

TRANSFORMING NURSING THROUGH KNOWLEDGE

Best Practices for Guideline Development,
Implementation Science, and Evaluation



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IMPLEMENTATION SCIENCE: SECOND PILLAR FOR SUCCESS

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FORGING THE WAY WITH IMPLEMENTATION SCIENCE

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LEARNING OBJECTIVES

After reading this chapter, you will be able to:

- Recognize that transferring and ensuring uptake of Best Practice Guidelines (BPG) into day-to-day clinical work requires active and multilevel interventions
- Understand the multifaceted strategies that can be used to create sustained evidence-based practice (EBP) changes in clinical practice and in academia and how to deploy them
- Describe RNAO's evidence-based implementation resources that support BPG uptake in service and academia
- Discuss the latest trends in implementation science

INTRODUCTION

This chapter provides the foundation for the Registered Nurses' Association of Ontario's (RNAO) groundbreaking work on Best Practice Guideline (BPG) implementation at micro, meso, and macro levels of intervention. We discuss RNAO's signature implementation strategies and evidence-based implementation tools as they relate to individual healthcare providers, organizations, and the health system as a whole. We also share two key evidence-based implementation resources for service organizations and academia. We end the chapter with a discussion of the latest trends in implementation science including: integrated knowledge translation and patient engagement, technology enabled and arts-based knowledge translation, developmental evaluation, and the concept of deimplementation.

As discussed in Chapter 1, *Transforming Nursing Through Knowledge: The Conceptual and Programmatic Underpinnings of RNAO's BPG Program*, RNAO has nurtured the BPG Program to mature in an organic way informed by macro theories of social movements and whole-system change; meso frameworks of knowledge to action—in practice; theories of diffusion, innovation, and distributed knowledge; and continuous on-the-ground learnings from the field. Nowhere has this approach been more evident than in RNAO's implementation methodology. From the inception of the BPG Program, RNAO has had deliberate stakeholder engagement on a massive scale. RNAO's trademark as an “activist” professional association for policy matters is the cornerstone for all aspects of the BPG Program. Stakeholders embraced the collective opportunity to be engaged in the BPG Program and have generously contributed their unwavering commitment, expertise, and time. Their feedback is continuous and rich, always reinforcing that together we must ensure BPGs are truly implemented into practice and do not stay as books on the shelf. Thus, while rigorously developed BPGs are foundational to the BPG Program, robust and dynamic implementation is what gives it life in the day-to-day practice of clinicians, in organizations, and throughout the health system.

During the 1990s, when the Program began, the most common approach to support evidence-based practice in nursing was to conduct educational sessions (Forsetlund et al., 2009; Kitson, Harvey, & McCormack, 1998). RNAO quickly recognized that following such education, it was difficult for practitioners to implement what they had learned once they returned to their practice settings. Much depended on the support they had in their practice settings from colleagues and managers, as well as the availability of resources (Canadian Institutes of Health Research [CIHR], 2012b; Grinspun, Melnyk, & Fineout-Overholt, 2014; Kitson et al., 1998; RNAO, 2012). The same barriers or blockages exist as much today as they did when RNAO's BPG Program began. For example, are the necessary evidence-based tools available for guiding and documenting nursing interventions? How will other staff follow up on the interventions? Will they have the required supplies and equipment to support interventions? What the BPG Program has done through its implementation methodology is equip nurses with approaches and techniques to overcome challenges. These approaches and techniques are detailed next.

MULTILEVEL AND MULTIFACETED IMPLEMENTATION

From the outset of the BPG Program in 1999, it was clear to RNAO and its stakeholders that a multifaceted approach to implementing the BPGs was needed to achieve sustainable change in practice and positive health outcomes. The initial focus was on knowledge translation and transfer, and supporting practice changes by addressing enablers and barriers to making change happen (Grinspun, Virani, & Bajnok, 2002). The term “implementation science” was at the time just an emerging concept and not

widely used or understood. Indeed, it was only in 2006 that the first journal dedicated to implementation science was launched. Its editors defined the concept as “the study of methods to promote the adoption and integration of evidence-based practices, interventions and policies into routine health care and public health settings” (Eccles & Mittman, 2006: p.1). RNAO’s approach to support implementation of BPGs has evolved alongside the program. When the first guidelines were issued in 2001, RNAO’s approach to supporting implementation was rudimentary. For the first year, we focused on three main approaches. First, we promoted the availability of the guidelines through a dissemination plan that included strategies such as an inaugural conference to introduce the guidelines to the nursing community, the publication of a series of articles related to various aspects of the BPG Program, distribution in hard copy to key stakeholders including schools of nursing, and ensuring the guidelines were accessible to the broader healthcare community and available for free download via the RNAO website. Second, we launched the Best Practice Champion Network with nurses from a variety of workplaces, trained by RNAO, to assist colleagues in implementing BPGs. Third, we identified service organizations to pilot the BPGs, and together we learned about effective implementation strategies. What follows are highlights of each level alongside the related implementation strategies, which are depicted in Figure 4.1 in the inner and outer circles of the implementation pillar of the BPG Program.



FIGURE 4.1 Implementation pillar of RNAO BPG Program.
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As Chapter 1 highlights, implementation has evolved from rudimentary to a sophisticated and comprehensive set of multilevel and multifaceted subprograms all aimed at optimizing evidence uptake, evidence sustainability, and Evidence Boosters. Indeed, the BPG Program works at three distinct and interrelated implementation levels: micro-level designed for individual nurses/health professionals, meso-level designed for organizations, and macro-level designed for health systems. What follows are highlights of each level alongside the related implementation strategies.

MICRO-LEVEL/INDIVIDUAL NURSE IMPLEMENTATION

The overall purpose of RNAO's intervention at the micro level is to work with nurses and other interested health professionals in developing their capacity as BPG leaders. Two key strategies are utilized: 1) the Best Practice Champion Network; and 2) the RNAO Learning Institutes.

