Understanding Licensed Practical Nurses’ Full Scope of Practice
Research Study

FINAL REPORT

Submitted to: College of Licensed Practical Nurses of Alberta

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Executive Summary

In February 2011, the Office of Applied Research at Bow Valley College was commissioned by the College of Licensed Practical Nurses of Alberta (CLPNA) to conduct a research study: *Understanding Licensed Practical Nurses’ Full Scope of Practice*. The study was funded by Alberta Health (AH), with the goal of providing objective, research-based evidence focused on LPNs in typical health care settings and exploring the factors that promote and/or inhibit successful LPN scope utilization. The following questions were investigated:

1. What can we learn about LPNs’ practice that promotes or inhibits their ability to practice to full scope? How can supports be enhanced? How can barriers be reduced?
2. What can we learn about LPNs’ work teams and systems that promote or inhibit their ability to practice to full scope? How can supports be enhanced? How can barriers be reduced?
3. What can we learn about LPNs’ organizations that promote or inhibit their ability to practice to full scope? How can supports be enhanced? How can barriers be reduced?
4. How do these practice-based, system-based, or administrative factors affect the quality of patient care?

The research was guided by a steering committee made up of senior representatives from Alberta Health Services (AHS), AH, the Alberta Continuing Care Association (ACCA), leaders in nursing research and nursing education, LPN representatives, and the three professional nursing organizations: the CLPNA, the College & Association of Registered Nurses of Alberta (CARNA) and the College of Registered Psychiatric Nurses of Alberta (CRPNA). The study involved the following research activities:
1. **Literature Review:** A literature review was used to inform the methodological approach for this study and to identify a range of factors most likely to influence LPNs’ ability to work to their full scope. Based on findings from the literature, a Scope of Practice Factors Model was designed, highlighting the role of individual, team, client, and organizational factors that can influence scope utilization.

2. **Survey:** Online and mail-in surveys were distributed to all practicing LPNs who were current members of the CLPNA. Based on the Scope of Practice Factors Model, the survey obtained current information on LPNs in Alberta by asking a range of questions about their practices and perceptions. A total of 2313 LPNs responded to the survey.

3. **Case Studies:** Six comparative case studies were performed at sites across Alberta. Sites were chosen based on a Scope Indicator variable produced from the surveys. Sites were selected to represent areas of high and low LPN scope, acute and long term care, urban and rural settings, and large and small facilities. Validated instruments used for data collection at the sites included interview and focus group protocols for senior managers, team leaders, LPNs, and team members. A standardized survey instrument was adapted for use with patients.

4. **Policy Review:** Policy documents were reviewed and interviews were conducted with leaders in the Alberta Health System, in order to shed light on the policy context of the research.

**The Research Process**

The study received formal approval from the Community Research Ethics Board of Alberta (CREBA), the Bow Valley College Research Ethics Board, and from the five zones in
which the case studies took place. The findings from case studies were validated by the senior site administrators, and findings were rolled up in a cross case analysis. After all components of the study were completed, a data triangulation table was constructed, which illustrated the consistency of findings from the four data sources and provided opportunity to see where findings were congruent with previous research, while also highlighting new and contradictory results.

Study Findings

Study results were categorized according to the individual, team, organizational, and system factors found to affect LPN scope utilization. Key findings are presented below:

**Individual factors.**

- There has been an increase in both perceived and actual LPN scope utilization compared with earlier studies, yet a gap between LPNs’ perceptions of skill utilization and their actual practice exists

- LPNs varied in terms of their certification (certificate or diploma) and the amount and content of post-basic education they had attained. More formal education was associated with improved nursing competencies, confidence, critical thinking, and math skills. In long term care facilities, more education was also linked to an improved ability to communicate with residents and families.

- Overall job satisfaction among LPNs was found to be quite high. LPNs who reported using more of their competencies had a significantly higher level of job satisfaction. A higher proportion of LPNs at low scope case study sites reported dissatisfaction with their job compared with LPNs at high scope sites.
• LPNs were generally motivated to take advantage of opportunities for professional development, including taking on additional competencies and responsibilities in the workplace. Conversely, a lack of motivation on the part of some LPNs to expand their skill set was seen by coworkers to pose a barrier to full scope utilization.

**Team factors.**

• A lack of time and a heavy workload interfered with the range of skills LPNs could perform. LPNs tended to take on more responsibilities, in instances where fewer RNs were available on the unit, such as during night shifts or when LPNs were called in by unit management as a financial strategy to avoid going into overtime with an RN.

• Variability in assignment was usually linked to individual team leaders. In acute care settings in particular, assignment was based largely on the patient’s level of complexity.

• By and large, LPNs were seen by coworkers as valued members of their care teams. Though there was some variation in the degree to which greater LPN scope utilization was embraced by RNs, a number of them described higher LPN scope utilization as an effective workforce strategy.

• Management and leaders often provided opportunities for LPNs to practice new and infrequently used skills. Variation in understanding and acceptance of LPN scope was evident among team members and managers.

• Collaboration and communication were related to the optimization of care team roles, and poor communication was a significant barrier. LPNs at high scope sites received guidance, teaching, and mentoring from RNs and other team leaders. The value of peer support was also noted.
Organizational factors.

- Role ambiguity remains a key barrier to LPN scope utilization. Inconsistencies in the accuracy of LPN job descriptions in relation to their day-to-day work were frequently noted.
- Managerial encouragement for LPNs to enrol in post basic training was not always matched by funding and/or formal approval to participate. Post-basic training, professional development opportunities, and organizational support for these varied by site.

