

# TRANSFORMING NURSING THROUGH KNOWLEDGE

Best Practices for Guideline Development,  
Implementation Science, and Evaluation



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# OVERCOMING CONTEXT AND LANGUAGE DIFFERENCES: BPSO TRAILBLAZERS IN CHINA

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## LEARNING OBJECTIVES

After reading this chapter, you will be able to:

- Understand the strategies for overcoming the contextual differences when implementing Best Practice Guidelines in a different culture
- Describe the facilitators and barriers within the Chinese context in implementing Best Practice Guidelines
- Develop an action plan related to implementing Best Practice Guidelines, building on the facilitators to tackle the identified barriers
- Discuss similarities and differences in the BPSO experience in an academic and a service setting
- Appreciate the impact of the BPSO Designation on patients, students, faculty, nursing staff, and organizations

## INTRODUCTION

This chapter is about the groundbreaking partnership between the Registered Nurses' Association of Ontario (RNAO) and organizations in China to establish Best Practice Spotlight Organizations (BPSO). The experiences of a service BPSO and an academic BPSO are shared, alongside the tremendous success and spread resulting in several additional BPSOs in China. The chapter highlights the themes of capacity building, knowledge transfer, scope of practice changes, and the role of the BPSO lead in ensuring successful BPG implementation. In addition, the integration of traditional Chinese medicine and traditional Chinese nursing within the Chinese BPSO model is profiled as part of this specific context.

## THE BACKGROUND OF INTRODUCING BPSOS IN CHINA

China represents approximately one-fifth of the world's population (Deloitte Touche Tohmatsu Limited, 2014). It is a nation with a severe nursing shortage. To accommodate the growing demands for quality and accessible healthcare, China is undertaking significant healthcare reforms (Zhu, Rodgers, & Melia, 2014), which have driven major changes in nursing education, practice, and research. Still, many challenges remain. First, in nursing education, the curriculum and teaching content cannot keep up with the rapid updates in knowledge. Second, monotonous teaching methods are not effectively engaging students, thus rendering them passive receptors of knowledge who lack innovation, creativity, and the ability to obtain knowledge. Third, there is a big gap in nursing between evidence and practice (Zhang, 2003). Most nurses prefer to use their own experiences as a reference for practice because of their many years of practice. At times, the practice delivered by nurses in China is based on textbooks, which are outdated. Moreover, many of the protocols developed for guiding nursing practice are based on expert consensus instead of more rigorous evidence (Jin et al., 2016). Even though some nurses are becoming familiar with the use of evidence-based practice, they rarely assess the feasibility and appropriateness of evidence for their own utilization.

With every challenge comes opportunity. Evidence-based nursing (EBN) provides a scientific framework that is based on nursing research and offers guides to clinical nursing practice and education. It is an effective approach to solve the dilemmas faced by nurses in China.

## ESTABLISHING ACADEMIC AND SERVICE BPSOS IN CHINA

In 2015, the DongZhiMen Hospital and Beijing University of Chinese Medicine (BUCM) School of Nursing became the first two BPSOs in China. The goal for joining as BPSOs was and remains the urgent need to promote a culture of evidence-based nursing practice and management decision-making, and to optimize nursing care, education, and research through the systematic introduction of evidence-based nursing.

## BUILDING UP THE BPSO TEAM

A structured and well-organized BPSO team is the prerequisite to implementing BPGs successfully. In China we set several priorities. First, the BPSO director acts as the scientific and administrative leader of an entity and oversees its general performance. Second, the BPSO leader is responsible for all BPG implementation. Third, BPG implementation involves various stakeholders. As an academic BPSO, BUCM School of Nursing aimed to ensure successful integration of BPGs into the curriculum by using the following strategies:

- Having an experienced faculty member instruct other faculty members in evidence-based practice, especially if they did not have experience in this area
- Selecting faculty directors as BPG leaders to be in charge of the BPG implementation in specific nursing courses
- Having BPG leaders discuss the BPSO Program with faculty, including strategies for implementation, because those faculty members will be central to integrating the selected BPGs into nursing curricula
- Engaging faculty in the planning process helps them adapt to the changes brought by the BPSO Program, and also to adjust their own teaching syllabus and methodology to embed the BPGs into their course
- Involving the students and identifying their preferred ways of gaining knowledge

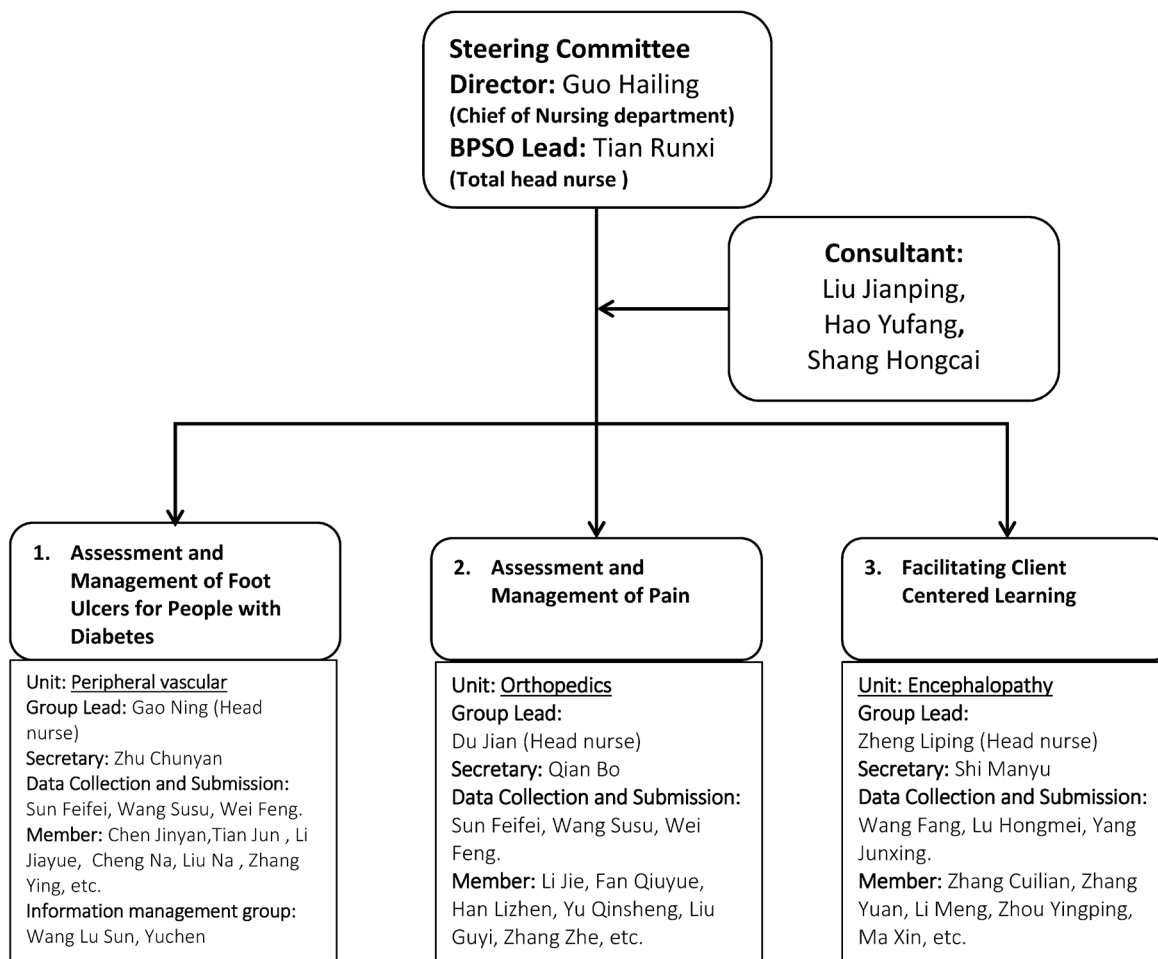
The process of integration at the DongZhiMen Hospital has been similar, albeit more complex, because clinical nurses have to apply the BPGs recommendations in their day-to-day practice with their patients. Thus, their BPSO team composition needs to be more comprehensive, with much emphasis on training, data collection, and audit and feedback. Figure 14.1 shows an example of the infrastructure setup in DongZhiMen Hospital, which includes an overall steering committee as well as sub-committees for each of the three BPGs implemented.

