

TRANSFORMING NURSING THROUGH KNOWLEDGE

Best Practices for Guideline Development,
Implementation Science, and Evaluation



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VALUE FOR MONEY: MEASURING THE ECONOMIC IMPACT OF BPSOS IN AUSTRALIA

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LEARNING OBJECTIVES

After reading this chapter, you will be able to:

- Understand the process and impact of the BPSO Host and BPSO Direct Designations in Australia
- Describe the responsibilities, benefits, and excitement of becoming a BPSO Host
- Gain awareness of the client, provider, organizational, and system outcomes of the BPSO Designation in Australia, in particular those related to economic impacts

INTRODUCTION

Every day in their practice, nurses around the globe have to share good news and bad with their patients. They have to provide the information in a way that is accessible to their patients, not sending mixed signals or unclear information, but sharing it in a way that meets the needs of the individual patient and their loved ones.

Our journey in measuring the economic analysis and outcomes of evidence-based practice began in order that we could make accessible the results of our work with patients and the public, health system funders, governments, and health bureaucrats. We cannot expect people who are not clinicians or from a clinical background to share the nursing culture based on achieving great results for our patients. Great results that cost more may not find favour in health systems that are increasingly cost-constrained. However there is growing acceptance that more effective care can also save money. Avoiding misadventure, readmission to hospital, or acquisition of secondary illnesses or complications are accepted as objectives that should be sought for both quality and cost outcomes.

So why embark on exploring the financial outcomes of our own Best Practice Spotlight Organization journeys? First, as we have described already, our healthcare system is increasingly dominated by managerialists. Clinicians have lost control and influence of the health and hospital systems with decision-making increasingly influenced by budgets, financial performance, and data analysis. Medical dominance, which has traditionally challenged nursing as a professional discipline, has been replaced by these managers. However, this new domination comes with a loss of the shared focus and experience of working directly with patients and clients, which at least gave nurses and doctors a common language and a set of client-centred goals.

This new domination is reflected in the political landscape, with policy debate increasingly focused on economic and fiscal performance. The economic debate has become an end in itself rather than an instrument to sustain and support wider societal well-being and improvement. Increasingly in Australia, governments and healthcare executives are using system reforms and innovation in practice to disguise or become the vehicle for budget cuts to the system. Whether it be case mix as a classification system, consumer-directed models of care (disability and aged care), or even the intended application of internationally benchmarked clinical standards (Transforming Health, South Australia), all have been used as or were the vehicles for budget-savings measures to be achieved.

This is not of itself necessarily a bad thing. If savings can be made by the adoption of evidence-based clinical standards, then so be it. However, our argument is that the adoption of the standards and their implementation should come first. If that results in savings along with the expectation of improved care, then that would be optimal. In Australia, too often the budget savings measures have actually been seen to drive the adoption of standards to give a cloak of clinical propriety to the measures. In fact, what it is doing is creating mistrust by clinicians and in the general community over the language of best practice and standards-based approaches, which is the reverse of what we should be seeking to achieve.

Nurses have historically attempted to describe the outcomes of their care using qualitative statements or measures. Improvement in the quality of outcomes and patient benefit and satisfaction have been central, with a number of well-known studies confirming the impact of nursing care on the morbidity and mortality of the client population (Aiken, Rafferty & Sermeus, 2014; Aiken et al., 2017; Barton, Johnson, & Price, 2009; Cheung, Aiken, Clarke, & Sloane, 2008; Twigg, Duffield, Thompson, & Rapley,

2010). Conversion of the learning to the economic impact that nurses make is less developed, although in some cases obvious. Measures that reduce the length of stay in hospitals through interventions, such as those that reduced the incidence of pressure ulcers, urinary tract infections, and falls, are well reported (Garrard, Boyle, Simon, Dunton, & Gajewski, 2014; Lloyd, Xiao, Albornos-Muñoz, González-María, & Joyce, 2013; Mitchell, Ferguson, Anderson, Sear & Barnett, 2016; VanDeVelde-Coke et al., 2012). The fact that there is a reduction in the length of stay clearly impacts cost of care but is rarely quantified in the reports.

Our experience is that we cannot assume health bureaucrats and politicians will understand and accept that such savings flow from these improved nursing-driven clinical outcomes. Instead, we should explicitly seek to quantify and state these savings where they exist, in order to make them understood by and able to influence decision-makers. This does not reduce the need to apply qualitative approaches. Rather, in this chapter we argue and demonstrate that it adds to the picture and allows a new way of entering the discussion on quality and value of nursing interventions with people of influence, whose primary interest and language is economic rather than clinical.

This chapter discusses the role, work, and journey of the Australian Nursing and Midwifery Federation (SA Branch) (referred to as ANMF [SA Branch]) as the Best Practice Spotlight Organization Designation (BPSO) Host in Australia, working in partnership with the Registered Nurses' Association of Ontario (RNAO) and the South Australian government, to establish, develop, implement, and evaluate the impact and value of evidence-based practice. We highlight the challenges and opportunities of the initial stages of our journey, including gaining government support and attracting health services to engage, invest, and participate to become accredited as BPSOs.

We then discuss the first phase of the BPSO Designation, the establishment at two South Australian public local health networks (across multiple sites and specialties), and how the RNAO Nursing Quality Indicators for Reporting and Evaluation (NQUIRE) database contributes to the evaluation of the patient/client, provider, and organization outcomes. To that end, pilot programs were submitted for analysis of hospital performance indicators and national quality care indicators, including average length of stay, falls, pressure injuries, use of mechanical restraints, urinary tract infections, and other indicators known to be sensitive to nursing practice and interventions.

We acknowledge that there is a wealth of qualitative statements and measures that describe health outcomes and benefits of nursing care. However, converting these measures to quantifiable savings that support the economic value of nursing and evidence-based practice appears to be a gap in the research. In order to provide an argument for sustained funding of the Australian BPSO Designation and demonstrate the economic benefits of the program, the ANMF (SA Branch), as the national BPSO Host, has worked to establish, quantify, and calculate the financial gains made from sound evidence-based practice and improved patient outcomes.

The evaluation demonstrates very significant improvements, not only with patient and nurse satisfaction, but at a system level with evidence of enhanced efficiencies and financial performance. These demonstrations convinced funding authorities of the program's value, resulting in expansion of the BPSO Designation. The economic evaluation of the Australian BPSO Designation and its outcomes provides a model for the measurement of financial impacts of nursing care, which is increasingly important within a financially constrained system.

BACKGROUND OF THE ANMF

The ANMF (SA Branch) is the largest professional and industrial organization representing nurses, midwives, and assistants in nursing in South Australia. We cultivate and promote knowledge-based nursing and midwifery practices and promote quality of work life and excellence in professional development. The organization has an important role advocating, influencing, and promoting the nursing and midwifery profession, practice, and healthcare policy.

In South Australia, the ANMF (SA Branch) has continuously lobbied for improved patient care and safety and is committed to promoting the integration of evidence-based practice and the provision of healthy work environments across all sectors of healthcare. Through the course of the organization's networking to improve evidence-based practice in South Australia, the ANMF (SA Branch) engaged with the RNAO and was attracted to the BPSO Designation. On March 2, 2012, the ANMF (SA Branch) signed an agreement with the RNAO to become a BPSO Host and lead the development and implementation of the BPSO Designation in Australia. In April 2012, the ANMF (SA Branch) finalized a contract with the Department of Health and Ageing (SA) to provide funding for the program as well as grant permission to use two of its sites to facilitate uptake of the program in South Australia.

ANMF (SA BRANCH): THE AUSTRALIAN BPSO HOST

Once the agreement with the RNAO was signed, the ANMF (SA Branch) became the second international host of the RNAO BPSO Designation (with the government of Spain being the first). This enabled the ANMF (SA Branch) to adapt the program to the Australian context. In our role of designated host, we lead and are responsible for BPSOs within Australia, in addition to directly working with RNAO and its network of international BPSO partners.

As the Australian BPSO Host, we select, coach, and support healthcare organizations to achieve BPSO Designation by implementing, disseminating, and evaluating the RNAO Best Practice Guidelines (BPG). Furthermore, we facilitate the establishment and development of a network of BPSO Leads for the purposes of knowledge transfer and exchange. Through regular meetings, reporting, and knowledge exchange forums, we monitor and provide reports to the RNAO with updates from the BPSOs as well as an overview of successes, challenges, questions, and issues of the BPSO Designation in Australia. As part of our participation in RNAO's Nursing Quality Indicators for Reporting and Evaluation (NQuIRE), we facilitate quarterly input of structural, process, and outcome indicator data by providing user education sessions, mentoring, and partnership with the RNAO and BPSOs to ensure data integrity, accuracy, and agreement on common definitions.

In return, the RNAO provides free-of-charge expert mentorship and consultation on guideline dissemination, implementation, uptake, sustainability, and evaluation. This includes all materials related to call for proposals, scoring of applications, and training materials, which enables full consistency of this internationally renowned program.

REFLECTION

Consider the early processes used in developing the Australia BPSO Host Model and identify what factors related to implementation science principles contributed to its success.



One of our key learnings is the importance of being able to actively engage with and become part of the implementation team. We are involved in leading the BPSO Designation institutes and workshops at the local level and providing continuing support for the Steering Committee, BPSO Lead, and nurses and midwives at the front line.

THE AUSTRALIAN BPSO MODEL

Since 2012, the Australian BPSO Designation has expanded. We now have four public health network sites participating in the Program: two designated BPSOs—Central Adelaide Rehabilitation Services (CARS, also referred to as Hampstead Rehabilitation Centre [HRC]) and Northern Adelaide Local Health Network (NALHN); and two predesignate BPSOs—Central Adelaide Local Health Network Mental Health Directorate (MHD) and Women’s and Children’s Health Network (WCHN). The adapted Australian BPSO Model in Figure 17.1 depicts the structures that have been established to support and enable the implementation of the BPSO Designation and BPGs, with an Executive Sponsor and ownership at the local level.