System factors.

- There is a lack of clarity with regard to regulations and policy throughout the system, and more direction from government and/or governing bodies was sought.
- Senior leaders indicated a strong commitment to policy change with regard to the expanded capabilities of the LPN role, and describe it as “a work in progress”.

Recommendations

As a result of discussion with the study steering committee, five broad-based recommendations were proposed. These are expected to enable a number of strategies related to the utilization of LPNs to their full scope of practice, which are outlined in the full report.

It is recommended that:

1. A strong case to be made to Alberta Health to lead the creation and articulation of a clear, compelling and shared vision of nursing practice in Alberta, where there is clarity regarding the competencies and the roles of the three nursing designations LPN, RPN and RN.
2. Regulatory bodies, employers, and individual LPNs assume joint responsibility and accountability to identify, provide, and access learning opportunities.

3. A detailed strategic plan and implementation plan be developed to assist all players with their role in implementing and facilitating change regarding scope of practice for all nursing professions.

4. More research be conducted to study the roles and opportunities for LPNs in areas such as emergency care, family care clinics and primary care, labour and delivery, mental health, home care, and leadership; and

5. A knowledge translation plan be created with input from all stakeholders to ensure that the findings of the study and its recommendations are widely disseminated and used to reach the different levels of staff.
Study Overview

In February 2011, the Office of Applied Research at Bow Valley College was commissioned by the College of Licensed Practical Nurses of Alberta (CLPNA) to conduct a research study: Understanding Licensed Practical Nurses’ Full Scope of Practice. The study was funded by Alberta Health (AH).

The project relates directly to Goal 3 (“Appropriate health workforce development and utilization”) of the AH Business Plan (AHW, 2012). The Government of Alberta recognizes the importance of differentiated practice and the utilization to full scope of practice by all nursing groups. It also recognizes that the implementation of innovation and increased operational efficiency “must be done prudently” (AHW, 2010) and that prudence requires evidence upon which policy and staffing decisions should be based.

Scope of practice for Licensed Practical Nurses (LPNs) has received little attention in nursing research. Only a small number of studies have examined the complex array of factors that impact the utilization of LPNs in healthcare teams, and in turn, the impact of their utilization on the quality of patient care. The existing evidence related to LPNs is “limited and mixed” (Harris & McGillis Hall, 2012, p. 15) and this scarcity has been a barrier to policy and to decisions related to practice. The present study was designed to address this gap and to add to the body of evidence-based knowledge related to nursing staff mix that specifically focuses on LPNs.

The goal of this research study was to provide objective, research-based evidence that focused on LPNs in typical healthcare settings and explored the factors that promote and/or inhibit successful LPN scope utilization. The following questions were investigated.
1. What can we learn about LPNs’ practice that promotes or inhibits their ability to practice to full scope? How can supports be enhanced and barriers reduced?

2. What can we learn about LPNs’ work teams and systems that promote or inhibit their ability to practice to full scope? How can supports be enhanced and barriers reduced?

3. What can we learn about LPNs’ organizations that promote or inhibit their ability to practice to full scope? How can these supports be enhanced? How can these barriers reduced?

4. How do these practice-based, system-based, or administrative factors affect the quality of patient care?

The study involved the following research activities:

- a literature review of relevant documents and research studies;
- a provincial survey of members of the CLPNA;
- six case studies at sites across Alberta that were selected based on the survey results to represent areas of high and low LPN scope of practice, acute and long-term care, urban and rural settings, and large and small facilities; and
- a review of policy-related documents and interviews with key high-level decision makers in Alberta designed to examine the existing policy context for the study.

The research was guided by a steering committee that was made up of senior representatives from Alberta Health Services (AHS), AH, the Alberta Continuing Care Association (ACCA), leaders in nursing research and nursing education, LPN representatives, and the three professional nursing organizations: the CLPNA, the College & Association of Registered Nurses of Alberta (CARNA), and the College of Registered Psychiatric Nurses of Alberta (CRPNA).
Structure of the Report

This report presents the culmination of 18 months of intensive research activity, presented in the following order.

Chapter 1: Introduction. Background and overview of the study

Chapter 2: Review of the literature. The research and policy literature that has informed all stages of the study is reviewed.

Chapter 3: Methodology. This chapter reviews the methodological considerations, the methods used for each of the study components, and the strengths and limitations of study findings.

Chapter 4: Findings of the CLPNA membership survey. The findings from a survey disseminated to all the members of the CLPNA are presented. The survey provided data that informed the selection of sites for the case studies and provided answers to key research questions from the perspective of LPNs.

Chapter 5: Findings of the cross-case analysis of six case studies. The cross-case analysis from six validated case studies conducted at sites throughout the province of Alberta is presented.

Chapter 6: Findings of the policy study. Findings based on interviews with five leaders in Alberta’s healthcare system are presented.

Chapter 7: Conclusions and recommendations. This chapter integrates the findings from the literature review as well as the survey, cross-case analysis, and policy study and presents key findings, conclusions, and recommendations.
Review of the Literature

This section highlights key research and policy documents that have informed the study. The characteristics of LPNs are described, followed by a review of documents and research relating to scope of practice. Research related to factors that inhibit and promote full scope of practice is reviewed, and the methodological challenges related to quality of care and patient outcomes research are highlighted. The section ends with a review of the policy documents related to LPNs’ scope of practice. The term “nurse” is used inconsistently in the literature, sometimes referring to all nursing professions and sometimes to one specific group. In this report, the term “nurses” will be used when referring to any combination of LPNs, RNs, and/or RPNs and otherwise, a specific designation will be used.