## SELECTING AND TRANSLATING BPGS

Selecting and translating BPGs and adapting them to the local culture are key steps to understanding the BPG development process and specific guideline content prior to implementation. Our BPSOs selected specific guidelines based on the following criteria:

- What are the prioritized nursing issues that need to be addressed in current nursing education and clinical practice?
- Can solutions be found in the BPGs?
- How does the knowledge from the BPGs fit with the current priorities and settings?

After selecting the guidelines, the translation process may commence. This step required careful planning and partnership with RNAO to ensure an accurate translation. At the BUCM School of Nursing, the translation team included a leader from the university who specializes in the topic, several master of science in nursing (MSN) candidates, and one or more specialized clinical staff. After translation, a careful review by RNAO is conducted to ensure that it is clear and accurate. The translated BPGs, with full acknowledgement of the contributors, are finally published on the RNAO website, providing free access for users.



**FIGURE 14.1** BPSO infrastructure at DongZhiMen Hospital.  
Used with permission.

## INTEGRATING BPGS INTO NURSING EDUCATION: THE BUCM EXPERIENCE

Integrating BPGs into the curriculum is a comprehensive process that gets embedded throughout the program. It engages all partners including nursing and other faculty, students, and clinical partners. Next we discuss the myriad of approaches we used to ensure we actively involved all partners in transforming our curriculum—in theory and teaching methodologies—into an evidence-based one.

## IN THE CLASSROOM

After selecting the specific BPGs to be implemented, the BPG leader needs to study the content together with faculty who will incorporate it into their courses. In the case of the BPG *Assessment and Management of Foot Ulcers for People with Diabetes* (RNAO, 2013a), the content is often taught in medical and surgical nursing courses. When reviewing the content, the faculty responsible for those courses discussed the following questions:

- How is the BPG developed and organized?
- What are the recommendations of this BPG?
- What are the differences between current clinical practice and the BPG recommendations?
- In the past, only some key points on foot ulcer care for diabetic patients were taught in those courses within 1 hour of lecture. How can a significant amount of new knowledge be integrated into the same timeframe?
- What strategies can be used to embed the recommendations in the class and engage students' interest?

This discussion is an effective way to not only enhance and update educators' own knowledge in this specific topic, but also to understand the gap between recommendations and clinical practice. Based on such analysis, educators can then adjust the teaching syllabus to incorporate the evidence-based concepts and recommendations into the learning objectives. For example, the current objectives in a *Medical Nursing* course (You, 2012) directed at diabetic patient care are:

- Gain basic knowledge on evidence-based nursing and understand the differences between the course textbook and the RNAO Best Practice Guideline
- Understand key recommendations from the RNAO (2013a) BPG, *Assessment and Management of Foot Ulcers for People with Diabetes*
- Describe how to apply those recommendations in day-to-day clinical practice

Prior to each class, nursing educators provide reading materials, including parts of the BPG and additional references, for students to review in advance. During class, educators expand on the foundation of evidence-based nursing and key recommendations from the BPG and share specific examples of embedding evidence-based concepts into clinical practice. Various teaching methods are adopted to make the learning experience more interactive, such as peer teaching, role-playing, problem-based learning, team-based learning, and a flipped classroom. Since entering the BPSO Program, our own teaching methodologies have become more dynamic and engaging, enriched with techniques that we learned during our training sessions with RNAO.

To assess the impact of implementing BPGs in the curriculum, the course evaluation system required changes. First, questions on evidence-based nursing and BPG recommendations were added to the tests and final exam of the course. This change emphasized the significance of the new content and directed students' attention when reviewing. Second, the formative assessment was enhanced with metrics for evaluating students' performance in peer teaching, role-playing, and other exercises that promote dynamic learning.

## INTRODUCING FACILITATING CLIENT-CENTRED LEARNING (RNAO, 2012) INTO A COURSE ON NURSING PRACTICE AT BUCM

Educators adopted the content of the *Facilitating Client-Centred Learning* (2012a) BPG in their lectures and also implemented some of the recommendations from the BPG as they applied to the student-educator situation in the classroom. The recommendations adopted included those listed below, with specific adaptations for the student learning situation identified following:

I. Educators can follow the six segments of the LEARNS Model (RNAO, 2012a, pp. 19–20) from the BPG:

- **Listening to student needs**—How can I encourage students to deliver their opinions and advice?
- **Establishing partnerships**—How do I engage and build a trusting partnership with students?
- **Adopting an approach to learning**—How do I shift to a more formal, structured, and interactive approach to facilitating learning?
- **Reinforcing competency in nursing practice**—How do I foster nursing knowledge and improve the nursing practice of students?
- **Naming new knowledge**—In what ways can I check for understanding amongst students?
- **Strengthening self-learning**—How can I promote or strengthen students' capacity for self-learning (e.g., after-school exercises, case study presentations, and using school resources)?

II. Based on the BPG recommendations 1, 2, 3, 4 and 8 (RNAO, 2012a, pp. 6–7), related to creating a safe environment to assess learning, assessing the learning needs, tailoring the approach by collaborating with students and colleagues, and assessing learning, we have designed the teaching methodology so students can engage in nurse/patient role-playing situations simulating appropriate teaching dialogues. If the topic is a specific disease or a nursing diagnosis, the “nurse” should try their best to explain it in plain language to the “client” and assess whether the “client” understands it. At the same time, the nurse should also think from the client's perspective and recognize the client's feelings. In this way, students may experience a relatively realistic clinical scenario and gain certain abilities in facilitating client-centred learning in future clinical practice.