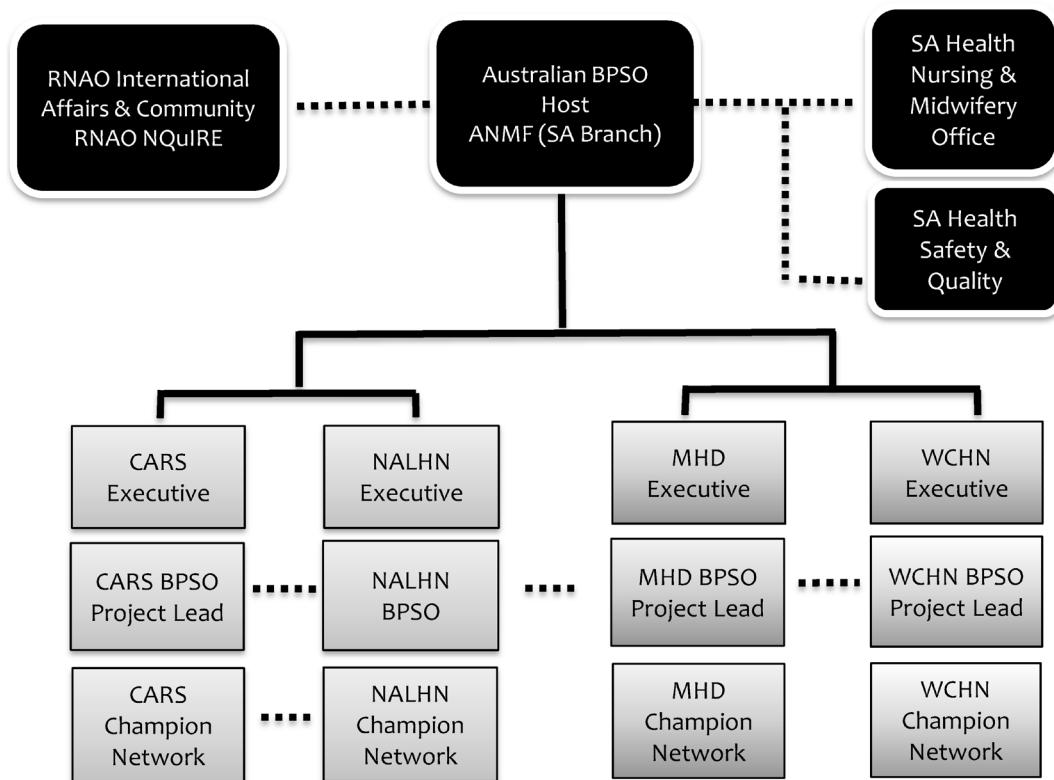


FIGURE 17.1 Australian BPSO governance and implementation structure as of June 2017. Copyright ANMF (SA Branch), 2017. Used with permission.

THE BEGINNINGS OF THE BPSO HOST MODEL

In April 2012, the BPSO Project Steering Committee was established to provide overarching leadership and governance. The Steering Committee is responsible for the appointment of the BPSO Program Manager and the selection of the BPSO candidate sites. The BPSO Steering Committee

monitors and evaluates the BPSO sites' progress to ensure compliance with contractual obligations and ensure that candidate and designate key deliverables are met, key milestones are achieved, and strategies to mitigate potential risks are implemented.

In Australia, the designated BPSO Program Manager works collaboratively with the SA Government, Local Health Networks, Executive Directors, Directors of Nursing/Midwifery, and the BPSO Leads. This BPSO Program Manager's leadership role, vital to the success of the program, includes:

- Consultation with the pilot sites to select the appropriate and relevant guidelines to be implemented
- Delivery of education and training to the BPSO Leads and Practice Champions
- Program management and coordination
- Provision of support and advice for the duration of the project
- Establishment of the Australian BPSO knowledge exchange forums
- Establishment of regular consultation meetings with the RNAO to support and provide advice on the project



How do you think these key activities of the BPSO Host Lead impacted the success of the first phase of the BPSO Designation in Australia and helped it spread? How could you modify these activities to be part of a role description for BPSO Lead in your setting?

AUSTRALIAN BPSO PROJECT ADVISORY COMMITTEE

In February 2013, the BPSO Project Advisory Committee was established to provide guidance and advice to the Program Manager on the BPSO evaluation framework and learnings. Reporting to the BPSO Steering Committee, the Project Advisory Committee is composed of representatives from SA Health Nursing and Midwifery Office, Safety and Quality Unit, and Nursing/Midwifery executives, as well as representatives from South Australian universities, BPSO project sites, and the ANMF (SA Branch).

RNAO BPSO DESIGNATION ADAPTATION TO THE AUSTRALIAN CONTEXT

Adapting the RNAO BPSO Model to the Australian context required communication on how this internationally successful model was indeed different from previous change models. Using the RNAO's philosophy enabled the establishment of meaningful dialogue and engagement with potential sites across the five local health networks in South Australia.

As part of the BPSO 3-year candidacy period, BPSO sites are required to implement a minimum of three clinical Best Practice Guidelines (BPG) and to successfully complete all activities mandated by RNAO and ANMF (SA Branch) to qualify for BPSO Designate status. This includes the establishment of the Best Practice Champion Network: training and engaging a minimum of 15% of the total nursing/midwifery workforce in the acute sector to become Champions for each BPG across the sites. In addition to the three clinical BPGs selected at each site, the ANMF (SA Branch) supported the implementation of the BPSO Designation with the complementary RNAO Healthy Work Environment BPGs to promote direct-care leadership at the bedside. Each of the selected RNAO BPGs and education materials was contextualized to reflect the South Australian legislation, population, practice, and healthcare system.

It is important to note the RNAO BPGs were mapped against the Australian National Safety and Quality Health Service Standards to ensure the initiatives were aligned to state and local health network priorities and goals and the national quality standards that improve health outcomes, system efficiencies, and effectiveness. This provided measures for evaluating the BPSO Designation in Australia.

PHASE 1: BPSO PILOT PROGRAM, 2012–2015

The BPSO Designation pilot extended for a 3-year period. It was structured to fit the Australian context and provide data to our government funders to demonstrate its impact. What follows is a description of the specific activities carried out during the first phase.

Selection of the Australian BPSOs

Interested local health networks submitted proposals to participate in the BPSO Designation, and two sites were eventually selected to commence their 3-year BPSO candidacy. The two candidates were Central Adelaide Rehabilitation Services (CARS) and Northern Adelaide Local Health Network (NALHN).

Establishment of the Local Australian BPSO Designation Governance and Leadership Structure

Similar to the Australian BPSO structure, the two sites established local leadership and governance structures. The Local Health Network BPSO Steering Committees provided executive leadership and drove the establishment, implementation, and evaluation of the BPSO Designation. Both sites worked collaboratively with the BPSO Program Manager and local health network executives.

During Phase 1, BPSO candidate sites selected the appropriate RNAO Best Practice Guidelines based on a number of factors, including the South Australian Government's and Local Health Network's strategic priorities and goals. Organization-wide audits identified gaps in practice knowledge and procedures, which determined the three priority areas for the inaugural BPSO Designation. Engagement of the Consumer Advisory Council resulted in advocacy for the BPSO Designation, as it promoted the partnership and value of consumers in healthcare. The established National Safety and Quality Health Service Standards Working Parties at the local health networks supported the incorporation and inclusion of the BPSO Designation and the three selected clinical BPGs, resulting in standardization of assessment, documentation, procedures, processes, practices, and policies.

Australian BPSO Leads

BPSO Leads were recruited at both sites to lead the implementation of the program. Working collaboratively with the BPSO Program Manager, the BPSO Lead also worked closely with the existing working parties, committees within the hospital, local health network, and government throughout the project. Together with the executives, both BPSO Leads participated in the Australian BPSO Learning Institute to enhance knowledge, skills, and expertise in the linkages between research, education, evidence-based practice and quality patient/resident/person care. A key element of the learning institute is the knowledge-transfer-change management model, and tools and resources for creating, innovating, and sustaining change to facilitate the implementation and uptake of the program.

Each site developed and enacted a 3-year project plan that identified the strategies, actions, resources, deliverables, and key milestones to support the implementation and sustainability of the BPSO Designation.

Australian BPSO Best Practice Champions

Critical to implementing the BPSO Designation as stated in the formal contract is the role of best practice Champions. To become Champions, nurses and other healthcare professionals participate in orientation workshops designed to provide them with strategies to champion Best Practice Guidelines in their organization and join the Best Practice Champions Network. The Champions model is well established in the RNAO literature as an effective model of knowledge transfer to incorporate evidence into practice (Garrard et al., 2014; Hewitt-Taylor, 2013; VanDeVelde-Coke et al., 2012). Through monthly meetings, the Champions share their learnings and experience, explore new opportunities, and support knowledge dissemination and local practice and cultural changes that are based on the highest level of evidence.



Consider how the relationship of the BPG Champion Network and point of care leadership affect BPG uptake and quality of care.

PHASE 2: BPSO DESIGNATION, 2015–2018

The achievements from Phase 1 of the BPSO Designation, utilizing the BPSO Best Practice Champion model, have supported the bottom-up approach to change and facilitated evidence-based knowledge transfer. It has enabled nurses and midwives at the front line to lead, influence, and embed practice changes at the local level. The economic analysis has also enabled the BPSO project evaluation to quantify the benefits in dollar value, which will be discussed later in this chapter.

In January 2016, in Phase 2 of our BPSO Host activities, Central Adelaide Local Health Network Mental Health Directorate and Women's and Children's Health Network commenced their BPSO journey.