Licensed Practical Nurses in Alberta

Practical nursing has a long history in Alberta, beginning in response to a post-World War II nursing shortage in 1947 and evolving into the regulated health profession that it is today. In its earliest form, LPNs required a 40-week training course and their work was similar to that of a health care aide (HCA) today.

From 1995 to 1999, a mandatory education upgrade was implemented for all LPNs holding a certificate, which included courses in physical assessment, medication administration, and infusion therapy. As of 2006, the educational requirements to become an LPN were expanded from the certificate to the diploma level with a minimum of 1,650 instructional hours, composed of 750 hours of theory and 900 hours of laboratory and nursing practice. At the end of their program, students are now required to fulfill practicum requirements under the supervision of a preceptor; one is a focused practicum of at least 105 hours in maternity, pediatrics, mental health, or community health and the other is a concentrated clinical experience of at least 140
hours to allow for consolidation of theory and to help students transition to the graduate practical nurse role.

Certificate graduates were not required to upgrade to a diploma, as the mandatory upgrade covered the required competencies. However, integral to the transition from the certificate to the diploma was the requirement to complete university level arts and science courses, which, according to the Educational Standards Advisory Committee (ESAC) was thought to contribute to the development of critical thinking (Standard 2.5.5-2.6) (ESAC, 2010). The instructional methods embedded in the new diploma curricula moved away from rote learning to problem solving and critical thinking. These more general skills were not part of the required upgrading for certificate graduates.

Once graduated, LPNs can develop their competencies through further independent study, work experience, and post-basic training. It is therefore to be expected that there will be differences in the skills and abilities of LPNs related to the time they graduated and the past training in which they participated. LPN competencies include basic, additional, and specialized knowledge, as well as skills, behaviours, and attitudes that contribute to their profession. LPNs are required to obtain all basic competencies. Their expertise will vary according to their work experience, the practice setting, and specialized training (CLPNA & AHW, 2005).

In 2011, there were 9,071 active licensed practical nurses registered in Alberta (CLPNA, 2011). Licensed practical nurses are employed in a broad range of healthcare settings throughout the province of Alberta. Examples of areas of responsibility include geriatrics, pediatrics, obstetrics, medical, surgical, doctors’ offices, home care, emergency care, and community health services.
Job Characteristics and Working Conditions

The Canadian Institute for Health Information (CIHI) reported that LPNs were significantly less likely than registered nurses (RNs) and registered psychiatric nurses (RPNs) to be employed full-time in nursing (CIHI, 2010). According to this report, only 49.6% of LPNs were employed full-time, compared to 58.0% of RNs and 66.6% of RPNs. Similarly, the latest census data (Almey, 2007) revealed that the proportion of all Canadian women employed part-time is not as high as among LPNs (26.8% versus 30.4% respectively) (CIHI, 2010).

Descriptions of LPN work revealed precarious employment characterized by unstable, temporary, and part-time work, employment with limited social benefits and statutory entitlements, job insecurity, low wages, and high risks of ill health (Vosko, 2006). The 2007 CLPNA Survey showed that almost half (46.3%) of LPNs in Alberta worked part-time and 13.3% worked as casual employees. An additional 19% of LPNs worked for two or more employers and a large number of LPNs were unemployed. All of these figures were above the provincial averages for other professions. In Saskatchewan, the 2010 Saskatchewan Association of Licensed Practical Nurses (SALPN) survey found that 58.3% of LPNs worked full-time and that 12.9% worked for two different employers. To date, there are no studies that describe the impact of part-time employment and working conditions on job satisfaction of LPNs or their ability to apply their knowledge and skills effectively.

A number of interactive factors may relate to job satisfaction among LPNs. These include team dynamics, job demands, control, support, and burnout (Harwood, Ridley, Wilson, & Laschinger, 2010). Trust and respect have been highlighted as key components of collaborative team dynamics (Abe & Henly, 2010; Atwal & Caldwell, 2005; Donald et al., 2009; Horton, Tschudin, & Forget, 2007). Mentorship and supportive learning relationships have been found to
impact RN engagement (Mills, Francis, & Bonner, 2008; Phelan, Barlow, & Iverson, 2006). The emotional engagement of nurses with their patients is related to excellence in nursing care (Henderson, 2001; Meier, 2005), but this can be seen as a form of job demand that is significantly associated with exhaustion and de-personalization and, consequently, with the quality of the work. To date, this has not been studied specifically with regard to LPNs. A Canadian Union of Public Employees (CUPE) (2003) study linked full scope utilization, the ability to work as part of a team, and the feeling that their skills are valued to job satisfaction. In another study (Castle, Degenholtz, & Rosen, 2006), compensation, management, promotional opportunities, relationships with residents, and perceived quality of care were also linked to job satisfaction.