III. Recommendation 6 is using plain language to promote health literacy (RNAO, 2012a, p. 6). We support students to become expert in this by asking them to give a short presentation at the beginning of each class, demonstrating how they would teach a client. The topic provided to the student can be a specific disease or a clinical nursing issue. For example, students can give a presentation on a cancer patient's diet. They can choose the content and presentation methods (oral presentation, PowerPoint, role-play, etc.) to make the knowledge understandable and memorable. After their presentation, the class would discuss the optimal way to provide health education to patients.

IV. Recommendation 7 is assessing the effectiveness of the education strategy (RNAO, 2012a, p. 6); educators use this in the curriculum by asking students questions about key lessons from previous classes where different teaching methods were employed. Through this, they can ascertain which methods were more conducive to knowledge uptake and explore a variety of approaches to making the class more engaging.

### **Evaluation of Students' Performance**

Students are evaluated comprehensively through presentations, answering questions, group discussions, nursing situational conversation, and written exams. Presentations can provide students with chances to improve their confidence and oral communication skills. Through answering questions, teachers can test whether students have gained the specific knowledge. Case discussion in groups can help group members improve communication skills and cultivate a sense of teamwork. Situational conversation is an effective way to expose students to relatively real clinical contexts and emphasize the importance of listening and thinking from the patient's perspective. The written exam is still a necessary component for assessing whether students have fully absorbed the course material.

### **Outside the Classroom**

Given the time constraints of in-class education, nurse educators devised additional methods for students to grasp evidence-based nursing. The following approaches were applied at the Beijing University of Chinese Medicine.

#### *Second Classroom*

Sophomore nursing students were asked to form teams and become familiarized with the RNAO (2012a) BPG, *Facilitating Client-Centred Learning*, during their winter break. In their teams, they discussed the BPG's contents, gaps between the BPG and current clinical practice, and changes in their knowledge and attitude toward health teaching in clinical practice after studying the BPG. At the beginning of the next semester, students were required to give presentations based on their discussions, using PowerPoint or other audio-visuals.

#### *Summer Class*

Students are provided with opportunities to attend classes during the summer break, and one class features lectures from evidence-based nursing experts. Their lectures are systematically arranged to cover the aspects of: asking clinical questions, searching for research evidence, appraising research evidence, and applying evidence to practice. From those lectures, students can gain in-depth understanding of evidence-based nursing concepts and practice.

#### *Students' Association of Evidence-Based Nursing*

The Students' Association of Evidence-Based Nursing is operated by graduate students who are BPG Champions. Its membership includes nursing undergraduate students from BUCM as well as students from other schools interested in evidence-based nursing. The main responsibilities of the association are to provide EBN training for undergraduate students, translate BPGs, and review BPGs with undergraduate students, with guidance from faculty. This is an effective approach for spreading the BPSO knowledge and preparing more BPG Champions in the organization.

# IMPLEMENTING BPGS INTO CLINICAL NURSING PRACTICE: THE DONGZHIMEN HOSPITAL EXPERIENCE

The process of introducing a clinical guideline in the practice setting is similar to that used in the academic setting. RNAO's Toolkit (2012b) is a critical resource that provides detailed guidance on implementing BPGs in clinical practice. The general process is as follows:

1. Identify gaps between BPG and clinical practice. For non-English speakers, the first issue that needs to be tackled prior to BPG implementation is the thorough understanding of BPG content.
2. The next step is to hold a multidisciplinary team meeting to identify the gaps between BPG recommendations and clinical practice. In this meeting, each recommendation is reviewed and rated. The following questions are used for consideration:
  - What are the recommendations that have already been implemented?
  - Are there any recommendations that have only been partially implemented?
  - What are the gaps between current clinical practice and the recommended practice, and to what extent do they exist?
  - Are there any recommendations that can be implemented quickly?
  - What will be the barriers to implementing those recommendations, such as budget, staff skills, workload, etc.?

The meeting concludes with a final decision on which recommendations will be implemented. An example of the review process of a specific BPG is provided in Table 14.1.

**TABLE 14.1 EXAMPLE OF GAPS IDENTIFIED AT DONGZHIMEN HOSPITAL**

RNAO BPG ASSESSMENT AND MANAGEMENT OF PAIN (RNAO, 2013b)				
GUIDELINE RECOMMENDATION	MET	PARTIALLY MET	UNMET	COMMENTS
1.1 Screen for the presence, or risk of, any type of pain: <ul style="list-style-type: none"> <li>■ On admission or visit with a healthcare professional</li> <li>■ After a change in medical status</li> <li>■ Prior to, during, and after a procedure</li> </ul>	✓			Admission assessment sheet and the TCM nursing care guideline

GUIDELINE RECOMMENDATION	MET	PARTIALLY MET	UNMET	COMMENTS
1.2 Perform a comprehensive pain assessment on persons screened having the presence, or risk of, any type of pain using a systematic approach and appropriate, validated tools.	✓			Visual Analogue Scale/Score (VAS)
1.3 Perform a comprehensive pain assessment on persons unable to self-report using a validated tool.			✓	Patients in this unit are all able to self-report
1.4 Explore the person's beliefs, knowledge, and level of understanding about pain and pain management.	✓			Admission assessment sheet
1.5 Document the person's pain characteristics.	✓			Admission assessment sheet
2.1 Collaborate with the person to identify his/her goals for pain management and suitable strategies to ensure a comprehensive approach to the plan of care.		✓		Lack opinions from patients
2.2 Establish a comprehensive plan of care that incorporates the goals of the person and the interprofessional team and addresses: <ul style="list-style-type: none"> <li>■ Assessment findings</li> <li>■ The person's beliefs and knowledge and level of understanding</li> <li>■ The person's attributes and pain characteristics</li> </ul>		✓		Lack opinions from patients
3.1 Implement the pain management plan using principles that maximize efficacy and minimize the adverse effects of pharmacological interventions including: <ul style="list-style-type: none"> <li>■ Multimodal analgesic approach</li> <li>■ Changing of opioids (dose or routes) when necessary</li> <li>■ Prevention, assessment, and management of adverse effects during the administration of opioid analgesics</li> <li>■ Prevention, assessment, and management of opioid risk</li> </ul>		✓		It's not suitable in China's context. Nurses are not allowed to do so.
3.2 Evaluate any nonpharmacological (physical and psychological) interventions for effectiveness and the potential for interactions with pharmacological interventions.	✓			