BEST PRACTICE CHAMPION NETWORK

RNAO coined the term “Champion” in 2001 following a comprehensive literature review on change agents. The term “Champion” was chosen to describe individuals who promote, support, and defend evidence-based practice (EBP). They pave the way for developing EBP cultures, identifying resources and other sources of assistance. RNAO defined a *Champion* as someone who supports the use of BPGs and other evidence-based resources to inform clinical practice and decision-making. Champions come from a variety of clinical, educational, and management positions, and all work to enhance the use of the guidelines in a range of clinical and academic settings.

Champions are described by a variety of terms in the literature, including change agents, knowledge broker, sponsors, and internal entrepreneurs (Greenhalgh, Robert, Bate, MacFarlane, & Kyriakidou, 2005; Locock, Dopson, Chambers, & Gabbay, 2001). Rogers (2003), in his diffusion of innovation theory, refers to “change agents” who “influence clients’ innovation-decisions in a direction deemed desirable by a change agency” (p. 366). Thompson, Estabrooks, and Degner (2006), as cited by Ploeg et al. (2010), conducted a concept analysis in this area and concluded that opinion leaders, facilitators, champions, linking agents, and change agents were basically all knowledge-transfer agents with different conceptual labels.

RNAO created a Best Practice Champions Network as a way to identify, support, and energize this group of change agents (Grinspun, Virani, & Bajnok, 2002). The Network, established in 2002, now consists of over 50,000 nurses, nursing students, other health professionals, support staff, and, more recently, members of the public who are knowledgeable and passionate about BPGs and actively motivate and guide their uptake in their organizations. Network members become Champions by participating in either a 1-day in-person workshop, a virtual learning series, or a self-directed eLearning program (RNAO, 2017b). The content of these orientation programs has been designed to provide Champions with numerous tools and strategies to promote and support the implementation of RNAO's BPGs in their organizations and to clarify and cement their role as a Champion. The basis of the curriculum for these educational offerings is the *Toolkit: Implementation of Best Practice Guidelines* (Bajnok, Grinspun, Lloyd, & McConnell, 2015; RNAO, 2012), discussed later in this chapter.

Once they have become Champions, members of the Network have access to various resources to advance their role, including newsletters, social networking, access to an online community of practice, workshops, seminars, and regular knowledge-exchange webinars at which Champions take the lead in presenting their work. RNAO Champions in Ontario also have access to funds that provide opportunities for networking and disseminating their work within their organization and scaling it out to their local community. The financial support for Champions across Canada and in other countries is dependent on local context and decisions. For example, in China, the Students' Association of Evidence-Based Nursing is supported and operated by graduate students of the Beijing University of Chinese Medicine (BUCM) School of Nursing. They are Best Practice Champions who train nursing

undergraduate students from BUCM and other schools interested in evidence-based nursing. Supported by faculty, they also engage in translating BPGs and reviewing BPGs—an effective approach for spreading the BPSO knowledge and preparing more Champions. For details, see Chapter 14, *Overcoming Context and Language Differences: BPSO Trailblazers in China*.

A study of the RNAO Best Practice Champion Network conducted by Ploeg and colleagues (2010) found that RNAO Champions are change agents that take on multidimensional roles to support BPG implementation. These include educator, facilitator, mentor, leader, policy developer, and evaluator. They also found that Champions use many strategies targeted at various levels of the organization, attend to a range of stakeholders, and tailor their strategies to the organizational context. Three main categories and related subcategories associated with Champion diffusion strategies were identified in this study and are summarized in Table 4.1.

TABLE 4.1 DIFFUSION STRATEGIES OF RNAO CHAMPIONS

CATEGORY	RELATED SUBCATEGORIES
Dissemination of information about clinical practice guidelines	Providing education and creating awareness Acting as a resource to support and mentor nurses
Champions as persuasive practice leaders	Working through committees Participating in and leading interdisciplinary teams
Tailoring guideline implementation strategies to the organizational context	Exploring, auditing, and monitoring of best practices Making changes to documentation systems to incorporate best practice recommendations

Source: Ploeg et al., 2010

Champions are active knowledge disseminators of clinical information to nurses and other healthcare professionals. They are prepared facilitators who offer support and mentorship. Champions are persuasive practice leaders who work with various disciplines in all types and levels of positions to explain, convince, and help ensure that RNAO BPG implementation and recommendations permeate the organization. The Champions navigate complex webs of committees and working groups in their organizations and regions to move practice change forward. The relationships they build across interdisciplinary boundaries improve the uptake of behaviour change beyond the nursing profession. Finally, Champions are adapters who tailor implementation strategies to the organizational context. They accomplish this by exploring practices and auditing and monitoring implementation processes and patient outcomes. They make efforts to contextualize guidelines to make them accessible and applicable to staff and patients by developing policies and procedures to support practice change (Ploeg et al., 2010).

REFLECTION

Think about a recent practice change that took place within your workplace. Did “Champions” step forward to lead the implementation of the change? If so, what strategies did they use to support their peers in changing practice?

The findings of this study are consistent with the ongoing experience of RNAO's BPG implementation leads globally, who are working to implement and sustain evidence-based-practice cultures within their organizations. The following reflection on the role and impact of the Champions they work with mirror the views of others across the BPSOs:

“Having Best Practice Champions has had an impact on resident care. We are seeing better outcomes for residents. The Champions understand the evidence and the rationale for why things are done a certain way. Champions have brought our team together around the common goal of improving resident care.”

—Sue Anderson, RN, Unit Manager and Michelle Varey, RPN, RAI Coordinator
William George Extended Care—Meno Ya Win Health Centre
Sioux Lookout, Ontario

RNAO BPG INSTITUTES

Capacity development of those responsible for leading guideline implementation didn't stop with the establishment of the Best Practice Champions Network in 2002. Feedback from those involved in the program at the time indicated that additional education and leadership development was necessary to support successful guideline implementation, evaluation, and sustainability. The format of an “Institute” was chosen to address this need, and the first annual Clinical BPG Institute was held in 2002 and was attended by nurses from a range of practice settings, all involved in the early days of RNAO's BPG implementation.