**Scope of Practice**

There are various definitions of “scope of practice” in the literature and little agreement on how it is to be defined, described, or evaluated (Hanover Research, 2010). While scopes of practice of different professions were historically seen as exclusive, according to the Canadian Nurses Association (CNA) there is growing awareness that this is no longer realistic in the health professions (CNA, 1993). Besner et al. (2005) found different definitions and a lack of agreement about the definition of scope and chose to define scope of practice in terms of nurses’ own descriptions of what it means to work to full scope of practice. According to Besner et al. (2005), nurses tended to describe scope of practice in terms of their day-to-day tasks. White et al. (2008) also concluded that nurses use tasks rather than roles to discuss scope of practice. Findings of one US study suggested that LPNs tended to focus more on nursing tasks, whereas RNs tended to focus more on the “big picture” and on ensuring resident safety (Vogelsmeier, Scott-Cawiezell, & Pepper, 2011). This finding needs to be considered in light of different levels
of training in the US and Canada. Yet, as pointed out by the CNA in 1993, there has been an increased understanding

that the boundary of nursing practice cannot be determined only by listing tasks and rules that are often incomplete and soon outdated. Past reliance on this approach has contributed to the lack of clarity and agreement about the scope of nursing. (CNA, 1993, p. 10)

Scope is guided by professional legislation that describes, defines, and controls the practice of nursing, as well as by self-regulation based on standards for entrance to and practice in the profession. It is the legal definition of nursing practice included in the professional legislation that establishes the basis for scope of practice. This is important because it is frequently used by employers and insurers to describe the limits of employee duties and insurance coverage. The CNA stated that “venturing outside the scope of professional nursing practice (i.e., as occurs in the preparation and dispensing of medications) is fraught with risk of legal liability, particularly as this may involve nurses engaged in activities beyond their education and competence” (1993, p. 277). On the other hand, confusion sometimes occurs when the legislated scope, which by definition determines the ceiling, or upper limit of skills, is confused as a description of what all nurses should be doing (Clarke, 2012, personal communication).

Nursing practice is defined legally in quite a broad way, and professional nursing bodies specify the details on how these broad definitions are interpreted and applied. For example, the CNA provided the definition: “Activities that [nurses] are educated and authorized to perform as set out in legislation and complemented by standards, guidelines, and policy positions of provincial and territorial nursing regulatory bodies” (2007, p. 13). In Alberta, the Government of
Alberta Health Professions Act (2003) provides general regulations and a list of permitted interventions for which LPNs in Alberta are authorized (CLPNA & AHW, 2005). In their Code of Ethics and Standards of Practice, the CLPNA provided a definition of the LPNs’ scope of practice as “the roles and responsibilities of the Licensed Practical Nurse to perform safe, competent, and ethical nursing care as defined by education, legislation, and the regulatory authority” (CLPNA, 2008a, p. 4).

There is little research that specifically examines LPNs and their scope of practice. Some studies involved relatively small samples, but nevertheless represent an important contribution because of the scarcity of research in this area and the significance of their findings (Besner et al., 2005; Oelke et al., 2008; White et al., 2008). However, because these studies were limited to acute care sites, it is difficult to generalize their results to other healthcare settings.

Several studies in the literature have described the underutilization of nurses. In a study of three western Canadian health regions, White et al. (2008) found that only 48% of nurses felt they were working to full scope of practice. RPNs were the most likely to report working to full scope, although many of them also felt underutilized (i.e., not working to full scope) and few LPNs perceived that they were working to full scope. Allard, Frego, Katz, and Halas (2010) found that 61% of nurses felt they were working to full scope. Although these studies did not focus on specific results related to LPNs, they illustrate that underutilization of skills is a widespread problem experienced by many nursing groups in the healthcare system.

Several Canadian studies point to the underutilization of LPNs (CUPE, 2003; CLPNA, 2007; Farrow, 2001; Matchim, 2006; SALPN, 2010). A survey and five case studies conducted by CUPE (2003) and by a committee of employers and LPNs found that approximately 60% of LPNs in Saskatchewan did not utilize all of their skills. In particular, despite the fact that an
overwhelming majority of LPNs (92%) had completed the certification course, less than half (40.9%) were regularly permitted to administer medications. The study also found a substantial difference in LPN utilization in different parts of Saskatchewan, depending on the model of care practiced in each region. Different healthcare sectors also significantly varied in scope utilization, with the most complete skill utilization occurring in long-term care. Underutilization of skills had considerable negative consequences for many LPNs, including frustration, stress, lack of confidence, disengagement, and/or demoralization. These consequences varied significantly by region and sector and corresponded to utilization levels. The case study findings revealed significant benefits associated with enhanced LPN utilization, as demonstrated by LPNs’ and managers’ perceptions of better quality healthcare and an increased level of job satisfaction and commitment to their work. In Farrow (2001), LPNs were thought to be losing some of their competencies by not working to full scope.

LPN utilization appears to have changed very little in recent years. The 2010 SALPN survey found that 50% of LPNs in Saskatchewan worked to their full scope of practice, which represented no change from their findings of 51% in 2006 and a small increase from 44% in 2004 (SALPN, 2010). In Alberta, there has been an increase in the number of LPNs who reported working to full scope of practice from 33% reported in 2002 to 51% in 2007 (CLPNA, 2007). It should be noted that these surveys relied on practical nurses’ perception of their utilization, rather than on objective measures.

While most of the research reviewed points to underutilization of LPN scope, a recent American study by Mueller, Anderson, McConnell, and Corazzini (2012) concluded that LPNs may be required to function outside their scope of practice due to either the unavailability of RNs or the employers’ lack of knowledge about their scope.
Barriers and Facilitators to Full Scope of Practice

A number of studies in the literature have identified certain barriers and facilitators in the workplace that affect the optimization of nurses’ roles. Barriers included patient complexity, lack of time, workloads, poor team communication, territoriality, ability to relinquish power, and nurses who have not maintained their competencies. Similarly, facilitators found to affect role optimization were increased support from management, including support for continuing education and greater collaboration between nursing team members (Harris & McGillis Hall, 2012; National Advisory Council of Alberta [NACA], 2006; Oelke et al., 2008). Despite recommendations for enhanced interprofessional training to increase collaboration in nurses (D’Amour, Goulet, Labadie, San Martin-Rodriguez, & Pineault, 2008; NACA, 2006; Phelan et al., 2006), a recent Cochrane review found that there was insufficient evidence to make any conclusions about the effect of interprofessional education on nursing practice or patient outcomes (Reeves et al., 2009).