Site 3: Central Adelaide Local Health Network Mental Health Directorate (MHD)

The MHD offers a range of inpatient, outpatient, emergency, and community mental health services, including acute, recovery, and specialist mental healthcare services for people in the Adelaide region. It contains 100 acute inpatient beds and 16 beds for older people with mental health conditions, located across three different campuses. The three selected BPGs for implementation by MHD are:

- *Promoting Safety: Alternative Approaches to the Use of Restraints* (RNAO, 2012a)
- *Assessment and Care of Adults at Risk for Suicidal Ideation and Behaviour* (RNAO, 2009)
- *Person- and Family-Centred Care* (RNAO, 2015)

Site 4: Women's and Children's Health Network (WCHN)

The WCHN provides a range of trauma, emergency, inpatient, outpatient, and specialist obstetric and maternity services for women, babies, paediatrics, and adolescents. It contains 295 acute inpatient beds, mental health services, and family community services. The three selected BPGs for implementation by WCHN are:

- *Person- and Family-Centred Care* (RNAO, 2015)
- *Woman Abuse: Screening, Identification, and Initial Response* (RNAO, 2012c)
- *Care Transitions* (RNAO, 2014)

BPSO AND BPG IMPLEMENTATION

The process of implementing the BPGs across the organizational, educational, and practice levels is guided and outlined by the RNAO (2012b) *Toolkit: Implementation of Best Practice Guidelines*. The Toolkit is a comprehensive resource manual for teams who are responsible for implementing BPGs at their organization. It is grounded in theory, research, and experience, and is focused for use at the organizational or departmental level through a systematic process. The Toolkit was used at both sites as the guiding document for change and BPG implementation.

PHASE 1 PILOT SITE 1: CENTRAL ADELAIDE REHABILITATION SERVICE (CARS)

CARS provides state-wide specialized rehabilitation services for people who are severely affected by acquired brain injury, major burns, spinal cord injury and multitrauma, stroke, orthopaedic conditions, amputations, and medical deconditioning. CARS has inpatient, outpatient, and community-based services, and is composed of 124 inpatient rehabilitation beds, a rehabilitation in-home program, and outpatient and community rehabilitation programs. The model of care aims to maximize an individual's level of function and independence through physical and nonphysical therapy with a multidisciplinary team approach. The multidisciplinary team works to develop and coordinate a set of goals based on the individual's psychosocial, health, education, recreational, and vocational needs.

The three selected and successfully implemented RNAO Best Practice Guidelines are:

- *Client Centred Care* (RNAO, 2006a)
- *Promoting Safety: Alternative Approaches to the Use of Restraints* (RNAO, 2012a)
- *Supporting and Strengthening Families Through Expected and Unexpected Life Events* (RNAO, 2006b)

PHASE 1 PILOT SITE 2: NORTHERN ADELAIDE LOCAL HEALTH NETWORK (NALHN)

NALHN provides a diverse range of health services for people living in the northern metropolitan area of Adelaide. NALHN encompasses the:

- Lyell McEwin Hospital and Modbury Hospital
- Primary health, subacute, and transitional care services
- Aboriginal healthcare services
- Northern Mental Health service

The Lyell McEwin Hospital is a 336-bed, specialist referral public teaching hospital that provides a full range of high-quality intensive, coronary, medical, surgical, maternity, paediatrics, mental health, diagnostic, emergency, and support services. Modbury Hospital is a 174-bed, acute care teaching hospital that provides inpatient, outpatient, and emergency services.

NALHN's model of care focuses on the patient journey, safe environments, clinical teaching and research, sustainability, and fostering innovation and best practice.

The three RNAO BPGs selected by NALHN are:

- *Client Centred Care* (RNAO, 2006a)
- *Prevention of Falls and Fall Injuries in the Older Adult* (RNAO, 2011a)
- *Risk Assessment and Prevention of Pressure Ulcers* (RNAO, 2011b)



How do you feel that ownership of practice change by nurses leads to positive engagement and the ability to impact positive outcomes?

BPSO PHASE 1 EVALUATION

The Australian BPSO Designation has been evaluated broadly in terms of the overall impact on the organization and the effects of embedding evidence-based practice and cultures. It has also been evaluated in terms of BPG recommendations and how they improve patient care and enrich professional practices of nurses and midwives. RNAO's NQuIRE comprehensive database system was used extensively in our evaluation processes.

MEASURING CLIENT, PROVIDER, AND ORGANIZATIONAL OUTCOMES USING NQUIRE

Aiming to monitor and assess the impact of the Australian BPSO Phase 1 Program, the evaluation was conducted in consultation with the South Australian Government and the South Australian Local Health Networks, Safety and Quality Units. The hospital data performance measures; safety and quality nurse-sensitive indicators; and NQuIRE structural, process, and outcome indicators were used to analyze and evaluate practice changes.

NQuIRE has been developed by the RNAO to enable BPSOs to systematically monitor and evaluate their progress and outcomes and measure and compare structural, process, and outcome indicators for “like” organisations at the individual ward/unit level for each of the BPGs. The NQuIRE indicators have facilitated the development and contextualization of the Australian BPSO Evaluation Model. In recognition of the capability and future development of the RNAO's NQuIRE database, ethics approval (HREC-14-SAH-21) was obtained through the SA Health Human Research Ethics Committee, which enabled international comparison and contribution to evidence-based practice research.

AUSTRALIAN BPSO EVALUATION FRAMEWORK, MODEL, AND TOOLS

In constructing the framework, the Australian BPSO Host, Local Health Networks, and BPSOs reviewed the international, national, and state indicators influencing patient and nursing outcomes. This led to the development of the Person-Organisation-Practice (POP) framework, shown in Table 17.1, which incorporates qualitative and quantitative measurements that are aligned to the SA Health policy, safety, and quality and reform agendas.

TABLE 17.1 PERSON-ORGANIZATION-PRACTICE (POP) FRAMEWORK

PERSON DATA	ORGANISATIONAL DATA	PRACTICE
Client-centred care specific patient discharge surveys	Structural indicators OBDs N/MHPPD Skill Mix	Percent of nursing/midwifery workforce trained in a specific BPG area such as CCC, Alternatives to Restraints, etc.
Patient testimonials and suggestions	SA Health safety and quality data	BPG-specific surveys that benchmark staff perspectives
Partnership with Consumer Advisory Groups and volunteers		Stakeholder consultations (ongoing Steering and Advisory Committee feedback)

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The Australian BPSO Designation evaluation was designed to examine the following questions and the relationships between them (see Figure 17.2):

- Has the implementation of the BPG changed staff's attitudes, beliefs, and knowledge?
- Has the practice changed?
- Has it achieved the intended outcomes?



FIGURE 17.2 The Australian BPSO Designation Evaluation Model.
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Quantitative Tools

As guided by the Evaluation Model, and in order to capture data to answer questions related to person, organization, and practice, a number of quantitative tools were developed and administered, as described in the following sections.

Tool 1: BPSO Practice Champion Survey

Literature reviews on the role of Practice Champions in a change-management context were conducted and identified that the attitudes and beliefs of nurses and midwives are integral to the successful implementation of the BPG (Price, 2015; RNAO, 2015; VanDeVelde-Coke et al., 2012). Nurses and midwives' confidence in working in a new way affects their acceptance of the proposed changes. Therefore, "considering how people will perceive and be affected by an innovation" is critical for change to be successful (Hewitt-Taylor, 2013, p. 35). Furthermore, the literature indicated that the level of support offered to change agents is essential to sustainment of attitude changes (Maben et al., 2012).

In summary, without these proven strategies and organizational support, the literature clearly states that innovations or new ways of working will often fail if the strong attitudinal barriers in nursing and midwifery are overlooked or unaddressed. In the absence of relevant tools to measure the attitudinal impact of each BPG, Practice Champion surveys were developed and validated to support the evaluation. The aim of the Practice Champion survey was to determine an individual's attitude and level of knowledge prior to and following BPSO workshops on each selected BPG. In order to enable this comparison and measure the impact of the specific Practice Champion workshop, two surveys were administered pre- and post-workshop. The surveys were composed of a series of attitudinal statements, and participants were asked to rate their level of agreement with those statements, ranging from 0 to signify that they strongly disagree, to 10, strongly agree.

Tool 2: Consumer Experience Survey

In order to assess interactions and satisfaction levels between the nursing and midwifery workforce and consumers, as well as to meet the NQuIRE requirements, the Consumer Experience Survey tool was developed. The survey investigated the patient's experience of care across the recognized NQuIRE domains and how their experience relates to the implementation of the *Client Centred Care* BPG recommendations (RNAO, 2006a). The survey was provided to patients (or their nominated person) on discharge with a prepaid envelope.

Tool 3: Nurse Staff Survey: Alternative to Restraints

The literature review on the use of alternatives to restraints showed that knowledge, in addition to understanding of how and when to apply restraint alternatives, is critical in establishing and sustaining a restraint-free practice environment (Barton, Johnson, & Price, 2009; Fariña-López et al., 2014; RNAO, 2012a). For this reason, as part of the evaluation process, a survey was developed to measure staff's knowledge, attitude, and confidence in when and how to apply alternatives to restraints. A subgroup analysis was conducted to assess the effectiveness of the BPSO Practice Champions workshop. This survey was administered to all nursing staff across the health unit, with a 47% response rate.

Qualitative Measures

Again, in keeping with the Evaluation Model and to answer the evaluation questions fully, focus groups and interviews were used to collect qualitative data, as described in the following sections.

Measure 1: Australian BPSO Focus Group

The BPSO focus group captured the experience of Practice Champions and assisted in facilitating knowledge transfer between peers. The focus group was held in July 2014 with the aim of evaluating how Practice Champions viewed the BPSO Designation and their journey in the BPG implementation process.

Measure 2: BPSO Interviews

RNAO strongly emphasizes the importance of leadership throughout the BPG implementation processes. By *leadership*, the RNAO refers to leaders at all levels, including consumers, nurses, and executive management (Edwards & Grinspun, 2011; RNAO, 2004; RNAO, 2013). RNAO recommends that Practice Champions and the network should be established and supported by the leadership team to facilitate and role-model cultural change at the bedside. This further suggests that the leadership culture in a practice environment serves as a vital linkage between clinical practice at the bedside and senior management (RNAO, 2012b). Qualitative video interviews were conducted with all of the BPSO Executives, Leads, Consumer Advisory Council, and Working Parties.

REFLECTION

What in your view are the benefits of conducting BPG implementation evaluation using structure, process, and outcome level indicators? How extensively was this carried out in the Australian experience?