RNAO's BPG Institutes are now a signature professional development offering. The format remains as a multiday event (3–5 days) held in a learning environment, away from the day-to-day responsibilities of work and home. It includes evidence-based theory, input sessions, stories from the field engaging those who are actively implementing BPGs, networking, and the establishment of small working/reference groups known as Best Practice Knowledge Units (BKUs) that support individual and collective learning. A key outcome for participants is to utilize the knowledge and skill gained at the Institute to shape a plan related to guideline introduction, implementation, evaluation, and/or sustainability that they can mobilize within their workplace.

The original curriculum included elements of the RNAO (2002) *Toolkit: Implementation of Clinical Practice Guidelines* (Toolkit) and addressed: the basics of the types of evidence that inform practice, the link between research and practice, facilitation and clinical supervision, enabling evidence-based practice cultures, strategies to support clinical change, project management, stakeholder engagement, environmental readiness, action-plan development, and finally sustaining change and the change agent.

Over the years, feedback from participants indicated that a “booster” session would be helpful for those experienced in guideline implementation, and the curriculum was revised to include a “foundational” (5-day) and “advanced” (3-day) stream. The curriculum for the advanced stream assumes a strong understanding of the elements of the Toolkit and some guideline implementation experience. This program focuses on project management skills, quality improvement with an emphasis on spread and scaling up, strategic positioning, leadership in developing evidence-based practice cultures, and

peer learning about successful implementation strategies to support clinical practice change. The curriculum for both the foundational and the advanced streams has been revised over the years to reflect the expanding knowledge of implementation science. The foundational stream in particular underwent a significant update with the publication of the second edition of the RNAO Toolkit in 2012. The pedagogical principles of adult education theory remain fundamental to these offerings.

For the past 8 years, the Institutes have been increasingly attracting members of the interprofessional team who are both engaged as faculty and/or attending for their own capacity development. This is paralleled with the move to increase the number of health disciplines involved in RNAO's guideline development, as well as a recognition by organizational and health system leaders of the impact of nursing-led guidelines on the interprofessional team and the need for all stakeholders to be involved in establishing evidence-based-practice cultures.

The following comment about the June 2017 *Clinical BPG Institute* reflects the overall views of the participants about this learning event:

“The RNAO Best Practice Clinical Institute was an absolute pleasure to attend. I attended the Clinical Institute with high expectations of professional growth and it exceeded them in every way! The knowledge, networking opportunities, and awareness of the BPGs that I was able to bring back to my facility has been a great help!”

–Matthew Léveillé, BScN, RN, RAI-C
Staff Education Coordinator
Muskoka Landing Long-Term Care
Huntsville, ON

What began as a modest offering in 2002 has evolved into a “must attend” professional development opportunity always booked to capacity. Moreover, today, in addition to the foundational BPG Institute (RNAO, 2017a), RNAO offers topic-specific Institutes including a focus on enhancing nursing executive leadership and clinical programs based on its BPGs in the area of wound care (clinical and program planning streams), chronic disease management, and mental health and addiction. Many of the institutes have been tailored to different contexts, such as those produced in partnership with First Nations in Canada. The quote below demonstrates the high value placed on the collaborative approaches used in the development of these programs to ensure context relevance, as well as the impact on knowledge, skills, and empowerment they have had on participants:

“The First Nations and Inuit Health Branch (FNIHB), Ontario Region has worked with RNAO over the past 7 years as they have planned, delivered and evaluated a number of learning events for the front line nurses. Basing these events on the RNAO Best Practice Guidelines has been a stellar opportunity. With the help of a comprehensive planning committee, the week-long events modeled after the RNAO Learning Institutes have been tailored to the First Nations context, and focused on areas such as mental health and addiction, chronic disease management,

and wound care. Each of the institutes has had a broad reach targeting nurses in a variety of locations, and has reflected critical best practice guidelines such as diabetic foot ulcer, managing chronic conditions, pressure injury, and substance use. In addition, these capacity building events have helped us create a network of nurses working with the First Nations population to help champion evidence-based practice, healthy work environments, and culturally competent care.”

—Vanessa L. Follon, RN, BScN

Assistant Director of Nursing

Regional Coordinator—Home and Community Care Program

Ontario Region/First Nations and Inuit Health Branch

MESO-LEVEL/ORGANIZATIONAL LEVEL IMPLEMENTATION

The overall purpose of RNAO’s intervention at the meso level is to support service and academic organizations in optimizing evidence uptake, evidence sustainability, and Evidence Boosters. Three key strategies are utilized: 1) *Toolkit: Implementation of Best Practice Guidelines* (for service organizations), 2) *Educator’s Resource: Integration of Best Practice Guidelines* (for academia), and 3) *Best Practice Spotlight Organizations*. Each is discussed in the following sections.

IMPLEMENTING BEST PRACTICE GUIDELINES INTO CLINICAL PRACTICE: TOOLKIT

When the RNAO published its first guidelines in 2001, the guidelines were pilot tested in a range of practice settings across the continuum of care. Champions, then called clinical resource nurses (CRNs), led the implementation and were a critical enabler for effective practice change. During this evaluation phase, these CRNs identified the need for a consistent approach to the planning and implementation of practice changes that were based on the RNAO BPG recommendations, and they asked RNAO to develop a “guideline on how to implement guidelines.” This was the impetus for the development of the *Toolkit: Implementation of Clinical Practice Guidelines* (RNAO, 2002). An interprofessional panel of researchers and practitioners, including some of the CRNs, worked to identify evidence to support the development of the Toolkit through the synthesis of systematic reviews, primary studies, and the expert opinion of panel members. The Toolkit was designed to be a user-friendly, evidence-based tool to facilitate guideline implementation within healthcare organizations. The goals of the Toolkit included a focus on helping those responsible for guideline implementation:

- Identify important factors in their organization that influence the adoption process
- Gain the support of Champions and key stakeholders
- Assess organizational support and readiness to adopt the guidelines

A case study approach was utilized, with sample templates and blank templates provided for ease of use. As such, it provided sound direction to organizations and their leaders about how best to ready a setting for change and how to plan, resource, and implement a carefully crafted set of strategies to achieve success (DiCenso et al., 2002).