Several studies examined organizational barriers to the implementation of full scope of practice. Three studies (Besner et al., 2005; McGillis Hall, 2003; Oelke et al., 2008; Pearson, 2003; Szigeti, Laxdal, & Eberhardt, 1991) described role ambiguity as a significant factor, explaining that staff was often uncertain of the overlap and the boundaries between their groups. Pearson proposed that nurse planning arrangements should “ensure greater coherence and clearer lines of nurses’ roles and responsibilities” (2003, p. 1). Oelke et al. (2008) recommended strategies that would encourage teamwork, role clarification, and redesign, as well as improve interprofessional relations. The interrelated relationship between role ambiguity, job satisfaction, and delegation has been noted (Besner et al., 2005; Quallich, 2005; Tarrant & Sabo, 2010).
A qualitative study that focused on the practice of acute care nurses (Besner et al., 2005) found strong evidence demonstrating the unmatched expectations nurses had based on their education versus limitations on what is “allowed” when they encounter their practice setting. According to this study, the most important factors to determine nurses’ scope of practice were workload, patient complexity, professional relationships, availability of resources, and supportive management. This study also found a significant level of role overlap and role ambiguity across occupational groups, as well as between disciplines. The resistance to LPN involvement was said to emerge from managerial fears that LPNs might replace RNs, rather than viewing them as complementary to the rest of the healthcare team. The study emphasized the obligations of providers to demonstrate clear areas of expertise that complement rather than compete with the activities of others. The study concluded that health professionals should clarify their roles and redesign their work in order to take advantage of teamwork and resolve current workload issues. Further, it was concluded that more research on the scope of practice of RNs, Registered Psychiatric Nurses (RPNs), and LPNs in different sectors is needed to determine optimum utilization of health professionals.

The study by CUPE (2003) found that, to a great extent, nurse managers determine LPN tasks and scope of practice. LPNs most frequently perceive hospital or administrative policy as a reason for their underutilization and rarely perceive their lack of skills or availability as a factor. The study recommendations included the development of clear policies for the full utilization of LPN skills and the training of managers in teamwork. It emphasized the importance of employer support for LPN training, the provision of substantial orientation for new LPNs, education for RNs and RPNs on LPN competencies, and comprehensive monitoring of LPNs’ scope utilization.
A document issued by NACA (2006) emphasized the need to remove barriers to full scope of the nursing workforce. It provided a number of recommendations for helping the community understand what full scope of practice means as well as strategies for optimizing utilization to full scope. Interestingly, one of the comments recorded in that document was a recommendation to “get rid of the term scope” (NACA, 2006, p. 11). More recent practice literature refers less to scope and more to concepts such as “skill mix” and nursing competencies. The Canadian Nurses Association (CNA, 2012) reviewed the evidence linking staffing models to quality of care and patient outcomes in order to create a decision-making framework to aid in creating nursing care delivery models. They concluded that no gold standard exists for measuring nurse staffing (Harris & McGillis Hall, 2012), but have proposed a Staff Mix Decision-Making Framework that includes client, staff, and organizational factors. The framework is based on the guiding principles of client health needs, nursing care delivery model and evidence, the involvement of direct care providers and nursing management, decision making with the support of information systems, and organizational components and leadership as a means to sustain implementation.

A system-based perspective requires an examination of policy and broad change management strategies that relate to scope utilization. McLaughin (1987) pointed out that even the most promising policy initiatives actually depend on how individuals throughout the system act and interpret them. Klein and Sorra (1996) observed that, ultimately, policy implementation is about changing individual behaviour and that the change process is likely to include initial avoidance and limited voluntary compliance before consistent and pervasive acceptance. The importance of nurse leaders and organizational champions in the implementation of policy was emphasized (Hendy & Barlow 2012; Salmela, Eriksson, & Fagerstrom, 2011).
Patient Outcomes and Quality of Care

Evidence related to quality of care and patient outcomes is seen as an essential basis for decision making regarding workforce planning, staffing models, and staff mix (CNA, 2012). However, research that investigates the links between particular groups of staff on quality of care and/or patient outcomes has been fraught with methodological challenges (CNA, 2012; Clarke & Donaldson, 2008). Quality of care has been defined and described in various ways, and ambiguity in use of the term has been noted (Gunther & Alligood, 2002). Quality of care can refer to the overall care that a patient receives in the health system or in a specific unit or clinical area. It can be analyzed from the perspective of providers as well as patients (Larrabee & Bolden, 2001). A patient-focused approach examines elements such as meeting patients’ perceptions with regard to meeting their needs, treating them in a pleasant and caring manner, and providing competent and prompt service. However, while patient perceptions are important, many researchers claim that they should not be the sole indicators of care quality. According to Gunther and Alligood (2002, p. 1), quality nursing care should be evaluated based on the services that nurses provide, for example, “nursing actions and behaviours linked to the use of nursing knowledge.”