BPSO PHASE 1: EVALUATION RESULTS AND FINDINGS

For the purpose of this section, we will focus on the evaluation of the Australian BPSO Designation at CARS—the inaugural site that has successfully implemented the RNAO clinical and Healthy Work Environment BPGs and attained designate status.

HAS THE IMPLEMENTATION OF THE BPG CHANGED STAFF'S ATTITUDES, BELIEFS, AND KNOWLEDGE?

Next we discuss the results of qualitative and quantitative measures administered in order to address this question.

CCC Practice Champion survey (Tool 1)

The Client-Centred Care Practice Champion surveys were conducted over an 8-month period. Their key results are shown in Figure 17.3.

The positive impact of the Client-Centred Care Practice Champions workshops is clearly illustrated by the survey results. The analysis found that overall, the workshops improved Practice Champions' knowledge and understanding of client-centred care; significantly impacted their confidence and belief in the implementation of evidence-based practice; and increased their belief that the active engagement of patients and their family results in safe patient care and better outcomes.

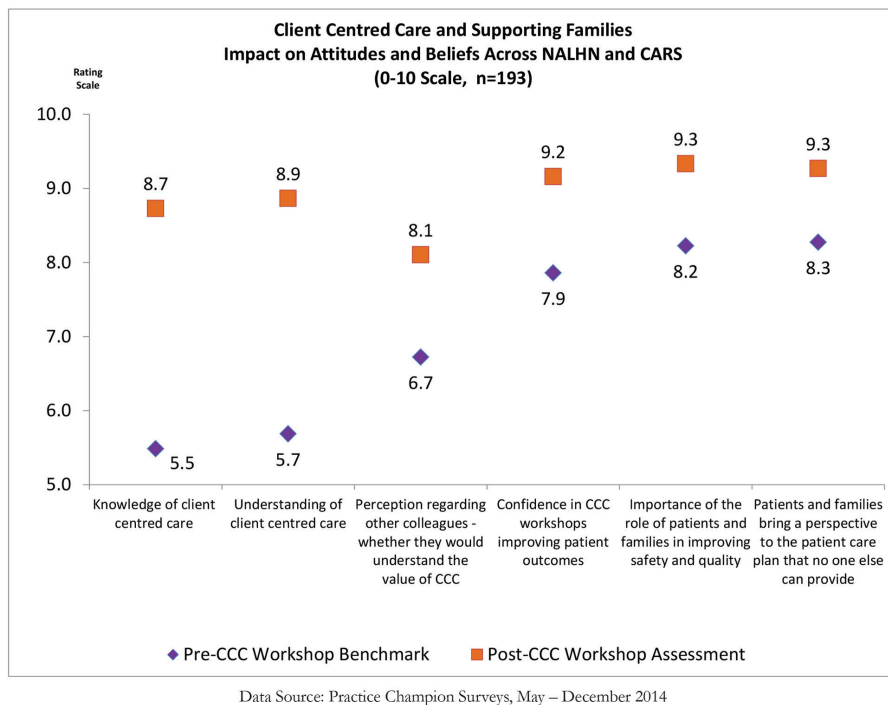


FIGURE 17.3 Results of the Client-Centred Care Practice Champion surveys: May–December, 2014. Copyright ANMF (SA Branch), 2017. Used with permission.

Improved knowledge, understanding, and perception of client-centred care:

- The Practice Champions' knowledge of client-centred care improved from a mean score of 5.5 out of 10 preworkshop to 8.7 postworkshop. This represents statistically significant improvements ($p < 0.001$).
- The Practice Champions' understanding of client-centred care also improved from 5.7 out of 10 preworkshop to 8.9 postworkshop. This represents statistically significant improvements ($p < 0.001$).
- The Practice Champions' perception of client-centred care improved as well from 6.7 out of 10 preworkshop to 8.1 postworkshop. This represents statistically significant improvements ($p < 0.001$).

Increased confidence in client-centred care improving patient outcomes:

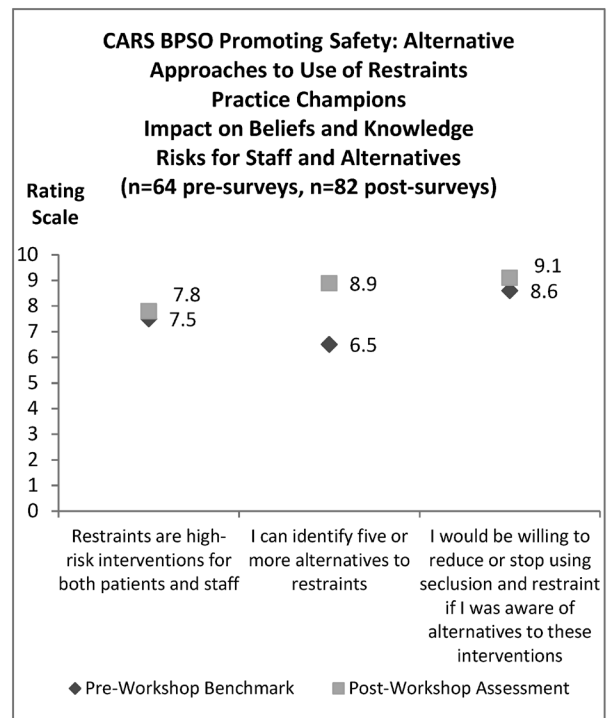
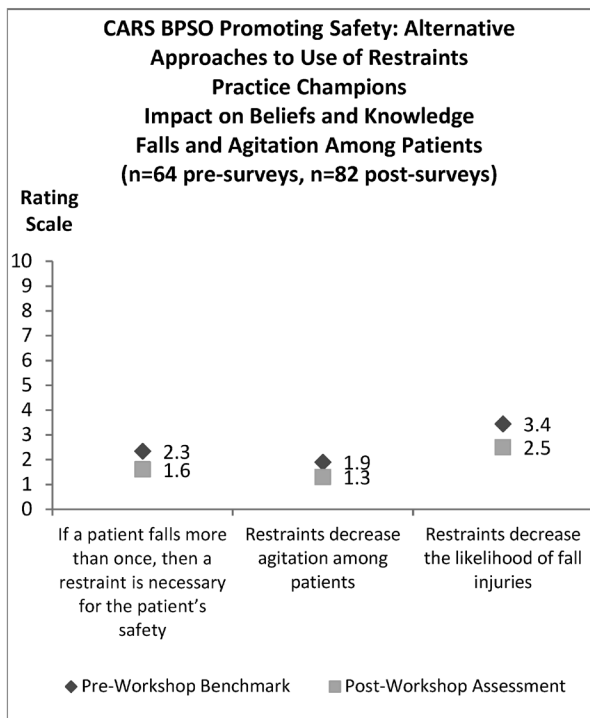
- The Practice Champions' confidence that client-centred care improves patient outcomes increased from 7.9 out of 10 preworkshop to 9.2 postworkshop ($p < 0.001$).

Enhanced knowledge of the need to engage and involve patients and families in all aspects of care:

- The Practice Champions' belief that involving patients and their family members will improve patient safety and quality of care increased from 8.2 out of 10 preworkshop to 9.3 postworkshop.
- The Practice Champions' attitude toward engaging patients and families as active participants in care increased from 8.3 out of 10 preworkshop to 9.3 postworkshop.

Promoting Safety: Alternative to Restraints Practice Champion Survey (Tool 1).

This survey sought to measure the effect of workshops related to the BPG *Promoting Safety: Alternative Approaches to the Use of Restraints* (RNAO, 2012a), conducted ahead of BPG implementation. The results are illustrated by Figures 17.4a and 17.4b. The analysis has found that the workshops have improved Practice Champions' knowledge and understanding of promoting safety and the use of restraints; their ability to identify alternatives; their understanding that restraints are high-risk interventions; and their belief that engagement with patients and their family is important in the use of restraints. In summary, the noticeable changes in knowledge, understanding, and attitude are essential to successful implementation of the guideline recommendations.



FIGURES 17.4A AND 17.4B CARS Practice Champion surveys
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BPSO Focus Group (Measure 1)

A semi-structured BPSO Champions focus group was moderated by the BPSO Leads and the BPSO Program Manager (see Figure 17.5). Focus group participants were asked the following questions:

- What have you experienced throughout your BPSO journey?
- What do you think is the difference of the BPSO Project?
- What does BPSO mean to you?