An evaluation of the Toolkit conducted by Dobbins and colleagues concludes that this evidence-based resource showed promise as a useful guide for those responsible for guideline implementation (Dobbins, Davies, Danseco, Edwards, & Virani, 2005). They also recommended periodic updates to ensure it continues to reflect the current evidence in implementation science. Based on these findings, feedback from those using the Toolkit, and an updated review of the state of implementation science globally, the Toolkit was revised, and its second edition was published in 2012 (RNAO, 2012). The second edition addresses comments from users that indicated more attention was needed to the important issue of maintaining change in the clinical setting and strategies to promote long-term sustainability. The panel that was convened to develop the second edition reviewed various models and frameworks that considered sustainability as an element of the implementation process. They chose the Knowledge-to-Action (KTA) framework, which is the foundation of the current edition of this resource. It was also renamed to *Toolkit: Implementation of Best Practice Guidelines* to recognize its utility in implementing both clinical and healthy work environment guidelines.

The KTA framework was developed through a concept analysis of 31 action theories to make sense of what happens during the knowledge translation/implementation process by considering both knowledge creation and action. This framework takes a systems perspective and recognizes that implementation is a social process and that adaptation of research evidence is necessary in order to take both local context and culture into account. The KTA process identifies the ideal phases or categories of action that are believed to be important when attempting to implement change (Graham & Tetroe, 2010).

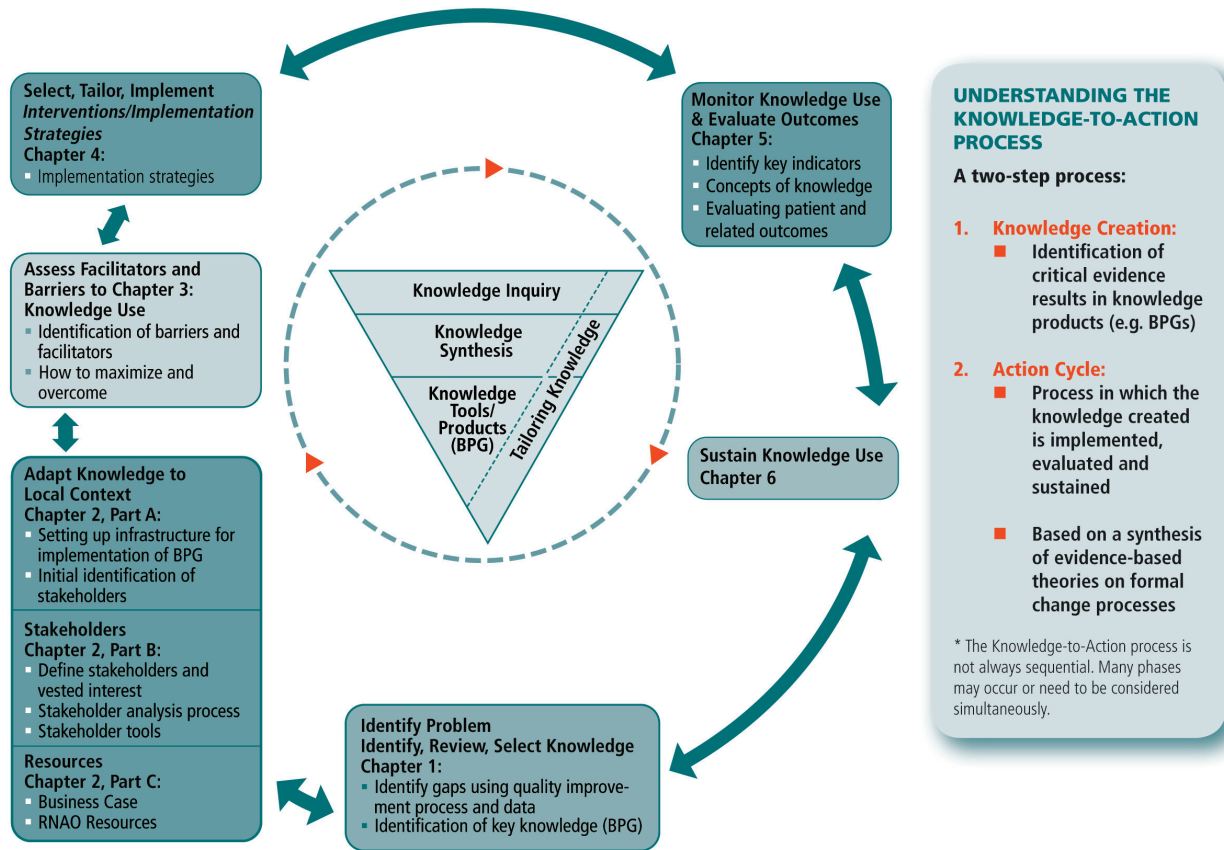
The KTA model (as depicted in the Toolkit, 2012, in Figure 4.2) is composed of two phases: 1) the Knowledge Creation process, which is presented as a triangle; and 2) the Action Cycle, which circles around the model and represents the activities or processes required to move the knowledge (evidence) into practice. It should be noted that there are bidirectional arrows between elements of the action cycle, as it is not a linear process, and aspects of the cycle will need to be revisited at various phases of implementation.

The Knowledge-to-Action framework provides the foundation for the Toolkit, with its chapters representing the various steps in the Action Cycle. Table 4.2 provides a high-level summary of the content of the Toolkit and the focus of each chapter.

REFLECTION

What implementation models or change theories are you familiar with? What are the similarities/differences between those models/theories and the KTA framework?

REVISED KNOWLEDGE-TO-ACTION FRAMEWORK



Adapted from "Knowledge Translation in Health Care: Moving From Evidence to Practice." S. Straus, J. Tetroe, and I. Graham. Copyright 2009 by Blackwell Publishing Ltd. Adapted with permission.