Nurses’ working environments have also been found to have an effect on the quality of patient care. Castle et al. (2006) found that quality of care in a nursing home was closely associated with job satisfaction of employees as well as promotional opportunities, relations with management, and level of compensation. Inadequate delegation between nurses and other healthcare staff such as HCAs can lead to patient care that is missed, delayed, or omitted (Harris & McGillis Hall, 2012).
The Health Quality Council of Alberta (HQCA) has developed a framework for conceptualizing quality of care. It includes six dimensions of quality: acceptability, accessibility, appropriateness, effectiveness, efficiency, and safety (HQCA, 2012). Standardized measurements for quality of care (HQCA, 2011) have been developed that can provide valid and credible data regarding the quality of patient care.

A number of studies (Bakker, Killmer, Siegrist, & Schaufeli, 2000; Frankel, 2008; Kramer, Maguire, & Brewer, 2011; Stordeur, D'Hoore, & Vandenberghe, 2001) have examined an association between leadership style and patient outcomes. Cummings et al. (2010) found that task-oriented leadership alone is insufficient to increase nurses’ job satisfaction. It needs to be paired with person- and relationship-oriented leadership in order to produce optimal results in the workplace. They concluded that when leaders invest energy into relationships, this can positively affect the health and well-being of nurses and, ultimately, the outcomes for patients (Cummings et al., 2010). The key role of leadership in nursing organizational culture and team dynamics was confirmed in a qualitative study by Bateman (2011).

The main challenge in patient outcome research is the fact that the healthcare system involves a large number of healthcare providers and different professional groups. This makes it difficult, if not impossible, to use standard comparative techniques based on aggregated data (Hegyvary, 1991; Maas, Johnson, & Moorhead, 1996). A recent literature review (Harris & McGillis Hall, 2012) provided an overview of these methodological challenges in attributing patient outcomes to specific team members. Most notably, these difficulties include inappropriate use of summarized scores and aggregated data to draw conclusions about the impact of a specific group on quality of health and patient outcomes. As stated in a recent Cochrane Review examining nurse staffing models in hospitals and the effect on patient
outcomes, “the quality of evidence in relation to the impact of hospital nurse staffing . . . is mixed and the findings should be treated with caution” (Butler et al., 2011, p. 27).

While patient outcome studies are accepted as a major source of evidence for decision making in relation to nursing skill mix, it is vital to also rely on methods that provide the highest level of evidence for non-randomized clinical trials. According to the most recent version of the *Cochrane Handbook for Systematic Reviews of Interventions*, “evidence from qualitative studies can play an important role in adding value to systematic reviews for policy, practice, and consumer decision-making” (Higgins & Green, 2011). There has been an increased awareness and recognition of the contribution that qualitative studies can provide to evaluating complex healthcare interventions (Mays & Pope, 2006). Higgins and Green (2011) also suggested a mixed method approach as an efficient method for the evaluation of complex models of health services delivery.
The Regulatory and Professional Environment

Alberta’s Health Professions Act (HPA) (Government of Alberta, 2000a), in contrast to previous legislation, regulates all health professions with one act and introduces “overlapping, non-exclusive scopes of practice for health professionals” (AHW, 2004, p. ix). The Act established 28 self-governing colleges that, under the authority delegated to them by the Act, govern 30 professions, including LPNs, RNs, and RPNs (AHW, n.d.).

The Act introduced the concept of restricted activities, which are defined elsewhere as “regulated health services that by law can only be performed by individuals who are authorized to perform them” (AHW, 2004, p. 7). As a companion to the HPA, Schedule 7.1 of the Government Organization Act identified an omnibus list of restricted activities that are part of the provision of a health service. Regulations for each individual health profession, made under the authority of the HPA, set out which restricted activities each profession may perform. Individual restricted activities may be authorized for several professions.

The HPA includes a mandate statement that is common to all 28 colleges. Each college must carry out its activities and govern its regulated members in a manner that protects and serves the public interest; provide direction to and regulate the practice of the regulated profession by its regulated members; establish, maintain, and enforce standards for registration and of continuing competence and standards of practice of the regulated profession; and establish, maintain, and enforce a code of ethics (Government of Alberta, 2000b).

Schedule 10 of HPA is dedicated to the profession of licensed practical nurses. It states that LPNs in their practice do one or more of the following.

(a) Apply nursing knowledge, skills, and judgment to assess patients’ needs.

(b) Provide nursing care for patients and families.
(b1) Teach, manage, and conduct research in the science, techniques, and practice of nursing.

(c) Provide restricted activities authorized by the regulations. (Government of Alberta, 2012, p. 124)

Prior to the proclamation of HPA in 2001, the 30 health professions were regulated by a number of different statutes. As a part of the transition to HPA, each college drafted regulations that included extensive consultation processes with numerous stakeholders. Subsequently, the regulations for each college were approved by the Lieutenant Governor in Council (AHW, 2004). The Licensed Practical Nurses Profession Regulation (Government of Alberta, 2012) identified registration categories, registration eligibility requirements, registration processes, a statement of authorized restricted activities, continuing competence requirements, and an alternative complaint resolution process. As members of a self-governing profession, individual LPNs are accountable for their decisions and actions to their clients and employers and to their regulatory college. If an individual member fails to meet the professional standards of her/his college, in this case CLPNA, the college is charged with the responsibility of taking disciplinary action (AHW, n.d.). This disciplinary action is over and above any such action undertaken by an employer.