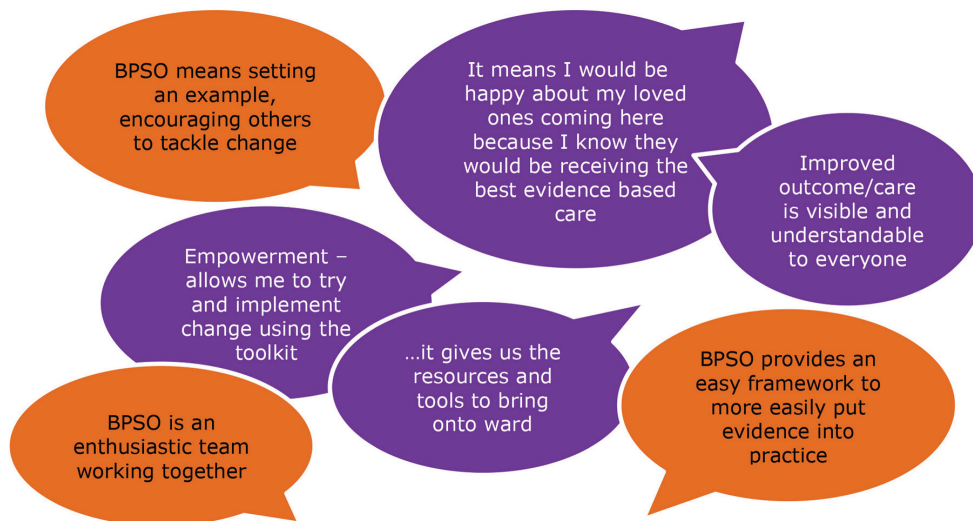


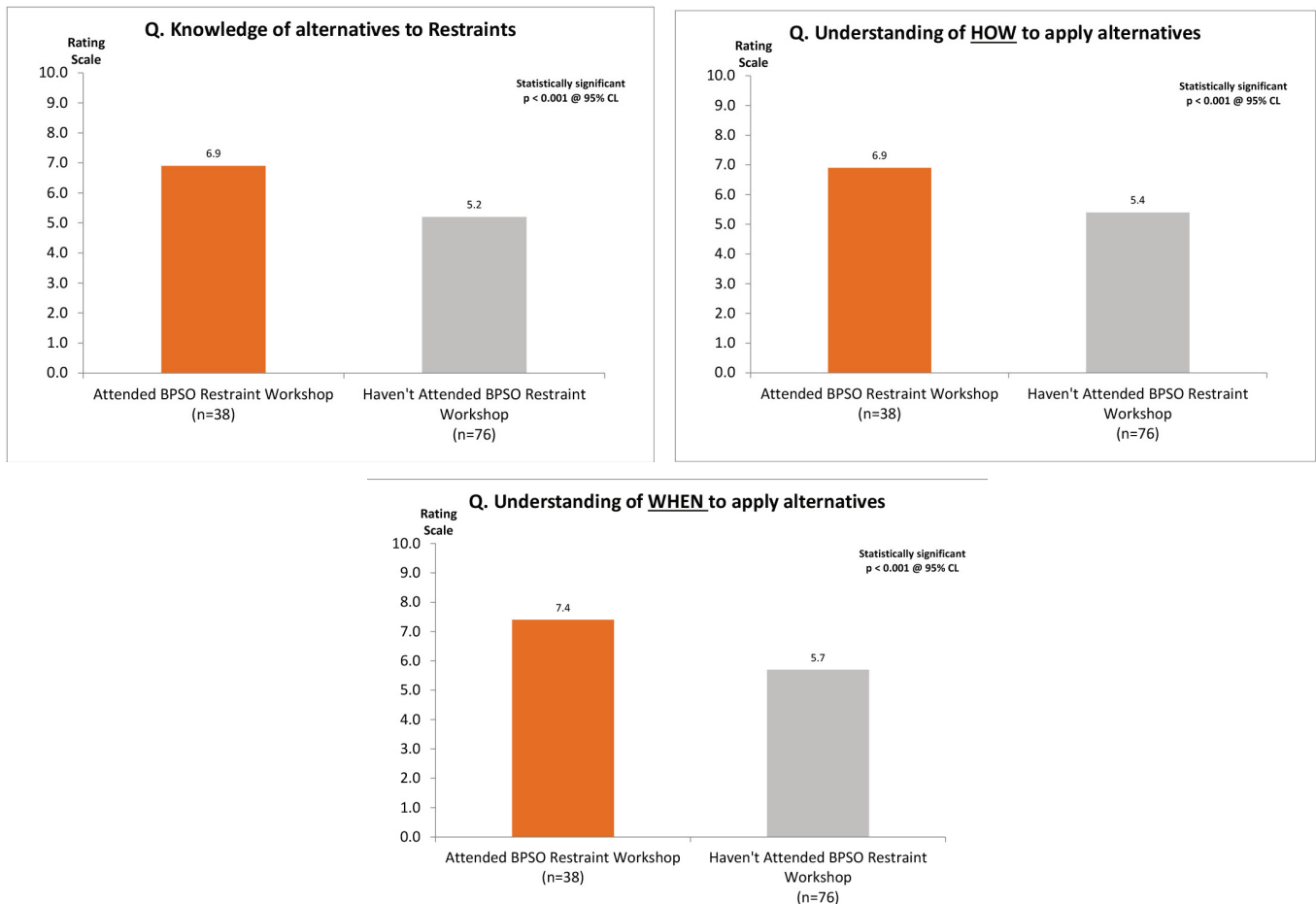
FIGURE 17.5 BPSO focus group responses.
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The key themes that emerged from the focus group are:

- The BPSO Designation has empowered Practice Champions to lead and innovate practice change using the latest research and evidence.
- Practice Champions commonly referred to their reflective journey throughout the BPG implementation process as an avenue that encouraged them to learn, think, and act collectively.
- The BPSO Designation has been pivotal in improving Practice Champions' clinical practice by increasing their knowledge and confidence in implementing BPG recommendations.
- The most common perspective related to the practicality of the program, because it revolves around easy-to-use and easy-to-adapt tools.

Nurse Staff Survey—Alternatives to Restraints (Tool 3)

Out of the 114 responses, 38 nurses attended the BPSO Promoting Safety and Alternatives to Restraints Workshop, and at the time of the survey, 76 nurses had not attended the workshop. The findings of the survey are shown in Figures 17.6a, 17.6b, and 17.6c.



FIGURES 17.6A, 17.6B, 17.6C Staff survey results reflecting changes in knowledge and understanding: Alternatives to least restraints. Copyright ANMF (SA Branch), 2017. Used with permission.

The responses confirm significant improvements amongst workshop attendees in their knowledge and understanding of how and when to apply alternatives to restraints. To sum up, the BPSO workshop on *Promoting Safety: Alternative Approaches to the Use of Restraints* (RNAO, 2012a) has resulted in enhanced knowledge in this area of practice, which is critical to improving patient outcomes, minimizing risks, and engaging patients and families at the centre of care.

HAS THE PRACTICE CHANGED?

To measure the practice change, clinical audits were undertaken. Below are two sample audits that were conducted during the BPSO Designation at CARS, in relation to the selected BPGs that were implemented and the evidence on how the practice changes have been embedded.

Clinical Practice Audit

The BPSO Designation and the Practice Champion workshops have contributed to the positive cultural and attitudinal change within CARS. This clinical practice change is evident in the CARS (HRC) Hourly Rounding Audit. Clinical Rounding was introduced to ensure patient safety and care needs were met each hour.

The audit has shown significant improvements in client-centred practice (see Figure 17.7). Improvements have occurred in all audited areas when compared to the September 2013 audit results. The high average compliance rate in the January 2015 audit has also indicated that HRC is achieving positive practice changes.

ARE THE FOLLOWING CHECKS OF PATIENT SAFETY AND CARE COMPLETED AT HOURLY ROUNDING?		AUDIT JAN 2015	AUDIT SEPT 2013
1	Comfort & safety	96%	52%
2	Call bell is in reach	96%	44%
3	Client status (sleeping, absent, therapy, in common areas)	96%	52%
4	Pain	96%	52%
5	Pressure injury prevention	96%	52%
6	Hydration	96%	52%
7	Continence	96%	48%
8	Handover—Client present	96%	0%
	Staff initials	96%	40%
	Average Total	96%	44%

Data Source: HRC Audit Reports

FIGURE 17.7 CARS–Hampstead Rehabilitation Centre audit report. Audit: Hourly rounding audit collation results. Auditor: R Pearl. Wards: All wards (1C, 1D, 2A, 2B, 2CD). Copyright ANMF (SA Branch), 2017. Used with permission.

CARS Practice Audits: Bed Rails Audit

HRC's positive achievement has also been reflected in the bed rails audits. As part of the implementation process, bed rails/cot-sides were removed, and a matrix was developed to guide the clinical decision. Figure 17.8 displays the results from two audits, conducted in October 2014 and January 2015. The initial audit was designed to look at the compliance rate after the initial introduction of the bed/cot-side matrix.

The October 2014 audit identified areas that needed improvements, including the need to:

- Improve documentation on risk assessment on admission (Q.2)
- Follow the recommendations from the risk assessment (Q.3)
- Improve documentation on clinical reasoning (Q.4)
- Improve documentation on Bed Rail needs reassessment (Q.7)

In comparing the results of the two bed rail audits, it is evident that such improvements have indeed been achieved. The practice of removing bed rails has been embedded, leading to a 100% score in the

latest audit, which indicated that, “no bed rails were required to be removed.” This practice change followed the recommendations from admission assessments, as seen in an increase from 15% in 2014 to 95% in 2015. In cases where recommendations were not followed, there was an increase in documentation on clinical reasoning.

	Section A	Audit Jan-2015			Audit Oct-2014			Comments
		Yes	No	n/a	Yes	No	n/a	
1	Are Bed Rails insitu on bed?	40%	60%	0%	45%	55%	0%	Decrease in Bed Rails in situ on bed
2	Is there documented evidence that a risk assessment has been completed on admission or within first 24 hrs?	95%	5%	0%	20%	80%	0%	Increase in document evidence
3	Have recommendations been followed?	95%	0%	5%	15%	70%	15%	Increase – recommendations have been followed
4	If not, have staff documented clinical reasoning for not following the recommendations in the clinical records?	5%	0%	95%	0%	65%	35%	Improvement in documentation clinical reasoning
5	Have the Bed Rails been removed from the bed if not recommended? (identify in n/a section if client has requested)	20%	0%	80%	55%	25%	20%	Increase in n/a due to no bed rails being on the bed already or the client has requested to keep them
6	Have the Bed Rails been removed from the bed once client is discharged?	0%	0%	100%	65%	25%	10%	100% n/a (no bed rails are required to be removed)
7	Is there documented evidence that the need for Bed Rails has been reviewed?	25%	60%	15%	0%	95%	5%	Increase in document evidence

Data source: HRC audit reports

FIGURE 17.8 Hampstead Rehabilitation Centre practice audit report, January 2015 vs. October 2014.
Audit: Bed Rails
Auditor: S McCormack
Wards: 1C, 1D, 2A, 2B

Documentations on risk assessment and admission also improved. In summary, the challenging behaviour/restraint data and the bed rails audit have confirmed that HRC has achieved a positive cultural shift and evidence-based practice change.