continues

**TABLE 14.1 EXAMPLE OF GAPS IDENTIFIED AT DONGZHIMEN HOSPITAL (CONTINUED)**

GUIDELINE RECOMMENDATION	MET	PARTIALLY MET	UNMET	COMMENTS
3.3 Teach the person, his/her family, and caregivers about the pain management strategies in their plan of care and address known concerns and misconceptions.		✓		Health education brochures, could involve patients more
4.1 Reassess the person's response to the pain management interventions consistently using the same re-evaluation tool. The frequency of reassessments will be determined by: <ul style="list-style-type: none"> <li>■ Presence of pain</li> <li>■ Pain intensity</li> <li>■ Stability of the person's medical condition</li> <li>■ Type of pain, e.g., acute versus persistent</li> <li>■ Practice setting</li> </ul>	✓			
4.2 Communicate and document the person's responses to the pain management plan.	✓			Nursing record sheet
5.1 Educational institutions should incorporate this guideline, <i>Assessment and Management of Pain</i> (3rd ed.), into basic and interprofessional curricula for registered nurses, registered practical nurses, and doctor of medicine programs to promote evidence-based practice.			✓	Not suitable in clinical context, however suitable in academic BPSO
5.2 Incorporate content on knowledge translation strategies into education programs for healthcare providers to move evidence related to the assessment and management of pain into practice.			✓	Not suitable in clinical context, however suitable in academic BPSO
5.3 Promote interprofessional education and collaboration related to the assessment and management of pain in academic institutions.			✓	Not suitable in clinical context, however suitable in academic BPSO
5.4 Healthcare professionals should participate in continuing education opportunities to enhance specific knowledge and skills to competently assess and manage pain, based on this guideline, <i>Assessment and Management of Pain</i> (3rd ed.).		✓		There's training in this area, however, not as a special training program
6.1 Establish pain assessment and management as a strategic clinical priority.	✓			Supported by the nursing department

GUIDELINE RECOMMENDATION	MET	PARTIALLY MET	UNMET	COMMENTS
6.2 Establish a model of care to support interprofessional collaboration for the effective assessment and management of pain.	✓			There's a pain management group currently in our hospital
6.3 Use the knowledge translation process and multifaceted strategies within organizations to assist healthcare providers to use the best evidence on assessing and managing pain in practice.	✓			Support from academia, especially BUCM, BPSO
6.4 Use a systematic, organization-wide approach to implement <i>Assessment and Management of Pain</i> (3rd ed.) Best Practice Guideline and provide resources and organizational and administrative supports to facilitate uptake.			✓	BPSO work will help us with this over time, as we expand this BPG

The results of the gap analysis guided the BPG implementation work and led to greater involvement of patients in their care; enhanced client-centred teaching about pain; increased independence for nurses in carrying out pain assessment, interventions, monitoring, and evaluation; and a more consistent approach to pain management hospital-wide.

## ASSESSING FACILITATORS AND BARRIERS TO BPG IMPLEMENTATION

The identification of facilitators can enable the BPSO team to maximize support for BPG implementation, and the identification of barriers allows the team to develop effective strategies for overcoming or mediating them early in the implementation process. This process can be augmented by interviewing identified stakeholders. An example of the facilitators and barriers identified in relation to implementing the *Assessment and Management of Foot Ulcers for People with Diabetes* (RNAO, 2013a) at DongZhiMen Hospital is provided in Table 14.2.

**TABLE 14.2 FACILITATORS AND BARRIERS IDENTIFIED IN BPG IMPLEMENTATION AT DONGZHIMEN HOSPITAL****RNAO BPG: ASSESSMENT AND MANAGEMENT OF FOOT ULCERS FOR PEOPLE WITH DIABETES (2013A)**

Facilitators	Policy support	The national nursing development programs 2010–2015 and 2016–2020 have both made it clear that scientific methods shall be utilized to standardize clinical nursing practice.
	Leadership support	The program is highly supported by the directors of nursing department, medical department, and head nurses.
	Adequate source of patient data	The peripheral vascular disease in this department is authorized as the national key discipline, and the treatment of diabetic foot is its specialty. Annually, hundreds of patients with diabetic foot come to this department for treatment.
	Staff nurses' great interest and positive attitude	Even though staff nurses' professional knowledge of evidence-based nursing is generally inadequate, they have great interest in BPGs and are willing to learn more.
	Support from academia	The academic center provides training to staff nurses on the basic knowledge of evidence-based nursing and provides instructions on evidence utilization in practice.
Barriers	Human resources	Nursing shortages have become a critical issue throughout China, as well as the peripheral vascular department.
	Lack of knowledge and skills	Although many staff nurses have heard of evidence-based nursing, they seldom accept relevant training and do not have a clear and deep understanding of EBN.
	Scope of nursing practice	The scope of nursing practice varies greatly in different countries. Some recommendations are beyond nurses' scope of practice and are not quite suitable in China's clinical context (e.g., the recommendation to assess foot ulcer(s) for infection using clinical assessment techniques, based on signs and symptoms, and facilitate appropriate diagnostic testing, if indicated).
	Financial problem	BPG implementation not only implies a heavier workload in the short term, but also involves more costs for the unit. Additions such as new health-education brochures, new nursing record sheets, and training programs all require more funding and financial support.

## DEVELOPING IMPLEMENTATION STRATEGIES

Guidelines developed by professional associations are sometimes quite general and not agency-specific, while protocols endorsed by a hospital are based on the specific hospital context, which provide detailed instructions and parameters for nursing practice. Thus it is necessary to translate the BPGs into evidence-based clinical nursing protocols. Within such protocols, the rationale of each chosen recommendation, the implementation method, and audit method are listed. An example of the pain management protocol developed by DongZhiMen Hospital is provided in Table 14.3.

**TABLE 14.3 EXAMPLE OF PAIN MANAGEMENT PROTOCOL DEVELOPED BY DONGZHIMEN HOSPITAL**

RNAO BPG ASSESSMENT AND MANAGEMENT OF PAIN (RNAO, 2013b)		
RECOMMENDATIONS CHOSEN TO BE IMPLEMENTED	CLINICAL NURSING PRACTICE STANDARDS	AUDIT CRITERIA
1.1 Screen for the presence, or risk of, any type of pain: <ul style="list-style-type: none"> <li>■ On admission or visit with a healthcare professional</li> <li>■ After a change in medical status</li> <li>■ Prior to, during, and after a procedure</li> </ul>	1. Perform pain screening on hospitalized and operated patients.	Admission assessment sheet and nursing record sheets
1.2 Perform a comprehensive pain assessment on persons screened having the presence, or risk of, any type of pain using a systematic approach and appropriate, validated tools.	2. Use an effective assessment tool to comprehensively assess the screened pain positive patients.	
1.4 Explore the person's beliefs, knowledge, and level of understanding about pain and pain management.	3. The assessment should include patient knowledge, comprehension of pain, and so on.	
1.5 Document the person's pain characteristics.	4. Document the person's pain characteristics.	
2.1 Collaborate with the person to identify his/her goals for pain management and suitable strategies to ensure a comprehensive approach to the plan of care.	5. The pain management plan should incorporate patient preference.	Patient interview or questionnaire