The particular competencies of LPNs were spelled out in the Competency Profile for Licensed Practical Nurses (CLPNA & AHW, 2005). The document “includes the knowledge, skills, behaviours, and attitudes required by” LPNs (CLPNA & AHW, 2005, p. i). It was jointly developed by CLPNA and AH, but legal ownership of the document rests with the ministry. The CLPNA Council has the authority to amend this document as it did in 2008 with the addition of “the competency of direct IV push” as an “additional competency” (CLPNA, 2008b). Such a
competency would be “gained specifically through additional training or specialty education” (CLPNA & AHW, 2005, p. ix). In addition, CLPNA’s Council, consistent with the mandate of a self-governing college, has developed and approved a code of ethics and standards of practice (CLPNA, 2008a).

LPNs’ scope of practice reflects the practice statement in Schedule 10 of HPA (Government of Alberta, 2000a), the restricted activities identified in the LPN regulation (Government of Alberta, 2012), and the competency profile document (CLPNA & AHW, 2005). There are two points of importance. First, a scope of practice for any health profession includes statements made in the HPA, the college’s regulation, and the competency profile or equivalent document developed under the authority of each college’s council. Second, scopes of practice are non-exclusive (AHW, 2004) and, as a result, the scope for any one health discipline may overlap with the scope of other disciplines. In the case of the three nursing professions, there is substantial overlap between LPNs and RNs.

While the concept of scope of practice defines the range of competencies and activities associated with each discipline, individual professionals in any health discipline are responsible, as members of a regulated professional body, for self-assessing their readiness to undertake a task based on their critical understanding of the situation, the competencies required, and their education, training, and experience. Even though a task may be within the scope for the profession, individuals have a self-assessment and situational assessment responsibility before undertaking the task. If individual LPNs feel that a task is not appropriate for their competencies, they seek assistance as required, just as all regulation health professionals are expected to under the HPA regulation (CLPNA, 2008a). In practice, it is not only the self-assessment of one’s readiness to undertake a task that will impact a decision related to an LPN’s role in a particular
organization. Administrators, managers, and supervisors make judgments about staff readiness in relation to particular patients and particular situations on an ongoing basis. Thus, the legislation regarding scope has been transferred through several filters from legislation to actual practice (Clarke, 2012, personal communication).

The LPN diploma programs are offered by public and private colleges in Alberta. HPA grants CLPNA the authority to approve the programs from which applicants must graduate in order to be eligible for registration. The programs, including their educational outcomes, must be approved by the Council of the CLPNA. Program approval for public colleges and program designation for private colleges rests with the Minister of Enterprise and Advanced Education. Graduates of these programs must successfully complete the Canadian Practical Nurse Registration Exam before being registered with CLPNA. Applicants from other jurisdictions are eligible for registration if their training and experience are considered to be substantially equivalent to the eligibility requirements set out in the regulation.
Public and Employer Policies

Alberta Health (AH), Alberta Health Services (AHS), and Covenant Health (CH) are the leaders and providers of healthcare in Alberta. These three bodies are crucial to understanding the implementation of full scope of practice for LPNs in Alberta because they reflect public policy and employer policy.

AH, a ministry of the Government of Alberta, provides strategic leadership and funding for the delivery of healthcare in Alberta. AHS is a healthcare delivery system that operates under the leadership of a board appointed by government. It has over 90,000 direct employees and provides services and programs at 400 facilities across the province. AHS was created in May 2008 when nine healthcare regions and three specialized agencies were amalgamated by government.

CH is a province-wide Roman Catholic healthcare delivery system that traces its roots to the late 1800s. As a system, it was created in 2008 when 16 facilities across the province joined together (Covenant Health, n.d.). It is governed by a board appointed by the Catholic Bishops of Alberta. CH receives funding from AHS through a service agreement and employs 9,400 people. It has full independence from AHS on policy matters.

Alberta Health

An examination of AH documents identified two relevant documents. The first, Health Workforce Action Plan: Addressing Alberta’s Health Workforce Shortages 2007 to 2016 (Government of Alberta, n.d.), was released in 2007 to address workforce shortages but, just as importantly, to “promote systemic change” (p. 6) so that the healthcare delivery system could respond to the demands of the future. Several strategies were identified to address the looming workforce shortages and the need for system change. For example, scope of practice received
attention with the following statement of expected outcomes: in cooperation “with health regions . . . begin policy and culture changes that allow health providers to work to their full scope of practice” (Government of Alberta, n.d., p. 10). Three examples were provided from professions other than LPNs.

The second document, Becoming the Best: Alberta’s 5-Year Health Action Plan, a joint publication of AH and AHS “sets out clearly defined targets for health system performance and outlines how AHS, the Government of Alberta, and their healthcare providers will work together to meet those targets” (Government of Alberta, 2012b). It makes a specific reference to enabling “professionals to work to the full extent of their skills and abilities, as part of larger health teams” (Government of Alberta & AHS, 2010, p. 31).

**Alberta Health Services**

A number of documents from AHS express a consistent commitment to full scope of practice for all health professions. Some make specific references to LPNs. The first of these was a strategic direction document released in 2009 just after the creation of AHS as a provincial system. As a part of a strategy to “balance workforce skills with need,” there was a general reference to “ensure optimal deployment and utilization of skills and knowledge of all health care providers” (AHS, 2009, p. 14). More specifically, there was direct reference to LPNs in order to “ensure use of License [sic] Practical Nurses (LPN) and Health Care Aides (HCA) to full scope of practice and broader utilization where appropriate” (AHS, 2009, p. 14).