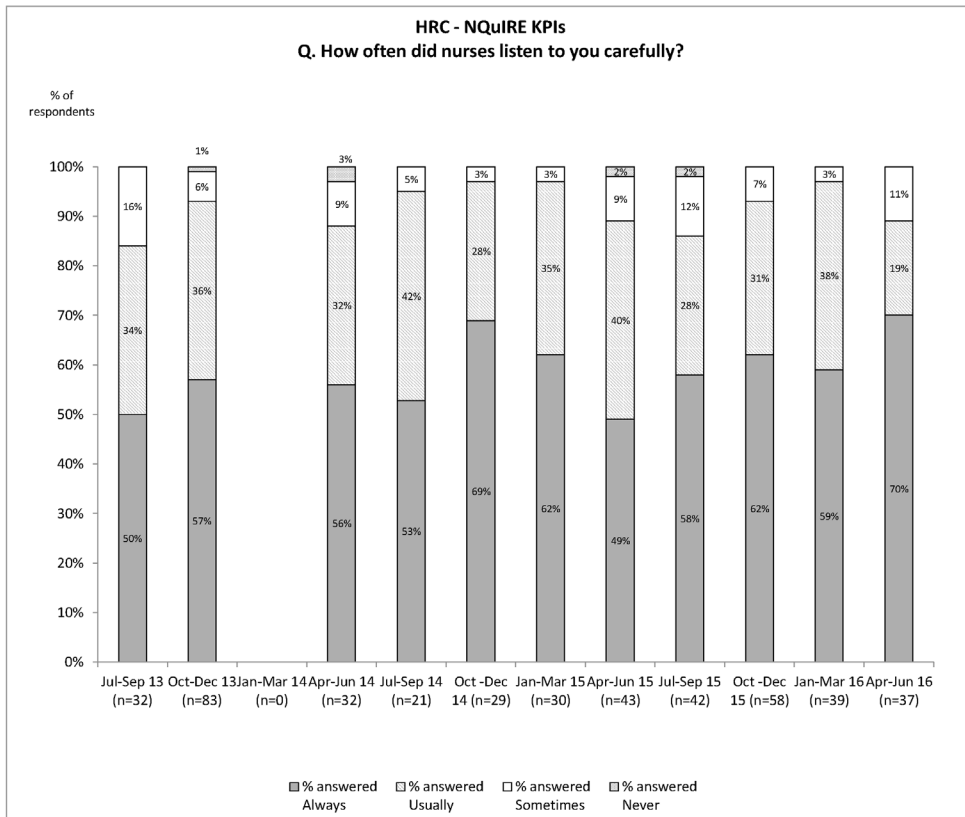
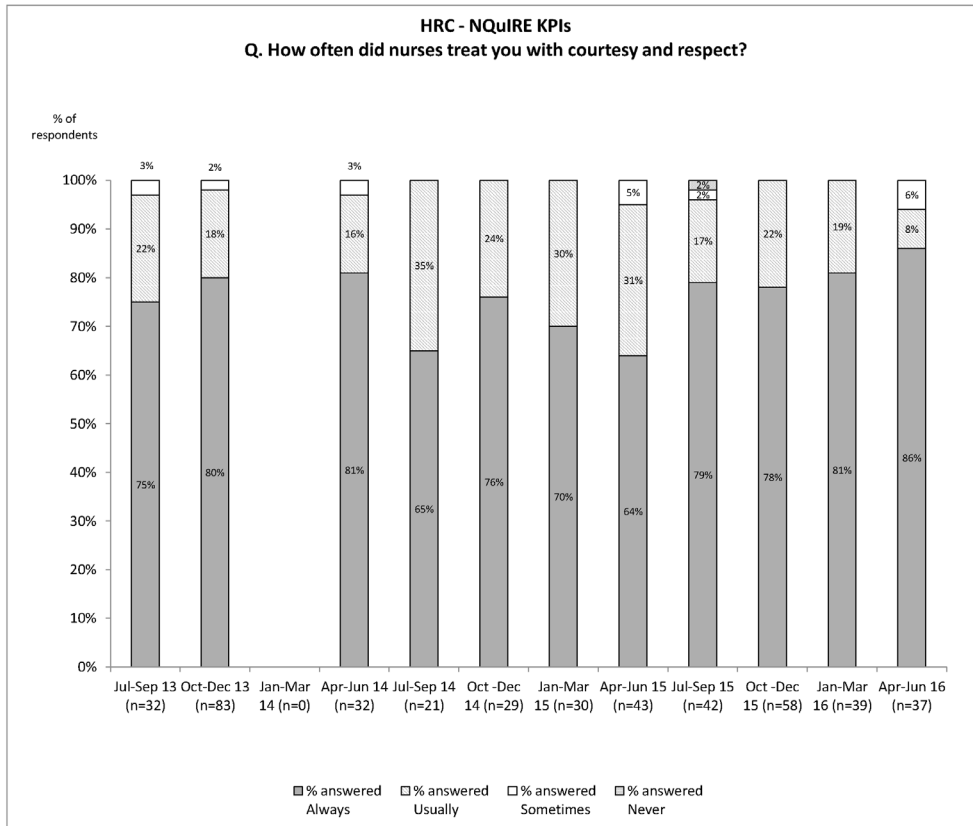
HAS THE BPG IMPLEMENTATION ACHIEVED THE INTENDED OUTCOMES?

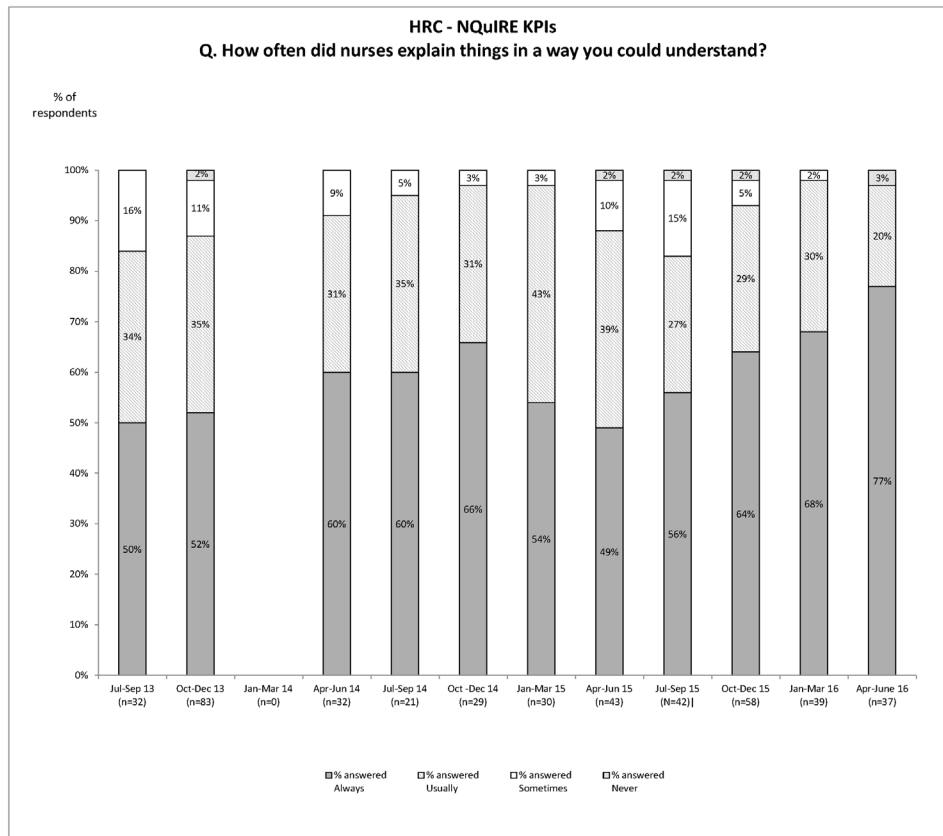
This section discusses the impact of BPG implementation on consumer experience.

CARS Consumer Experience Survey (Tool 2)

The implementation of the HRC Consumer Experience Survey commenced in July 2013, with small sample sizes for analysis. In analyzing the nurse-patient interactions, patients reported improvements in always being treated by nurses with courtesy and respect; nurses always explaining things in a way they could understand; and nurses always listening to them carefully. The patient discharge surveys were collated and analyzed in quarterly periods for comparison purposes.

The charts in Figures 17.9a, 17.9b, and 17.9c provide a summary of the findings.





FIGURES 17.9A, 17.9B, AND 17.9C HRC Consumer Experience Surveys between July 2013 and June 2016.

Data Source: HRC Consumer Experience Survey, July 2013—June 2016

Note: Period January 2014—March 2014: No surveys were received.

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The analysis of consumers' experiences has been an enabler of practice and process improvements. It is noted that the proportion of respondents who mentioned "always" in the three survey questions fluctuated across reporting periods. During the same periods, the South Australian Government made the major announcement that the HRC would be closed, with over 100 rehabilitation beds being realigned to other local health networks. This clearly had a significant impact on rehabilitation nurses and the workplace environment.

SA HEALTH SAFETY AND QUALITY INDICATORS

Evidence-based nursing and midwifery interventions, and systematic collection, analysis, and reporting of nursing-sensitive indicators, have supported the BPG implementation and outcome evaluation with the end goal of improving patient outcomes and quality of care. Nursing-sensitive quality indicators and structural indicators are important in establishing, monitoring, and evaluating evidence-based practice guidelines. It is internationally accepted and recognized that the link between the number of nurses/midwives, education levels, and skill mix directly influence patient outcomes (Aiken et al., 2002; Aiken et al., 2014; Aiken et al., 2017).

PATIENT SAFETY INDICATORS

In order to evaluate the BPSO pilot and how it complemented other safety and quality agenda and organizational priorities, the internationally recognized nursing-sensitive indicators, such as incidence of falls and pressure ulcers, have been analyzed based on their relation to the implementation of the BPG recommendations. Assessment and evaluation were based on the data currently being captured by the systems within the organization.

All (SAC 1 and SAC 2) Incidents—Serious Incidents—Mandatory Reporting Requirement

SAC, Safety Assessment Code, is a numerical score that rates incidents affecting a patient. The score is based on the consequence of that incident and the likelihood of its recurrence, using a risk type matrix. The scale is from 1 to 4, with SAC 1 (extreme) indicating a major incident with significant harm or death, and 4 (insignificant) being a near miss or no harm. The SAC is mandated by SA Health and is used by all public hospitals across South Australia (Government of South Australia—SA Health, 2016). Reporting on the total number of all SAC 1 and SAC 2 incidents at CARS since FY 2012/13 (see Figure 17.10) demonstrates a decrease in both categories that is consistent with the SA Health trend.