*continues*

**TABLE 14.3 EXAMPLE OF PAIN MANAGEMENT PROTOCOL DEVELOPED BY DONGZHIMEN HOSPITAL (CONTINUED)**

RECOMMENDATIONS CHOSEN TO BE IMPLEMENTED	CLINICAL NURSING PRACTICE STANDARDS	AUDIT CRITERIA
<p>2.2 Establish a comprehensive plan of care that incorporates the goals of the person and the multi-professional team and addresses:</p> <ul style="list-style-type: none"> <li>■ Assessment findings</li> <li>■ The person's beliefs and knowledge and level of understanding</li> <li>■ The person's attributes and pain characteristics</li> </ul>	<p>6. The pain management program requires collaboration between the patient and the professional team. It should include assessment findings, patient knowledge, and pain characteristics.</p>	<p>Nursing record sheets including nursing care plans and assessments</p>
<p>3.1 Implement the pain management plan using principles that maximize efficacy and minimize the adverse effects of pharmacological interventions including:</p> <ul style="list-style-type: none"> <li>■ Multimodal analgesic approach</li> <li>■ Changing of opioids (dose or routes) when necessary</li> <li>■ Prevention, assessment, and management of adverse effects during the administration of opioid analgesics</li> <li>■ Prevention, assessment, and management of opioid risk</li> </ul>	<p>7. Multimodal analgesic approach should be used. 8. Grasp the side effects and risks of opiates.</p>	<p>Nursing record sheets; survey for nurses</p>
<p>3.2 Evaluate any nonpharmacological (physical and psychological) interventions for effectiveness and the potential for interactions with pharmacological interventions.</p>	<p>9. Rational use of nonpharmacological therapy for patients.</p>	<p>Patient interview or questionnaire</p>
<p>3.3 Teach the person, their family, and caregivers about the pain management strategies in their plan of care and address known concerns and misconceptions.</p>	<p>10. Incorporate pain management strategies into patient education.</p>	
<p>4.1 Reassess the person's response to the pain management interventions consistently using the same re-evaluation tool. The frequency of reassessments will be determined by:</p> <ul style="list-style-type: none"> <li>■ Presence of pain</li> <li>■ Pain intensity</li> <li>■ Stability of the person's medical condition</li> <li>■ Type of pain (e.g., acute versus persistent)</li> <li>■ Practice setting</li> </ul>	<p>11. Use a consistent tool for pain evaluation.</p>	<p>Nursing record sheets</p>
<p>4.2 Communicate and document the person's responses to the pain management plan.</p>	<p>12. Communicate and document the person's responses to the pain management plan.</p>	

RECOMMENDATIONS CHOSEN TO BE IMPLEMENTED	CLINICAL NURSING PRACTICE STANDARDS	AUDIT CRITERIA
5.4 Healthcare professionals should participate in continuing education opportunities to enhance specific knowledge and skills to competently assess and manage pain, based on this guideline, <i>Assessment and Management of Pain</i> (3rd ed.).	13. Use the BPG in continuing education.	Continuing education material in nursing department

Based on the established protocol, the BPSO team developed new procedures and nursing record sheets where necessary. For example, recommendation 1.0 in the BPG *Assessment and Management of Foot Ulcers for People with Diabetes* (RNAO, 2013a, p. 18) is to “Obtain a comprehensive health history and perform physical examination of affected limb(s).” The team at DongZhiMen Hospital developed a table with a specific checklist of items mentioned in the BPG, including the history of presenting illness (initiating event, duration of ulceration, treatment undertaken, and outcome of the treatments), past medical history, glycemic control, nutritional status, and allergies. In relation to the BPG *Assessment and Management of Pain* (RNAO, 2013b), prior to its implementation, the admission assessment sheet only included one question: Do you feel pain? During the implementation process, the DongZhiMen Hospital team developed a single pain assessment sheet, which requires patients to describe the pain experience at length. On top of adding new items to the existing nursing record sheets, other resources, such as health-education brochures for patients, needed to be enhanced.

## CHAMPION DEVELOPMENT

In DongZhiMen Hospital, nurses and physicians participating in the BPG implementation process are regarded as BPG Champions. They are given BPG Champion badges and receive priority in attending relevant training programs. The BPSO Orientation Program is based on RNAO’s toolkit and materials, including the PowerPoint presentations—all of which are provided to us as part of the agreement at no cost. The content of these materials includes theories of evidence-based curriculum and practice, as well as teaching methods.

The specialist nurses’ training program focuses on the scope of nursing practice, which is one of the main obstacles to implementation of the BPG recommendations encountered at DongZhiMen Hospital. Indeed, we credit the BPSO Program with progressive changes in the scope of practice for nurses. For example, before implementing the BPG *Assessment and Management of Foot Ulcers for People with Diabetes* (RNAO, 2013a), the dressing change for patients with diabetic foot was often done by physicians. To shift the practice scope, the specialist nurses’ training program was developed for wound care. After obtaining the approval of physicians in the peripheral vascular department, and after nurses earned qualifications on wound care, they are now able to conduct the dressing change for patients with physicians’ full support.

## INTERDISCIPLINARY COOPERATION

Interdisciplinary team cooperation is essential for effective BPG implementation. For patients with diabetic foot ulcers at DongZhiMen Hospital, a vascular surgeon, endocrinologist, nutritionist, and diabetes specialist nurse work closely with each other to develop the optimal treatment and care.

Similarly, another interdisciplinary team develops pharmaceutical and nonpharmaceutical therapies for patients suffering from pain.

## OBTAINING ADDITIONAL RESOURCES THROUGH RESEARCH FUNDS

Another main barrier to BPG implementation is financial support. The BPSO team at DongZhiMen Hospital found the solution by applying for research funds both from the hospital and the Beijing government. We were successful in this endeavour thanks to our increased research capacity from the BPSO training and program work.

## MONITORING BPG USE AND EVALUATING OUTCOMES

Evaluation and monitoring is a key pillar of the BPG Program and a critical aspect of the BPSO requirements for both service and academic BPSOs. All BPSOs participate in NQuIRE, RNAO's robust comprehensive database system, on an ongoing basis, and as well are expected to engage in other evaluation processes.

### NQUIRE DATABASE

Each BPG implementation site is required to submit data monthly to the RNAO NQuIRE database. Based on the NQuIRE data reports, the DongZhiMen Hospital BPSO gains insight into BPG utilization outcomes. BUCM BPSO is working with RNAO to help determine appropriate education indicators that can become part of NQuIRE.