FIGURE 4.2 Knowledge-to-Action framework as depicted in *Toolkit: Implementation of Best Practice Guidelines* (RNAO, 2012).
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TABLE 4.2 CHAPTERS OF THE TOOLKIT: IMPLEMENTATION OF BEST PRACTICE GUIDELINES (RNAO, 2012)

CHAPTER	CONTENT
Introduction: Setting the Stage	<ul style="list-style-type: none"> ■ Overview of the Toolkit
Chapter 1: Identify Problem: Identify, Review, Select Knowledge	<ul style="list-style-type: none"> ■ A problem is defined and best practices that may be helpful to resolve the problem are identified. ■ Identify a BPG to determine if current practice is consistent with the best practice, or whether a change in practice is needed (gap analysis).

CHAPTER	CONTENT
Chapter 2A: Adapt Knowledge to Local Context	<ul style="list-style-type: none"> ■ Choose a knowledge product (BPG) that reflects best evidence to address the identified problem. ■ Recommendations can be adapted to suit the organizational context.
Chapter 2B: Stakeholders	<ul style="list-style-type: none"> ■ Involve staff and stakeholders to ensure that the chosen knowledge product will meet the needs and best fit the organizational culture.
Chapter 2C: Resources	
Chapter 3: Assess Facilitators and Barriers to Knowledge Use	<ul style="list-style-type: none"> ■ Incorporate an assessment of the environment and the relevant stakeholders to maximize outcomes. ■ Identify key facilitators such as group interactions, positive staff attitudes, leadership support, interdisciplinary Champions, as well as inter-organizational collaboration. ■ Determine critical barriers including lack of knowledge, negative attitudes, and resistance to change.
Chapter 4: Select and Tailor Implementation Interventions and Strategies	<ul style="list-style-type: none"> ■ Incorporate an implementation plan that considers stakeholder assessment and engagement, the local context, as well as the evidence on effective implementation strategies.
Chapter 5: Monitor Knowledge Use & Evaluate Outcomes	<ul style="list-style-type: none"> ■ Measure knowledge product use by adherence to the recommendation or changes in knowledge, behaviours, and/or attitudes. ■ Evaluate the impact of implementing knowledge products. ■ This phase is central to effective implementation and should be considered throughout all of the earlier phases.
Chapter 6: Sustain Knowledge Use	<ul style="list-style-type: none"> ■ Plan for long-term improvement of care outcomes based on effective implementation of knowledge products. <ul style="list-style-type: none"> ■ Dependent on supportive leadership, facilitative human resources, and ongoing staff education ■ Requires adaptability and integration of new knowledge into dynamic and evolving practice environments

The Toolkit has been utilized extensively in Ontario, across Canada, and internationally to direct a structured, systematic approach to the implementation process. It has been translated into multiple languages, which has supported its global reach. The following quotes from those who have used the Toolkit to lead practice change highlight its effectiveness in both local and international contexts:

“ . . . [T]he gap analysis tools located in the Toolkit easily helped identify where our long-term care home was excelling and where there was room for improvements. The Toolkit assisted our home in creating an annual strategic plan to evaluate our required programs, formulate home specific education plans, monitor changes, and guide our nurses to provide the most current, evidence-based care.”

–Sara Le, RN
 Director of Resident Care
 Tilbury Manor Nursing Home

“The Toolkit has been used to support our staff to implement the RNAO guidelines. We were introduced to the Toolkit early in our BPSO work, and it has made a significant difference in how we approach practice change, by providing a methodology that all staff are able to understand and utilize.”

–Maribel Esparza-Bohórquez, RN, MSc
Chief of Nursing Division, Clínica FOSCAL, Bucaramanga, Colombia

INTEGRATING BEST PRACTICE GUIDELINES INTO CURRICULA: EDUCATOR’S RESOURCE

The engagement of stakeholders in the academic sector is critical to support integration of BPGs in the undergraduate nursing curriculum. A Request for Proposals issued in 2003 resulted in the selection of eleven academic institutions that proposed projects to integrate BPGs into various undergraduate nursing courses. These projects resulted in significant innovations, with faculty and students collaborating on project conceptualization and execution. As these projects were being completed, RNAO and the academic organizations involved in this work recognized the need for a resource that would capture key learnings and inform nurse educators in both academic and practice settings about successful approaches to integrating evidence-based practice into curriculum. The outcomes from these educational projects were shared with the nursing community via RNAO’s multidimensional dissemination strategy, and ultimately informed the development of the *Educator’s Resource: Integration of Best Practice Guidelines* (RNAO, 2005a).

RNAO’s Educator’s Resource was developed by a team of experts from academia and those responsible for staff development in practice settings from across the continuum of care. The development process included a review of the relevant literature and the creation of a guiding framework to organize the key components. The draft Educator’s Resource was reviewed by over 70 external stakeholders representing academic and service organizations, including the Canadian Association of Schools of Nursing and the College of Nurses of Ontario (the provincial nursing regulatory body). Their feedback was compiled, discussed by the panel, and based on consensus, incorporated into the final document (RNAO, 2005a).

RNAO’s Educator’s Resource is designed to help educators in academic or practice settings to plan, implement, and evaluate learning events for nurses and the interprofessional team, whether staff or students, to promote integration of BPGs into practice. We recommend that this resource be utilized in conjunction with the *Toolkit: Implementation of Best Practice Guidelines* (RNAO, 2012) and the guidelines themselves.

The Educator’s Resource has been structured to provide “need to know” and “nice to know” content. Chapters are organized utilizing the framework for Integration of Best Practice Guidelines into learning events (Figure 4.3) as its foundation.



FIGURE 4.3 Framework for Integration of Best Practice Guidelines into learning events (adapted from RNAO, 2005a, p. 9).