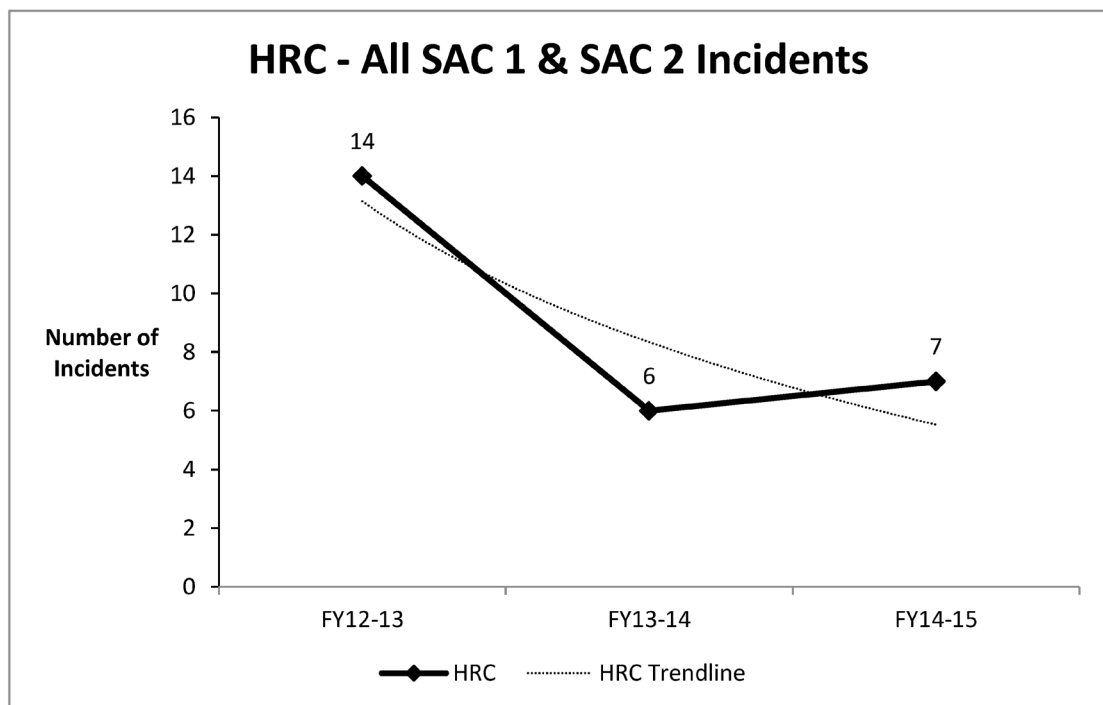


FIGURE 17.10 CARS (HRC) all SAC 1 and SAC 2 incidents, FY 2012/13 to FY 2014/15. Copyright ANMF (SA Branch), 2017. Used with permission.

All (SAC 1 and SAC 2) Falls Incidents—(With Harm and Injury)

From the findings on falls-related incidents with harm and injury, there has evidently been a reduction at HRC (from 11 in FY 2012/13, to 4 in FY 2013/14, and 5 in 2014/15). Moreover, for comparison purposes, there was a 64% reduction of SAC 1 and SAC 2 falls incidents during the 2012/13 period at HRC, compared to an 18.6% reduction in SA Health (across all local health networks). See Figure 17.11.

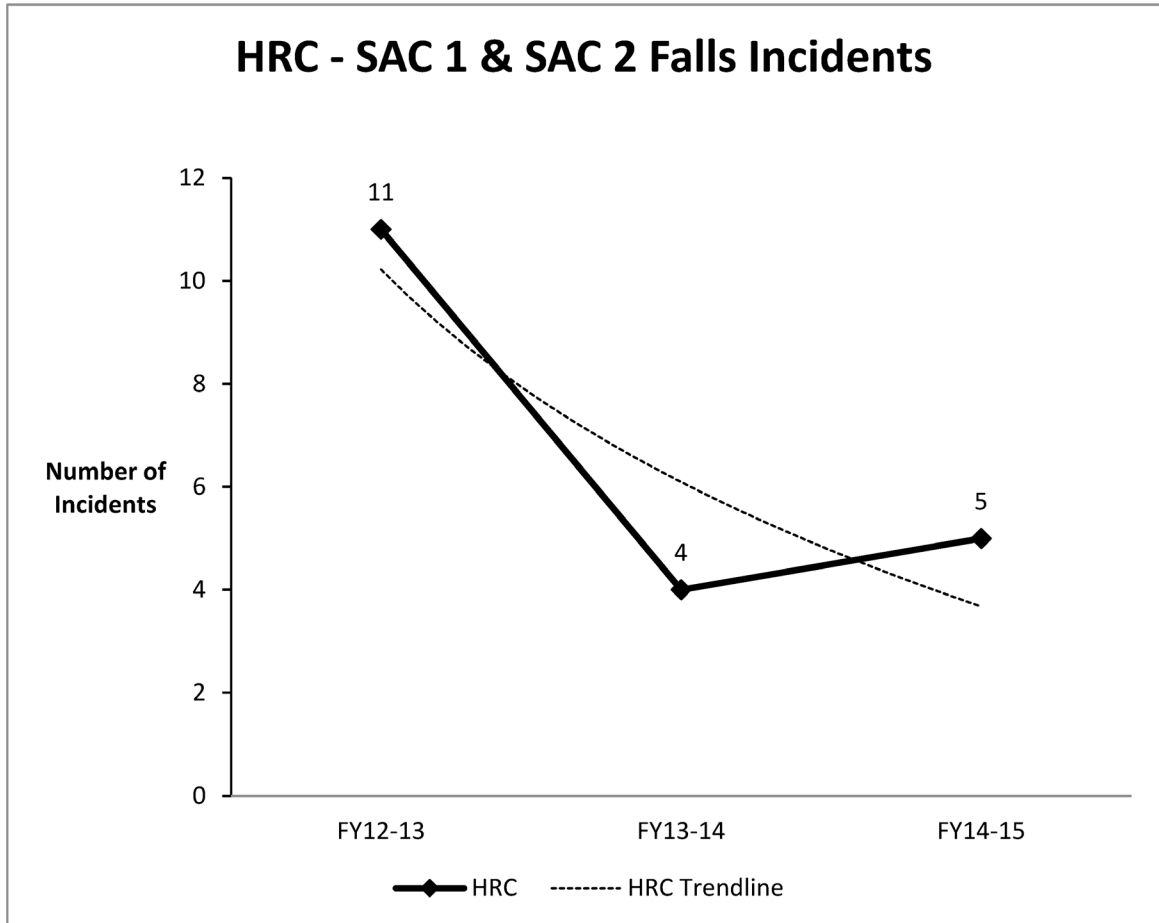


FIGURE 17.11 CARS (HRC) all SAC 1 and SAC 2 falls incidents, FY 2012/13 to FY 2014/15. Copyright ANMF (SA Branch), 2017. Used with permission.

CARS Hospital Acquired Pressure Injury Incidents

At HRC, there has been a reduction (50%) in hospital-acquired pressure injury incidents from 78 in FY 2012/13 to 39 in FY 2014/15 (see Figure 17.12).

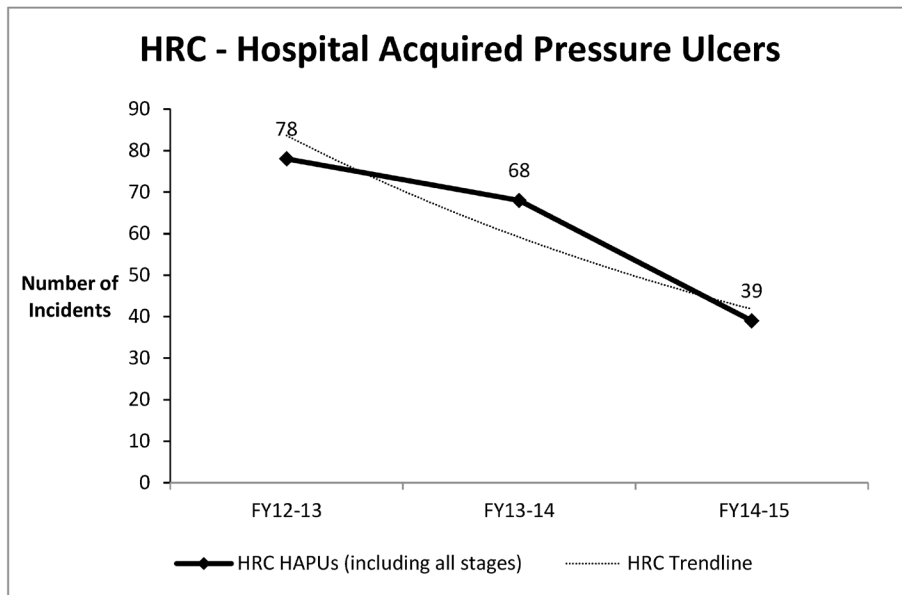
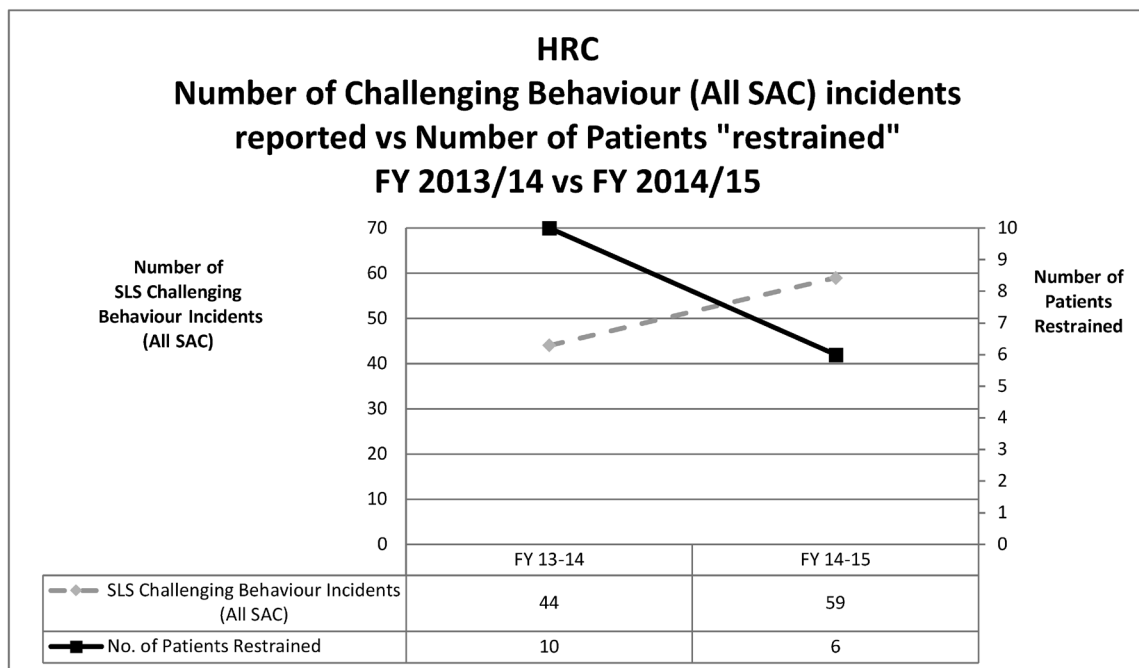