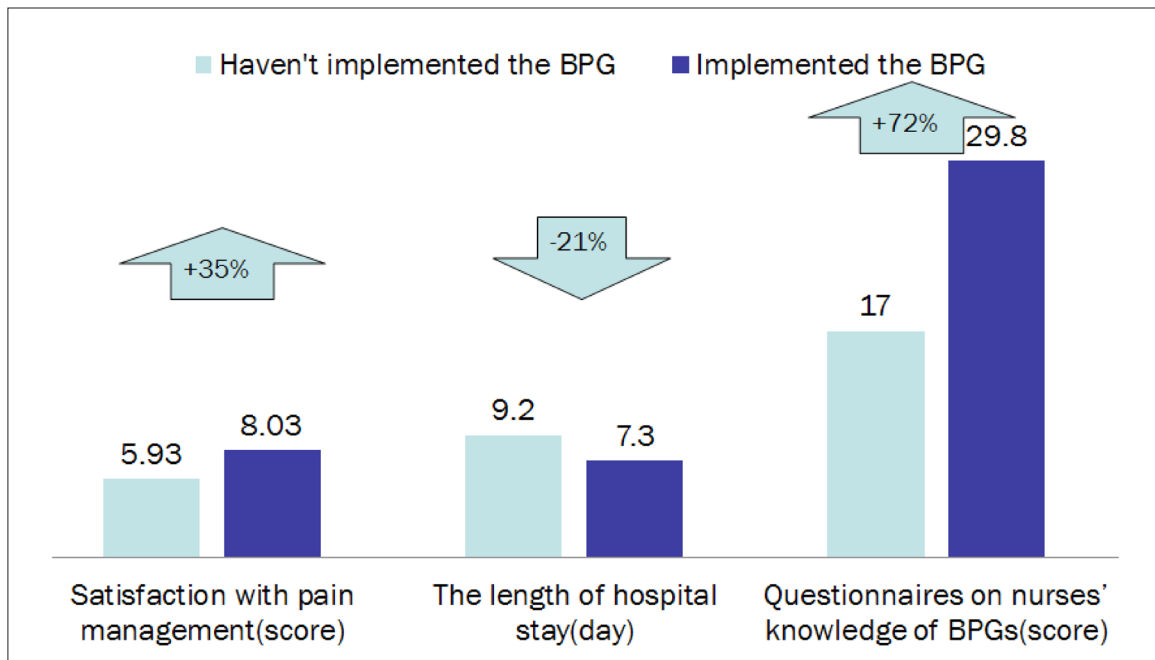
### RNAO AUDIT

RNAO conducts an annual audit of the BPG implementation sites, and it provides constructive feedback on the structures and processes used by the BPSOs and BPG implementation, in practice and integration into the curriculum as well as sustained use/integration of evidence-based practice.

### QUESTIONNAIRE ON PATIENT SATISFACTION

The DongZhiMen Hospital develops and administers questionnaires on patient satisfaction related to their pain control to evaluate the overall effect of implementing the RNAO (2013b) BPG, *Assessment and Management of Pain*. Results have shown increased patient satisfaction with pain management (see Figure 14.2).

Other indicators for evaluating outcomes include the length of hospital stay, patients' medical costs, and questionnaires on nurses' knowledge of BPGs, all of which have shown substantive improvements (see Figure 14.2).



**FIGURE 14.2** The effects of implementing the RNAO BPG *Assessment and Management of Pain* (2013b) using three indicators measured pre- and post-implementation. Used with permission from DongZhiMen Hospital.

## SUSTAINING BPG USE

Sustaining practice change related to implementation of BPGs is an important and vital activity for academic and service BPSOs. Key to success in this area is the use of a variety of sustainability strategies, many of which are discussed next.

### DEVELOPING AN ANNUAL WORK PLAN

For planning and sustaining BPG implementation, an annual plan was developed to set goals and coordinate activities. Both the DongZhiMen Hospital and the BUCM School of Nursing use their annual plan as a framework for reporting to RNAO on a biannual basis, as a way to review strengths and areas for improvement.

### MONTHLY REVIEW MEETINGS

The BPSO teams have monthly meetings to track the status of BPG implementation work.

### MAINTAINING AND ENHANCING CHAMPION TRAINING

Since the launch of the BPSO Designation at DongZhiMen Hospital and the BUCM School of Nursing, BPSO Champions have made significant strides in nursing education, practice, and research. Using a train-the-trainer approach, RNAO has effectively transferred the knowledge and skills of BPG

implementation to local Champions, who not only maintain but also augment the outcomes of the BPSO Designation.

## ACHIEVEMENTS OF THE BPSO DESIGNATION IN CHINA

The BPSO Designation in China has resulted in a number of key changes in educational and clinical practices, scope of practice, and interprofessional work. Most importantly, it has already delivered positive results in education for both faculty and students, as well as improved patient and organizational outcomes. An added bonus is the enthusiastic attention that both the university and the hospital have received, which has translated into funding gains and high-level recognition of its leadership and staff. This section of the chapter discusses top achievements in these academic and service BPSOs.

### ACHIEVEMENTS BY THE ACADEMIC BPSO

For students at the Beijing University of Chinese Medicine (BUCM), the introduction to evidence-based nursing through the RNAO BPSO Program enriched their knowledge of best practices and also cultivated their critical thinking. What's more, master's students gained a broader perspective on research topics related to guideline adoption, implementation, and synthesis. Some dissertations have already been developed on *Identification and Management of Dysphagia After Stroke: An Evidence-Based Nursing Practice* (Gao, 2015); *The Analysis of Application Situation for Colostomy Care Clinical Practice Guideline Recommendations* (Xue, 2017); and *Development of Evidence-Based Practice Protocols for High Risk of Diabetic Foot Ulcers* (Jiang, 2017).

### STUDENT COMMENTS

Student A: "The guideline can not only help us to adjust our ways of thinking, but also help us to study knowledge of the practice of nursing and nursing skills. In addition, in the process of learning a guideline, we can also develop a collaborative academic atmosphere amongst the students, learning and cooperating together as a team."

Student B: "According to this BPG, if we as nurses want to succeed in facilitating client-centred learning, we should work hard to build a professional, therapeutic partnership relationship with our clients. In the academic setting the client is the student, whereas in the clinical setting the client is the patient. Lack of a partnership relationship is the main obstacle to the success of client-centred learning."

Nurse educators also gained new insights from the experience of implementing BPGs in an academic setting. Many educators at BUCM are now able to develop new teaching methods and learning resources that have enriched their teaching practices as well as student engagement. In particular, they have gained in-depth knowledge of student-centred teaching, which has brought a higher degree of innovation and interaction into their classroom.

## TEACHER COMMENTS

Teacher A: "I finally found a way from the *Facilitating Client-Centred Learning* BPG to encourage students to ask questions to improve their understanding of what we taught."

Teacher B: "Students always enjoy our class and are more satisfied with teachers teaching skill and contents based on the guidelines."

Teacher C: "Sometimes the students find it difficult to understand some sentences or words in the BPGs, so I organize them to discuss those questions together. I think it is a good way to cultivate their critical-thinking ability."