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The Framework in Figure 4.3 represents nursing as a knowledge-based profession, integrating both the art and science of nursing. These elements are enhanced through the integration of BPGs into practice. The intended outcome is enhanced quality of nursing practice and clinical outcomes. This four-step framework incorporates the student, the guideline(s), the learning event, and the educator. At the center of the framework is the learner and the learner's interaction with the BPG. Surrounding the learner/BPGs are the activities the educator should consider in order to deliver a successful learning event. These activities include the elements of the nursing process: Assessment, Planning, Implementation, and Evaluation. These elements are depicted in a circular manner because the interaction of teaching and learning is cyclical, and aspects of the framework may occur simultaneously (RNAO, 2005a, p. 9).

The Educator's Resource is divided into six chapters to guide readers through the elements of the framework as they design a learning event. Each chapter is structured in a similar way and includes (RNAO, 2005a, p. 10):

- What is this chapter about? (outlines the steps of the framework element)
- Steps (description of the steps and specific discussion of content relevant to the chapter)
- Scenarios (two case studies that apply information from the chapter)
- Key points (summary of the chapter)
- References
- Tips, Tools and Templates (ready-to-use materials)

Table 4.3 provides a summary of the chapters of the Educator's Resource, representing the various elements of the guiding framework and the key content addressed.

TABLE 4.3 CHAPTERS OF THE EDUCATOR'S RESOURCE: INTEGRATING BEST PRACTICE GUIDELINES (RNAO, 2005A)

CHAPTER	CONTENT
Chapter 1—Setting the Stage	<ul style="list-style-type: none"> ■ What is the Nursing Best Practice Guidelines Program? ■ What is the purpose of the Educator's Resource? ■ Who can benefit from the Educator's Resource? ■ How was the Educator's Resource developed? ■ Roadmap to using the Educator's Resource ■ Scenarios, References ■ Tips, Tools and Templates
Chapter 2—Assessment for the Learning Event	<ul style="list-style-type: none"> ■ Step 1: Assess the Environment ■ Step 2: Assess the Educator ■ Step 3: Assess the Learner ■ Step 4: Conduct a Learning Needs Assessment ■ Step 5: Assess the Group ■ Key Points, Scenarios, References ■ Tips, Tools and Templates
Chapter 3—Planning the Learning Event	<ul style="list-style-type: none"> ■ Step 1: Integrate BPG content into the curricula of an academic or practice setting ■ Step 2: Identify facilitators and driving forces for integration of BPG content ■ Step 3: Identify barriers to integrating BPG content, and strategies to overcome them ■ Step 4: Identify partnerships for BPG education ■ Step 5: Facilitate the integration of BPG content into learning events ■ Step 6: Identify and allocate resources ■ Step 7: Plan for content ■ Step 8: Develop a learning plan ■ Step 9: Plan for contingencies ■ Key points, scenarios, references ■ Tips, Tools and Templates
Chapter 4—Implementing Teaching/Learning Strategies	<ul style="list-style-type: none"> ■ Step 1: Choose teaching/learning strategies ■ Step 2: Implement teaching/learning plan ■ Key points, scenarios, references ■ Tips, Tools and Templates
Chapter 5—Evaluation	<ul style="list-style-type: none"> ■ Step 1: Review your endpoint ■ Step 2: Evaluate the learning event ■ Step 3: Evaluate the learner ■ Step 4: Review and implementation of evaluation ■ Key points, scenario, references ■ Tips, Tools and Templates

CHAPTER	CONTENT
Chapter 6—Enrichment Materials	<ul style="list-style-type: none"> ■ Nursing Best Practice Guidelines Program ■ Assessing your learners ■ Planning the learning event ■ Implementing the learning plan ■ Evaluation ■ References

The Educator’s Resource is a unique tool that has been widely utilized to support the integration of BPGs into curricula within Ontario, across Canada, and internationally. It is available for free download from the RNAO website (RNAO, 2005a). As a result of the international interest in this resource, it has been translated into Spanish, and this version can also be assessed on the RNAO website (RNAO, 2005b).

BEST PRACTICE SPOTLIGHT ORGANIZATIONS

A key organizational strategy to support meso-level implementation is the Best Practice Spotlight Organization (BPSO) Designation. Launched in 2003, the Designation has proven to be the most successful implementation tool to foster evidence-based organizations through BPG implementation and sustainment, as well as to measure sustained implementation impact on patients, organizational, and health system outcomes. As described in Chapter 1, *Transforming Nursing Through Knowledge: The Conceptual and Programmatic Underpinnings of RNAO’s BPG Program*, the BPSO Designation is an opportunity for health and academic organizations to formally partner with RNAO over a 3-year period. Following this period, if successful, the organization becomes a Designated BPSO, with renewal biennially, pending achievement of deliverables. The goal of the partnership is to create EBP cultures through systematic implementation of multiple RNAO BPGs.

Chapter 6, *Best Practice Spotlight Organization: Implementation Science at Its Best*, details the BPSO objectives, types of BPSOs, as well as RNAO’s requirements for, and supports to, BPSOs. Chapters 7, 8, 9, 10, 13, 14, 15, and 17 each bring to the reader the lived experiences of BPSOs in various health sectors and academia—from the founding BPSOs to more recent ones, in all sectors, and in various places around the globe. Thus, what follows is a high-level analysis of what has made them so successful from an implementation science perspective.

The BPSO Designation enables organizations to commit to a focus on patient care and clinical excellence, using the latest evidence to inform practice and optimize outcomes. The systematic implementation of BPGs has helped advance government priorities within organizations, as well as enhance clinical, provider, and organizational outcomes. Through the BPSO Designation, healthcare and academic organizations have made progress in positively influencing provincial, national, and international health systems.

Since the inception of the program, BPSOs have effectively used and contributed to implementation science in developing creative strategies for successfully implementing BPGs, as well as by sustaining and spreading

REFLECTION

Thinking about practice change initiatives within your workplace that have not been successfully sustained, how do you think the outcome may have been different with committed support from all levels of the organization?

their uptake. BPSOs have also enhanced their understanding of evaluation and the importance of data quality, increased their capacity to effectively monitor and evaluate guideline impact, and developed mechanisms to share results with the staff implementing practice changes to support sustainment (RNAO, 2015).