FIGURE 17.12 CARS (HRC) hospital-acquired pressure injury incidents, FY 2012/13 to FY 2014/15. Copyright ANMF (SA Branch), 2017. Used with permission.

Reduction in Restraint

HRC showed an increase in number of reported challenging behaviour incidents and a decrease in the number of patients being restrained (see Figure 17.13). These trends indicate more success in de-escalation, thus reflecting the success of BPG implementation.



Data Source: SLS Reports

FIGURE 17.13 CARS (HRC) challenging behaviour and restraint incidents, FY 2013/14 to FY 2014/15. Copyright ANMF (SA Branch), 2017. Used with permission.

SUMMARY

The adaptation and application of the RNAO BPSO Designation to the Australian context has proven to be successful. Overall, staff and consumer surveys, clinical practice audits and indicator data showed:

- Nurses are better informed and have improved knowledge, understanding, and attitudes toward implementing and embedding evidence-based practice.
- Patients'/clients' hospital experience and nurses/midwives interactions with patients/clients improved.
- There has been a reduction of all incidents (SAC1 and SAC2).
- There has been a reduced incidence of patient/client falls (SAC1 and SAC2).
- There has been a reduced incidence of hospital-acquired pressure ulcers.
- There has been a reduced use of restraints in the environment.

MEASURING ECONOMIC OUTCOMES OF THE AUSTRALIAN BPSO DESIGNATION

To strengthen the case for value of the BPSO Designation for South Australia, it was necessary to consider the cost effectiveness of evidence-based practice in nursing and how the clinical improvements can be translated to an economic argument in terms of “savings” to the health system. There are four main types of economic evaluation in healthcare:

1. Cost minimization, where the consequences are assumed to be the same so only the costs are compared
2. Cost effectiveness, where a ratio of the differences in costs and outcomes is calculated—that is, an incremental cost effectiveness ratio (ICER)
3. Cost utility, where the ICER is based on cost per quality adjusted life years (QALY)
4. Cost benefit, where both costs and outcomes are valued in monetary terms (Gray, Clarke, Wolstenholme, & Wordsworth, 2012; Simoens, 2009)

ECONOMIC IMPACT OF BPG IMPLEMENTATION SHOWN THROUGH COST BENEFIT ANALYSIS

To measure the economic impact of the Australian BPSO Designation, we selected the fourth option: the cost benefit of the program to the South Australian health system, which is illustrated in Table 17.2.

TABLE 17.2 COST-BENEFIT ANALYSIS RELATED TO IMPLEMENTATION OF FALLS AND PRESSURE INJURY BPGS

Australian BPSO Designation Evaluation Indicator	Nurse-Sensitive Indicator Change	Number of Changes in Incidences	\$/Incident* (Based on RNAO Financial Estimates)	Total Savings/ Costs
Reduced incidence of patient/client falls (SAC1 and SAC2)	From total of 11 incidences in 2012/13 to 5 incidences in 2014/15	6	\$35,000 per fall	\$210,000
Reduced incidence of hospital acquired pressure ulcers	From total of 78 incidences in 2012/13 to 39 incidences in 2014/15	39	\$9,000 per pressure injury	\$351,000
Total Savings				\$561,000
Less Investment	(\$50,000 per annum to site BPSO Lead)			\$100,000
Cost Benefit (Net Saving)				\$461,000

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OTHER SAVINGS THAT ARE RELATED TO REDUCTION IN RESTRAINT

The systematic cost of restraint is difficult to quantify. There is limited information in the literature on the economic evaluation that demonstrates the link between cost savings and prevention of restraints.

It has been established by RNAO, as part of the literature reviews, that a relationship does exist between restraint and patient/client falls. However, there is a large degree of variability based on the outcome or injury of the patient fall—serious/life threatening to no physical harm. In the Australian BPSO economic evaluation, we have explored and considered multiple factors, such as staffing (hours per patient day), reductions in length of stay, and range of interventions. Therefore, we are exploring a model that could provide to the base for the economic measurement of the benefits of reduction in restraints. The potential financial savings and implications associated to each of the restraint episodes are depicted elements of the model in Figure 17.14.

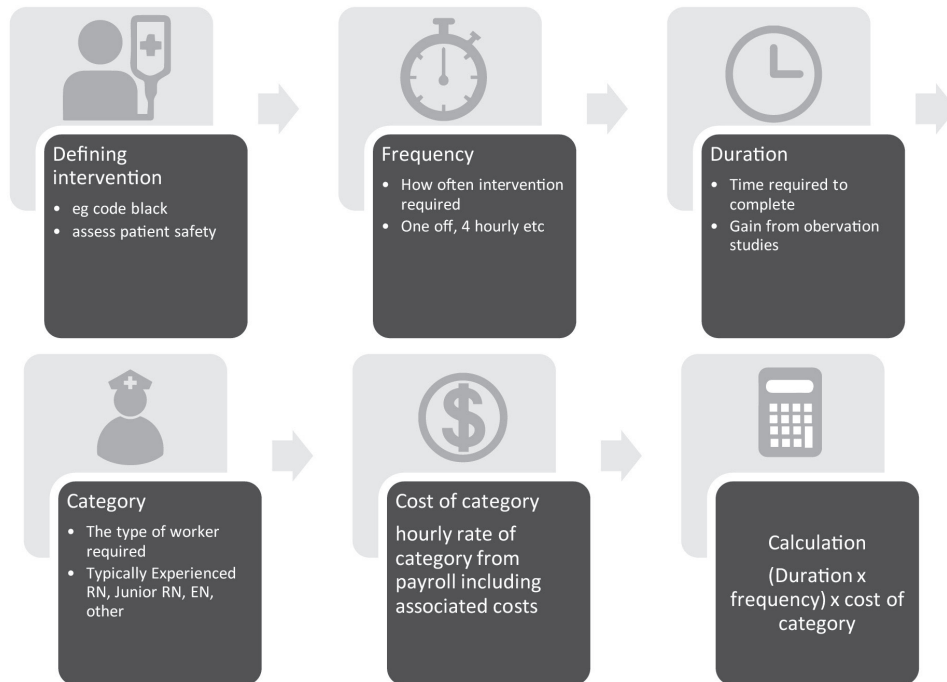


FIGURE 17.14 Financial implications and potential savings model.
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CALCULATION METHODOLOGY

The calculation methodology was based on:

- Defining the intervention eliminated or reduced (actions related to restraint such as code black team attendance, evaluation of impact on skin integrity, safety, etc.)
- Identifying the frequency of the interventions that would have been required
- Identifying the duration of the intervention (time required)
- Identifying the person(s) who would be required to undertake the intervention (by staff category)

The calculation is performed in two parts. First, the total amount of nursing time is calculated based on the intervention frequency and duration. Then the total nursing time is multiplied by the cost of relevant staff, which equals the costs saved.

REFLECTION

How do these evaluation results relate to your own experiences and, in your view, have they been effectively captured? Consider how you would explain the value-add of BPG implementation using these results.

CONCLUSION

The adapted RNAO BPSO Designation has contributed significantly to the growing body of knowledge and understanding of how to successfully bridge the gap between evidence, knowledge, and practice in Australia. Following the success of Phase 1, the Australian BPSO Designation has been extended to Phase 2. The coaching, mentoring, and support for three (out of four) metropolitan local health networks in South Australia has led them to fulfill their goal of becoming the “change that they wanted to see.” The systemic approach used in the BPSO Designation, and specifically with BPG implementation, has resulted in a shift to an evidence-based practice culture in which decision-making about healthcare and service delivery is based on the best evidence possible; hospital policies and procedures are standardised; and care variation is reduced, thus ensuring consistent, quality, safe care.

We have successfully advocated for and attained funding for the Australian BPSO Designation within a financially constrained system. Our comprehensive evaluation was able to demonstrate significant improvements, not only with patient and nurse satisfaction, but at a system level with evidence of enhanced efficiencies and financial performance. Based on data and testimony, the value for money proposition further reinforces that nurses and midwives using evidenced-based practice within a healthy work environment do make a difference at all levels.

KEY MESSAGES

- Implementing evidence-based practice guidelines requires a systematic, organizational-level approach.
- Nursing practice based on evidence produces positive clinical outcomes for patients.
- Nursing practice based on evidence saves money for the system.
- The BPSO Designation and its impact on client, provider, organization, and system outcomes has led to increased respect from government for nurses as knowledge professionals and for the nursing association’s work.

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