Teacher D: "Since the *Ostomy Care and Management* guideline includes much new knowledge, such as ostomy assessment tools, new nursing skills, and so on, which we can hardly find in our textbook, we introduce the BPG as supplemental knowledge when teaching students how to provide better care for ostomy patients. In addition, we plan to design the colorectal cancer care lesson plans according to the content of this guideline in order to help students master the knowledge better."

Teacher E: "Before we incorporated the BPG into our curriculum, we gave lectures on pain assessment mainly based on the textbook. However, in the textbook, only a limited number of traditional pain assessment scales for general population were available. Students felt that it was difficult to apply these pain assessment tools in clinical practice.

Now we introduce the specific, operable pain assessment procedure and validated tools to our students from this BPG. Students come to understand how to perform a comprehensive pain assessment with a validated tool in special populations, especially those unable to self-report, such as newborn infants, older adults, and patients in critical condition. We also design the role-play to let the student complete a pain assessment for a patient in pain by following the BPG, and to find the barriers for pain assessment in real clinical practice."

At an organizational level, the BPSO Program has provided many new ideas for educational and teaching reform at the Beijing University of Chinese Medicine. These include student-centred learning and how to promote and sustain the application of knowledge to practice in a variety of clinical learning environments. The program has also led to increased research capacity and achievements. In 2015, several evidence-based nursing research projects were approved by the University; BUCM became the chief editor, compiling these projects into a graduate student textbook in 2016, *Evidence-Based Nursing*. Moreover, two influential journals in China established special columns for the BUCM School of Nursing to publish a series of articles on evidence-based nursing, including its BPSO-related work, in 2016.

With such achievements, and as a result of the heightened profile of BUCM in China and other countries, the BPSO team was invited to give EBN lectures at national conferences, universities, and hospitals. In 2016, the BPSO director at BUCM School of Nursing was invited to an international conference in Liaoning province and gave an oral presentation on "Implementation of BPGs in Nursing Practice." She was also invited to the 2016 national nursing Deans Summit in Guangxi province for an oral presentation on "Implementing BPGs in Nursing Education." She was also invited to give lectures on EBN at Peking Hospital, Shandong University, Third Medical University, and others.

## ACHIEVEMENTS BY THE SERVICE BPSO

There have been many changes and successes achieved in nursing practice since the inception of the BPSO Program at DongZhiMen Hospital. Evidence-based practice has become the focus of global healthcare; however, the transformation of high-quality evidence into clinical practice is a challenge to nursing staff in many institutions.

At DongZhiMen Hospital, the BPSO team learned that BPG implementation is, first, an effective method to improve the quality of clinical care, and second, a catalyst for research and professional advancement. Many nurses have conducted research on BPG implementation and published a number of articles on their findings. In 2015 and 2016, nurses from the DongZhiMen Hospital won the first prize and top ten individual awards at the Beijing Municipal Administration of Traditional Chinese Medicine Competition. In addition, the hospital is gaining numerous external accolades. As well, the increased competency of nurses implies better pay and more opportunities for advancement. By improving their practice and research ability, nurses report feeling more confident and enthusiastic about their work. Nurses have also gained more trust and support from doctors and patients. Inter-professional collaboration has increased, as doctors are now more likely to collaborate with nurses in responding to patients' needs.

*“It offered me a chance to grow professionally and improve my ability to be an effective leader and manager. I gained skills of communication, good judgment, and logical thinking ability. In my work, I started to develop more awareness of and improvement in my ability to solve problems and find solutions.”*

—Gao Ning, BPG implementation leader of *Assessment and Management of Foot Ulcers for People with Diabetes* (RNAO, 2013a)

Amongst the achievements at DongZhiMen Hospital BPSO is higher patient satisfaction with its nursing care because of nurses' attention to providing better patient care, and the greater respect they have for patients' perspectives, needs, and values. Before the introduction of the BPG *Assessment and Management of Foot Ulcers for People with Diabetes* (RNAO, 2013a), there were no stoma nurses at the hospital. Following the BPG recommendations, stoma specialist nurses were recruited, and a new dressing clinic was opened. Patients who were previously hospitalized for dressing change can now receive the service in the clinic, which shortens the time of hospitalization of patients and reduces their expenses. Furthermore, through the implementation of *Facilitating Client-Centred Learning* (RNAO, 2012a), nurses are showing a higher degree of attention to patients' needs and their perspective.

Like the BUCM School of Nursing, the nursing department at DongZhiMen Hospital experienced a similar boost in support and a higher research profile. It received more financial, policy, technical, and intellectual support from the hospital, as well as support from BUCM in the form of expert consultation and scientific research guidance. These valuable resources enabled the nursing department to experience an unprecedented surge in nursing research, where it has developed 17 approved research projects in 2016 and received research funds nearing 578,500 RMB. One project, entitled

“Implementation Scheme and Application of TCM Nursing in Diabetic Foot Ulcer,” is a Beijing TCM (Traditional Chinese Medicine) bureau-level project and is related to the BPSO-led application of that BPG. In addition, the nursing department obtained two nursing patents and published four conference papers and several articles in journals. Nursing workflow has also been optimized; the integration of the diabetic foot ulcer assessment tool (PUSH scale) into clinical practice is one example.

## CHALLENGES AND SOLUTIONS TO BPSO IMPLEMENTATION

There have been and will continue to be challenges to address and overcome in implementing EBP, including BPGs, in China. Overcoming these requires continuous leadership and strategic thinking and acting. Keeping in mind the end goal of improved nursing education and clinical practice for better patient, organizational, and health system outcomes, as well as perseverance to get to the finish line, are paramount to realize these goals. Both of our organizations are fully committed and invested in our work as BPSOs. Independently and together we are building creative solutions to sustain our work in our own BPSOs and spread the BPSO Designation and BPG uptake to other organizations and academic settings in China. The key challenges are discussed next.

### HEAVY WORKLOAD

Heavy workload was identified as a major obstacle for nurses and educators, which may deter or hinder participation in the BPSO Program. The DongZhiMen Hospital is a tertiary hospital characterized by, and renowned for, its Traditional Chinese Medicine (TCM) treatment and nursing care. As such, nurses must conduct TCM nursing techniques as well as Western nursing practices, which gives them a much heavier workload in comparison with other hospitals. Seventeen nurses in the peripheral vascular department are responsible for 40 beds and implementing the BPG *Assessment and Management of Foot Ulcers for People with Diabetes* (RNAO, 2013a); 10 nurses in the orthopaedics department are responsible for 26 beds and implementing the BPG *Assessment and Management of Pain* (RNAO, 2013b); and 34 nurses in the encephalopathy department are responsible for 75 beds and implementing the BPG *Facilitating Client-Centred Learning* (RNAO, 2012a). The BPG implementation work has, to some extent, added to their current workload, which may impede the implementation process and quality.