The following testimony highlights the impact of the BPSO Program on BPG uptake resulting in better patient *outcomes*:

“[In our organization as a BPSO] RNAO Best Practice Guidelines provide guidance and enhanced patient care supporting evidence-based practice. The guidelines have provided rigor and enhanced clarity to all healthcare professionals. The impact of the best practice guidelines ensures favourable patient outcomes and experience while advancing the nursing profession.”

—Suzanne Robichaud
Vice-President of Clinical Programs and Chief Nursing Officer
Hôpital Montfort—RNAO BPSO
Ottawa, Ontario

MACRO-LEVEL/HEALTH SYSTEM IMPLEMENTATION

The third level of implementation for the BPGs is the macro level, targeted at health system implementation. The goal here is to scale out the implementation efforts across the health system in Ontario, across Canada, and internationally. Five years from the outset of the BPG Program, system levers were identified to enable long-term sustainability of the guidelines and the impact the guidelines have on the health of people. Several key initiatives were instituted:

- In 2004, with funding from Health Canada, a Pan-Canadian tour was delivered involving 24 full-day, free workshops and numerous webinars focused on evidence-based practice and the uptake of BPGs. The engagement was phenomenal, with over 2,000 nurses participating from across the country. This high level of interest resulted in requests for workshops from organizations in various parts of Canada that were interested in expanding their utilization of evidence-based practice.
- Several impactful, system-level initiatives have been launched throughout the years to advance the uptake of evidence, and in particular RNAO’s BPGs, across specific sectors or in focused areas of practice. For example, in the long-term care sector, funding was secured by RNAO to hire Long-Term Care Best Practice Coordinators whose role is to support practice advancement in LTC homes based on guideline recommendations. Chapter 11, *Evidence-Based Practice in Long-Term Care*, expands on this important initiative. Similarly, a specific multifaceted strategy was developed for smoking cessation, including an interactive website (www.TobaccoFreeRNAO.ca), Champions dedicated to smoking cessation, and collaboration with a range of provincial and national government stakeholders working to reduce tobacco use. Chapter 10, *Scaling Up and Out: System-Wide Implementation Initiatives*, highlights this and two additional RNAO-led provincial and national implementation initiatives in the areas of mental health and addiction and falls prevention.

- In 2017, RNAO launched an *Implementation Research Collaboratory*—a partnership between RNAO, BPSOs, and researchers from around the world to identify, develop, and test indicators for successful and sustained guideline implementation. The inaugural activity of the Collaboratory, as part of a larger program of research, is a commissioned study to refine, validate, and operationalize the RNAO *Indicators and Sub-Indicators of the Best Practice Guideline Implementation Framework*. The study will result in a comprehensive framework of indicators of BPG implementation, identifying specific implementation strategies and processes that will be incorporated into the Nursing Quality Indicators for Reporting and Evaluation (NQuIRE) for routine collection by BPSOs (Squires, Gifford, Grinspun, Grdisa, & McConnell, 2017). The intent is to expand implementation science knowledge through studying actual experiences of our global BPSO network.

LATEST PERSPECTIVES ON IMPLEMENTATION SCIENCE

As we have seen throughout this chapter, transferring knowledge and ensuring uptake of evidence-based practices (EBPs) into our day-to-day clinical work does not automatically happen. It requires the purposeful interventions described and studied in the field of implementation science (Grinspun, Virani, & Bajnok, 2002; Grinspun, Melnyk, & Fineout-Overholt, 2014). RNAO is at the forefront of this relatively young field, which will continue to evolve based on lived experiences and research. What follows are emerging implementation science approaches that are impacting knowledge uptake in nursing and healthcare.

INTEGRATED KNOWLEDGE TRANSLATION AND PATIENT ENGAGEMENT

There is increasing acceptance in implementation science of the importance of adopting an integrated knowledge translation (iKT) approach to both producing and translating knowledge into practice. *iKT* refers to a collaborative, participatory, action-oriented, community-based approach to research that results in the co-production of knowledge (CIHR, 2012a). The cornerstone of iKT is that it involves engaging and integrating stakeholders (also known as knowledge users) into the full research process from conceptualization through to interpretation and dissemination of findings. The stakeholders can and should vary greatly depending on the project. They can range from policy- and decision-makers from the community up to the federal level, researchers, members of the public including patients and families, members of industry, healthcare providers of all levels, and the media (CIHR, 2012a). Knowledge, when produced in this unique paradigm, is then already in part “owned” by the participants, who are in a much better position and willing to act on the knowledge than if they are simply informed about it. Hence, an iKT approach naturally facilitates implementation of knowledge. RNAO was ahead of most in following this approach since the inception of the BPG Program.

Patient engagement is a special case of iKT that is increasingly receiving attention in Canada and internationally. *Patient engagement* occurs when “patients meaningfully and actively collaborate in the governance, priority setting, and conduct of research, as well as in summarizing, distributing, sharing, and applying its resulting knowledge” (CIHR, 2014, p. 1). Given that this is a relatively new way of doing research for many, scientific evaluations of experiences with patient engagement in research studies

are limited. However, existing evaluations are promising, revealing that engaging the public early in the design of studies, ideally at the planning stage, not only ensures that the research is relevant to their concerns but also leads to better results and improved translation of the knowledge produced into practice (Nass, Levine, & Yancy, 2012). The inclusion of the public at the micro level in the RNAO's Best Practice Champion Network, and at the meso level in organizational specific BPSO implementation activities, demonstrates the application of the principles inherent in iKT and patient engagement.

TECHNOLOGY-ENABLED KNOWLEDGE TRANSLATION

The digital age has revolutionized the way people access information, communicate, and collaborate. Technology-enabled knowledge translation refers to the use of digital information and communication technologies to accelerate knowledge translation efforts. With the universality of the Internet, the proliferation of approaches in communication and social networking, and the continuous improvements in technologies from electronic notebooks to smartphones, there are now rich opportunities for technology-enabled knowledge translation in most healthcare settings.

