistency across settings.

### Evaluate and Synthesize Best Evidence

To critically synthesize findings from the literature, the inclusion of faculty in evidence-based projects often is helpful (Hopp, 2005). In this project, a faculty member from the Yale School of Nursing synthesized the evidence on CINV and reviewed the clinical literature for

### 1. Assess the need for a change in practice.

- Oncology nursing council needs assessment
- CINV identified as a priority problem by staff
- Stakeholders: clinical nurse specialists, nurse managers, staff nurses, administrators

### 2. Link to interventions and outcomes.

- Review of existing CINV assessment and documentation standard
- Audit of nursing documentation
- Determined outcome: revised standard and documentation forms

### 3. Evaluate and synthesize best evidence.

- Research evidence on CINV
- Evidence for documentation of CINV
- Internal evidence: audit data
- Professional practice knowledge

### 4. Design practice change.

- Assessment of facilitating factors and potential barriers
- Strategies designed to overcome barriers
- Revision of standard
- Revision of documentation forms across settings

### 5. Implement and evaluate the practice change.

- Staff orientation to new standard and documentation
- Use of unit-based nurse “champions”
- Clinical nurse specialists as change agents in process
- Audits
- Regular meetings and ongoing communication and feedback to units

### 6. Integrate and maintain the practice change.

- Communicate outcome data: units, council, meetings, national oncology nursing conference
- Follow-up audits
- Integration of project into next evidence-based project for CINV management

## Figure 1. Yale-New Haven Hospital Oncology Nursing Council Evidence-Based Chemotherapy-Induced Nausea and Vomiting (CINV) Project

Note. Based on information from Rosswurm & Larrabee, 1999.

documentation of CINV. In addition, institutional evidence, in the form of an audit of documentation of CINV across settings, revealed variability in practice (Donovan, Knobf, Denhup, Coomb,

& Czaplinski, 2005). In summary, accurate assessment and documentation of CINV were supported as critical and foundational steps to the ultimate goal of improving outcomes for patients at risk for or with CINV.

## Design Practice Change

To prepare for making a change in practice, organizational characteristics, potential facilitating factors and barriers, financial considerations, resources, and administrative support are key factors to consider.

**Organizational characteristics:** Structure (e.g., size, services), culture and philosophy, communication system, leadership support (e.g., centralized, decentralized), and reporting relationships are key organizational characteristics (DiCenso, Guyatt, & Ciliska, 2005). This project was designed to be servicewide across inpatient and outpatient settings. At the initiation of the project, the oncology service included inpatient and outpatient services and was a partnership with YNHH, Yale School of Medicine, Yale School of Nursing, and Yale Cancer Center. Project team members of the oncology nursing council were well integrated in the Department of Nursing at YNHH and were well-respected clinical leaders, which greatly facilitated administrative support and approval.

**Facilitating factors and barriers:** Known factors that support implementation of a formal change in practice include administrative support, an organized approach (Benefield, 2003), teamwork (Melnik, 2005), positive staff attitudes, staff readiness, and availability of change agents (Marshall, 2006; Miller et al., 1999; Rosswurm & Larrabee, 1999). Potential barriers include the organization's philosophy and culture related to nursing's power base, infrastructure support, and workforce issues (Scott-Findlay & Golden-Biddle, 2005). Clinician factors that can impede the use of evidence in practice include lack of value for new knowledge, resistance to change, lack of authority to change practice, lack of competence to assess research evidence, limited time, limited resources (e.g., staffing, access to information, inefficient documentation systems, no advanced practice mentors), and little or no incentive to improve or change practice (Cooke et al., 2004; Newhouse, Dearbolt, Poe, Pugh, & White, 2005). Factors that facilitated the YNHH CINV project included creation of a project team that included strong CNS leadership with structured, routine team

meetings; staff nurses as “champions”; and administrative support. Barriers identified in the project included diverse documentation systems across settings (computerized inpatient system versus hard-copy records and flow sheets for the outpatient service), differences in the level of nursing commitment to adhere to symptom documentation, an inadequate standard describing assessment and documentation, workforce issues, and resistance to change.

Strategies to overcome or minimize the barriers to the project included partnership support between the CNSs as change agents and the NMs to secure support for the time and resources required for the staff nurses to engage in the project. Critical to the effort was the involvement of staff nurses in reviewing the CINV standard, determining the needed changes in the documentation system, providing feedback to nursing staff, and actively participating in the decision-making process. Information about the project and specific recognition of the work of project team members were highlighted in the council's newsletter, and reports updating the progress of the project were presented at nursing department meetings.

The two major activities for the practice change were the revision of the CINV assessment and documentation standard and the development of consistent documentation across settings. The CINV standard was revised based on the evidence from the literature and expert opinions of the project members. Revision of the standard included separation of the history of nausea and vomiting from the patient's current status, identification of the timing and frequency of assessment (by shift for inpatient, by visit for outpatient setting), specified content of assessment for both nausea and vomiting, and specific content of the assessment (i.e., onset, duration, grade, and distress).