Creating an incentive is one solution that the BPSOs offered to encourage educators and nurses to participate in BPSO activities. For example, they added indicators related to BPSO participation to the BUCM faculty’s annual Key Performance Indicator System, which includes BPG translation, BPG implementation, and BPG leadership. With that, faculty are becoming more active in BPSO involvement. Using a more direct approach, the director of the nursing department at the hospital and at the BUCM School of Nursing spoke with BPSO leaders who volunteered for the position about the importance of BPG implementation and their role in its impact. As a result, the BPSO leaders felt highly favoured and more motivated to do the work well.

## CULTURAL DIFFERENCES

Given the many differences in knowledge, attitudes, and practices, it is understandable that culture may form a barrier to understanding, and thus implementing, best practices. In particular, the BPG *Facilitating Client-Centred Learning* (RNAO, 2012a, p. 6) presented a challenge to Chinese BPSOs in its recommendation to “Engage in more structured and intentional approaches when facilitating client centred learning.” The BPSO teams did not understand the meaning of “structured” approaches and thus felt unable to implement the recommendation correctly.

In order to effectively implement the BPGs and overall BPSO Program, both Chinese BPSOs have organized BPSO symposiums and other forums for reviewing and discussing the BPGs. Translation of the BPGs and regular meetings with the RNAO BPSO Host have also enhanced local capacity to develop an evidence-based culture. Professional training programs in English oral and writing skills have further cultivated an English learning environment for better uptake of the BPGs and implementation resources.

## ATTITUDES, KNOWLEDGE, AND PRACTICES IN EVIDENCE-BASED NURSING

DongZhiMen Hospital and BUCM School of Nursing have encountered a range of attitudes toward evidence-based nursing. Despite a majority of positive views, some educators did not realize that nursing education needs to be evidence-based, while some nurses demonstrated reluctance or struggled with implementing evidence-based practice. In the early days of our work, some of the comments we heard are reflected in the voices from educators and nurses:

### EDUCATOR AND NURSE COMMENTS

Teacher B: “I don’t understand why they ask us to use BPGs in our course, I don’t think it is so necessary.”

Nurse A: “It’s hard for us to implement BPGs in our practice.”

Attitude plays a principal role in guiding human behaviour toward achieving goals (Ajzen & Fishbein, 2005). In order to increase positive beliefs and attitudes regarding the integration of BPGs into curriculum and to improve nurses’ EBP knowledge and skills, several training programs were offered, and RNAO faculty were invited to give lectures on BPG development, implementation, and evaluation. In addition, a BPG Discussion WeChat group was created on a mobile platform for communication and sharing knowledge about BPGs. Using this, BPG Champions can readily engage in discussion or provide suggestions around BPG implementation, thereby enhancing their knowledge and enriching the overall evidence-based culture.

## FUTURE PROSPECTS OF CHINA BPSOS

The current BPSOs in China recognize the tremendous potential of this EBP knowledge transfer strategy to transform nursing and nursing education in China. The future prospects for China BPSOs are very strong and discussed in the next section.

## BUILDING AN EBN CULTURE

The work embarked upon by BUCM School of Nursing and DongZhiMen Hospital is almost unprecedented in academia and healthcare in China, as we assumed a leading role in integrating best practices into nursing education and clinical nursing practice. BPG implementation at the BUCM School of Nursing has caused a paradigm shift in multiple ways. Nursing educators have shifted to a student-centred approach and an evidence-based curriculum, both of which foster critical thinking amongst students. We will continue to revise and refine curricula to fully incorporate evidence-based nursing concepts into nursing education. Educators are also developing a comprehensive and long-term evaluation system to better assess whether the updated knowledge and evidence-based concepts are applied to nursing graduates' future clinical practice.

BPG implementation in the clinical setting has enhanced nurses' professional knowledge and research capacity and is cultivating an evidence-based culture in the nursing department and beyond. The BPSO team at DongZhiMen Hospital will continue with the rigorous implementation of the selected BPGs and strive for further innovation. By combining evidence-based practice, research, and quality improvement together, we aim to build a solid evidence-based nursing team with more nursing leaders and staff nurses involved. The overarching goal is to advance the evidence-based culture throughout the whole hospital.

## INTRODUCTION OF EBN INTO TCM NURSING

With the advantages of simplicity, convenience, effectiveness, and low cost, Traditional Chinese Medicine (TCM) nursing techniques are well accepted and readily adopted in China and increasingly internationally. The main drawback is that most TCM nursing techniques lack standardization.

Although the Chinese government has promulgated TCM nursing handbooks and guidelines, these resources are developed based on experience, without support from scientific and rigorous research findings. With the assistance of the evidence-based nursing methodology we have gained from our BPSO experience, it may be possible to standardize TCM nursing techniques, thereby reducing the variability in their implementation and enabling their dissemination throughout the world.

## BPSO DESIGNATION EXPANSION

With the great efforts made in disseminating BPSO-related work, an increasing number of hospitals and nursing schools are becoming interested in evidence-based nursing and joining this powerful movement. Once we achieve our BPSO Designation in April 2018, the BUCM School of Nursing and affiliated DongZhiMen Hospital plan to refine our program methodology and apply to RNAO to become a BPSO Host, the first in China. Our overall aim is to impact student learning, faculty development, clinical nursing excellence, and ultimately to improve the health of the population in China.

## CONCLUSION

In China, the combination of healthcare reform, the early trending amongst some nursing leaders to embrace evidence-based practice, and the emergence of the BPSO Designation has resulted in groundbreaking accomplishments in nursing education and clinical practice that are transforming nursing. As pioneer BPSOs in academia and service in China, we have experienced much success based on focused activities to change education and clinical practices for better learning and health outcomes. We have also been purposeful in spreading this knowledge and sharing our experiences through numerous nursing and healthcare networks across China and abroad.

Lessons learned related to the use of a comprehensive planned methodology based on implementation science and knowledge transfer have spurred powerful changes in scope of practice, interprofessional care, and the status of nurses in the eyes of patients and other healthcare professionals, particularly medical doctors. The BPSO Designation in China has reflected the local context and supported adaptations as necessary to enable the integration of traditional Chinese medicine and traditional Chinese nursing. Finally, as true innovators, our two founding BPSOs are linking with new BPSOs as mentors to maximize the benefits of evidence-based education and clinical practice to advance outcomes for all, especially our patients.

## KEY MESSAGES

- Changing the way we do things can be a challenging experience and process. Successful BPSO leaders strongly believe that change in academia and clinical practice based on evidence is the best way for improvement.
- Leadership is a key factor for the success of developing a culture of evidence-based practice and education in China.
- There's no one-size-fits-all method for BPG implementation. The specific cultural and organizational context needs to be considered.
- BPGs augment TCM with strong mainstream evidence to the benefit of students and patients in China.
- The BPSO Designation is a robust program that brings EBP to the classroom and the bedside pragmatically and effectively.

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