The use of social media is one example of technology that is increasingly used as a tool for knowledge translation in healthcare. *Social media* is defined as the set of tools and networking platforms allowing people to connect, communicate, and collaborate via web-based technology (Jue, Marr, & Kassotakis, 2009). Examples of social media include: e-communities; hosted image and video services; social networking sites such as Facebook and Twitter; blogs; and wikis (Oakley & Spallek, 2012). While social media is still a relatively new tool for knowledge translation and has not yet received extensive scientific evaluation, there are, in theory, several reasons to consider its use. For example, because billions of people use social media, it provides a venue for quick dissemination of health information to large numbers and diverse stakeholders. It also stimulates conversation between stakeholders, which can include how the knowledge can be used to advance practice (Ndumbe-Eyoh & Mazzucco, 2016). Additionally, it creates "communities of practice" around specific topics of interest; it provides flexibility in when and how to deliver knowledge; and it has built-in metrics for evaluation of knowledge dissemination such as numbers of shares (a means of publicizing a post further to one's contacts) and likes (a symbolic way of letting others know that one values or appreciates the post) (Hemsley & Mason, 2013). RNAO, as a professional association, is extremely active in social media and utilizes a variety of platforms including Twitter, Facebook, Instagram, Pinterest, Periscope, and YouTube, amongst others, for knowledge mobilization related to both policy matters and the BPG Program.

ARTS-BASED KNOWLEDGE TRANSLATION

Arts-based knowledge translation has emerged recently as a novel, nontraditional approach to moving knowledge into practice. Although arts-based methods are relatively new to nursing and healthcare generally, they are very well established in other fields, predominantly education and the social sciences. Arts methods such as storytelling, visual arts, and drama offer alternative ways of communicating knowledge about healthcare. Arts-based knowledge translation holds immense potential for providing new and unique ways of engaging diverse stakeholders, especially patients and families, on important healthcare issues. The approach uses experiential and interactive aspects of health and is boundary-crossing, as it requires collaboration between individuals from very diverse professional backgrounds (e.g., physicians, nurses, storytellers, artists, and filmmakers). Arts-based knowledge translation represents an exciting paradigm shift, whereby knowledge translation is viewed as a

creative, dynamic process rather than a passive linear process as originally thought (Parsons & Boydell, 2012). The RNAO utilized arts-based knowledge translation as a strategy in a limited way at a BPG conference held in the early 2000s, where a small theatre company was engaged to bring to life key recommendations of several foundational Best Practice Guidelines and highlight the impact of quality nursing care on patients and their families. Several BPSOs have incorporated the art of storytelling in their Champion development workshops as an innovative strategy to facilitate engagement, influence value shifts, and share outcomes.

DEVELOPMENTAL EVALUATION

Although not conventionally thought of as an approach to knowledge translation in healthcare, developmental evaluation holds great potential for facilitating meaningful practice change due to the importance it places on context. With developmental evaluation, assessments are made of where things are and how things are unfolding in an organization with respect to the implementation of specific knowledge. This helps determine which knowledge-translation strategies hold promise, which ones currently used ought to be abandoned, and what new efforts should be tried (Patton, 2010). What is most novel and promising about this approach for knowledge translation is that instead of trying to “control” for context, it recognizes the crucial importance of context and adapting to the context to make knowledge translation happen.

DEIMPLEMENTATION

Much of the emphasis in knowledge translation is rightfully placed on implementation of knowledge—getting best practice knowledge used in practice. But equally important, and a currently rising trend, is *deimplementation*—getting ineffective or potentially harmful knowledge out of practice. Deimplementation is merely the opposite of implementation; therefore, it is likely to require different approaches and thoughtful ways to: 1) identify practices that should be deimplemented and then 2) to design strategies to deimplement these practices. This newly emerging field of deimplementation, also known as deinvestment, is still in its infancy but has sparked a lot of interest, with much ongoing investigation by knowledge-translation researchers in Canada and internationally. It is argued that “deimplementing practices reflects a recommitment to evidence-based healthcare” (Prasad & Ioannidis, 2014, p. 4).

CONCLUSION

Making significant practice changes requires intervention and ongoing attention at multiple levels—micro, meso, and macro. At the micro level, RNAO’s Best Practice Champions demonstrate their value daily, serving as motivators, problem solvers, and mentors for evidence-based practices. They identify barriers that block and enablers that support practice change, and they funnel this knowledge in appropriate ways at the practice and organizational levels. At the meso level, BPSOs have transformed the organizational culture of service organizations to one where evidence-based practice is the norm. BPSOs leverage the capacity of their Champions and utilize a range of approaches to successfully implement Best Practice Guidelines.

These approaches have been founded in implementation science and the systematic approach to practice change outlined in the *Toolkit: Implementation of Best Practice Guidelines* (RNAO, 2012), resulting in positive impacts on client, practitioner, and organizational outcomes. By linking evidence-based practice to evidence-based policy, scaling up implementation, and engaging key stakeholders and the public, practice and policy changes at the macro level are achieved as described throughout this book. Looking to the future, RNAO's cutting-edge *Implementation Research Collaboratory* will contribute new knowledge on the most effective implementation strategies and tools to ensure optimal uptake of evidence to continuously enhance nursing practice and improve outcomes for patients, organizations, and health systems everywhere.

KEY MESSAGES

- Successful implementation programs require attention at the micro level of individual practitioners, meso level of organizations, and macro level of regions and health systems.
- Champions at all levels of the organization have been shown to effectively facilitate the uptake of evidence in practice.
- Implementation frameworks have been successfully utilized to support the integration of BPGs in clinical practice and educational curriculum.
- Organization-level strategies to focus BPG implementation have proven successful across a range of settings and contexts.
- Wide stakeholder engagement—involving stakeholders in a variety of roles and in all sectors—supports the uptake of evidence-based practices in service and academic organizations.

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