The next major effort focused on overcoming the documentation system barriers. On the inpatient units, the CNSs led the development of a CINV section in the computerized nursing admission assessment and successfully negotiated with the hospital's technology staff for a timely implementation. Several staff nurses tested the system and recommended revision; specifically, a prompt was added to remind staff to conduct CINV assessment. In the outpatient settings, the agreed-upon assessment parameters needed to be incorporated into the existing nursing flow sheet. The

outpatient staff nurse “champions” assumed this responsibility and worked with the NMs to revise their flow sheets and communicate with their respective staff nurses regarding the revised flow sheets and standard for documenting CINV. Into the second year of the project, the outpatient medical record was transitioned to an electronic record, and the team members successfully facilitated transferring the existing “hard-copy” documentation to the new system.

## Implement and Evaluate the Practice Change

The oncology nursing council and unit-based staff meetings were used to communicate with the nursing staff about the revised CINV assessment and documentation standard and provide a timeline for implementation and evaluation. The exact method and timing of implementation were specific to each practice site. This was extremely important because it allowed the project team members to engage their staff nurse colleagues and address unique environmental and clinician characteristics of an individual practice site that might facilitate or impede effective implementation.

A minimum of one month after implementation (range = 1–8 months), an audit was conducted in all practice sites and compared to the original audit (baseline data). Results of the audit revealed a positive trend for adherence to the CINV assessment and documentation standard (Donovan et al., 2005). The results of each practice site’s audit were reported and discussed with the respective NMs and staff nurses. A second audit was conducted, and results indicated continuance of a positive trend toward adherence to the CINV standard.

## Integrate and Maintain the Practice Change

To sustain a practice change, a plan is needed to decrease reliance on the project leader and team by diffusing the responsibility over time to direct care providers (Thompson & Learmonth, 2002). Providing data from the audits to the nursing staff was very useful in helping to keep staff engaged in adhering to the standard. Plans were made for follow-up audits to be conducted as part of unit-based quality improvement.

## Conclusion

In evaluation of the process and outcome of this evidence-based CINV proj-

### Project leader

- Oncology clinical nurse specialist

### Opinion leaders

- Oncology clinical nurse specialists: adult and pediatric

### Project “champions”

- Staff nurse from each oncology practice site
- Adult medical oncology (inpatient and outpatient)
- Radiation oncology
- Gynecologic oncology (inpatient and outpatient)
- Pediatric oncology (inpatient and outpatient)

### Management

- Unit-based nurse managers

### Administration

- Director of oncology services

### Research expertise

- PhD faculty in school of nursing

## Figure 2. Evidence-Based Project Stakeholders

ect, the authors learned that implementation at the point of care (unit level), partnership with NMs, CNS leadership, engagement of staff nurses, regularly scheduled unit-based and team meetings, and regular communication with the oncology nursing staff were largely responsible for the success of the project. These factors are consistent with the literature about successful evidence-based projects (Cooke et al., 2004; Larrabee, 2004; Rosswurm & Larrabee, 1999).

The authors also learned that implementation of the project required much more time, commitment, and persistence than anticipated; CNS leadership of the project was essential; flexibility was necessary during the process (barriers are dynamic, not static); and ongoing communication and audit feedback to staff were critical. The authors concluded that an evidence-based model to implement practice change provides a supportive framework, that use of a nursing standard for assessment and documentation was a strategy to support best practice in oncology nursing, and that the CNS as a change agent was key to the success of the overall project.

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*At the time of this project, Constance Donovan, RN, MSN, FAAN, AOCN®, was*

the oncology inpatient clinical nurse specialist at Yale-New Haven Hospital and the project team leader; and M. Tish Knobf, RN, PhD, FAAN, AOCN®, is an oncology clinical nurse specialist and American Cancer Society professor of oncology nursing at the Yale School of Nursing in New Haven. No financial relationships to disclose. Mention of specific products and opinions related to those products do not indicate or imply endorsement by the *Oncology Nursing Forum* or the Oncology Nursing Society. Knobf can be reached at [tish.knobf@yale.edu](mailto:tish.knobf@yale.edu), with copy to editor at [ONFEditor@ons.org](mailto:ONFEditor@ons.org).

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### Leadership & Professional Development

This feature provides a platform for oncology nurses to illustrate the many ways that leadership may be realized and professional practice may transform cancer care. Possible submissions include, but are not limited to, overviews of projects, accounts of the application of leadership principles or theories to practice, and interviews with nurse leaders. Descriptions of activities, projects, or action plans that are ongoing or completed are welcome.

Manuscripts should clearly link the content to the impact on cancer care. Manuscripts should be six to eight double-spaced pages, exclusive of references and tables, and accompanied by a cover letter requesting consideration for this feature. For more information, contact Associate Editor Mary Ellen Smith Glasgow, PhD, RN, CS, at Maryellen.smith.glasgow@drexel.edu or Associate Editor Judith K. Payne, PhD, RN, AOCN®, at payne031@mc.duke.edu.