The strategic directions document of 2009 was followed by a document outlining a “five-year vision for Alberta Health Services” that builds on the initial strategic plan (AHS, 2010, p. 5). While it did not make any specific reference to LPNs, it continued the overall workforce utilization goal strategy that initiatives should be implemented that enable staff to fully utilize
their skills and support “full scope of practice and achieve benefit through use of multidisciplinary teams” (AHS, 2011a, p. 34). Five Transformational Improvement Programs were identified in the 2010 document and repeated in a 2011 document (AHS, 2011a). They included the statement: “efficiently utilize health professionals by matching workforce supply to demand, promoting team-based delivery of services, and allowing health providers to work to the full extent of their education, skills, and experience” (AHS, 2010, p. 48; 2011a, p. 35).

AHS’s governance document (2011a) provided important context for understanding the role of employer policy in relation to professionals’ scope of practice. A distinction was made in the document between corporate governance and clinical governance. The former focused on the business operations of AHS while the latter focused on quality of care and patient safety. Clinical governance policies “set out the responsibilities and expectations for the healthcare team in the delivery of clinical care” (AHS, 2011b, p. 5). While LPN scope of practice is determined by legislation, regulation, and the CLPNA as outlined earlier, employer policies promote professionals with different and overlapping scopes of practice working as teams with a “systematic and integrated approach to ensure a high standard of patient care” (AHS, 2011b, p. 5).

**Covenant Health**

Covenant Health (2011) made its policy commitment to full scope of practice for all healthcare providers in a policy manual statement of the same name. Its policy stated:

Covenant Health supports full scope of practice for all health care providers within all sites, sectors, and programs to ensure that their skills and education are utilized to their full scope of practice appropriate to competencies, needs of the patient/client/resident, and the environment of care.
Decisions relating to scope of practice shall be based on the following:

1. Education, experience and competence of the health care provider
2. Care needs of the patient
3. Support available in the clinical setting
4. Competency profile for the health care provider
5. Authorizations for restricted activities as per the regulation. (Covenant Health, 2011, p. 1)

Of particular note was their statement of principle surrounding interdisciplinary care:

Successful implementation of interdisciplinary models of care with overlapping scopes of practice requires communication and collaboration amongst members of the care delivery team. Professionals working in interdisciplinary teams will respect one another’s knowledge, skills, and competencies while maintaining mutual concern for the provision of quality care to the patient/client/resident served. (Covenant Health, 2011, p. 2)

This policy document review demonstrated that the Ministry, AHS, and CH are fully committed to full scope of practice for all health professionals where appropriate, with some specific references to LPNs. The focus of the policies is on principle-centred, interprofessional, and collaborative patient care, recognizing the individual professional’s responsibility to assess her/his competence in relation to the context and task at hand.
Methodology

This chapter describes the research methods and processes employed in the conduct of this research study, including the research questions, conceptual framework, and data collection matrix that provided the foundation for all of the research activities. In addition, a brief description of the data collection methods is provided. Finally, the limitations and strengths of this particular study are reviewed.

The Research Design

The research questions. The overall purpose of this research project was to look at the personal, team, and organizational factors that promote or inhibit successful scope utilization for LPNs in Alberta. The original project proposal posed the research question: “What is the impact on patient outcomes and quality of care when LPNs work to full scope of practice?” After an extensive review of the literature on nursing scope of practice and following consultation with key stakeholders, the research team concluded that it was not possible to provide reliable and credible evidence related to patient outcomes directly related to LPN practice. Indeed, as the literature revealed, outcome studies on scope of practice to date have been fraught with methodological problems, serious limitations, and attribution issues. Research flaws included many unreported variables and confounding factors, small sample sizes, inappropriate use of summarized scores and aggregated data, and difficulties attributing outcomes to specific team members. Still, it was noted that some of these studies have continued to hold a pervasive influence on nursing discourse (e.g., Tourangeau et al., 2006).¹

¹ The authors recommended that hospitals seeking to minimize unnecessary patient death should maximize the proportion of RNs providing direct care, but did cite a number of limitations, including small sample size relative to number of predictor variables that may have masked other potential predictors of hospital mortality and the potential of unknown and unmeasured extraneous variables. However, as recently as September 2011, nurse commentators on the CBC reported this study as support for a particular staffing mix (CBC, 2011).
It was concluded that given the mixed staffing models and team-based environment in which care is provided in Alberta, it was not possible to link outcomes to a single professional group within that team. As one member of the study’s steering committee commented, “Patient outcomes cannot be attributed to LPNs unless they have been treated only by LPNs.” As a result, the study focused on personal, team, and organizational factors in care settings as they relate to the role of LPNs as well as on the quality of patient care provided in that environment.

The research questions included:

- What can we learn about LPNs’ practice that promotes or inhibits their ability to practice to full scope? How can these supports be enhanced? How can these barriers be reduced?
- What can we learn about LPNs’ work teams and systems that promote or inhibit their ability to practice to full scope? How can these supports be enhanced? How can these barriers be reduced?
- What can we learn about LPNs’ organizations that promote or inhibit their ability to practice to full scope? How can these supports be enhanced? How can these barriers be reduced?
- How do these practice-based, system-based, or administrative factors affect the quality of patient care?

**The conceptual framework.** Applied social research procedures can be used to systematically investigate the effectiveness of social interventions or policies. In order to address issues of criticality and efficiency, a rigorous approach to the research process was chosen to ensure information of sufficient credibility under scientific standards to provide a confident basis for action and to withstand criticism aimed at discrediting it (Rossi, Lipsey, & Freeman, 2004).
To ensure that the study was designed using a strong theoretical framework, the literature review was used to identify a range of factors most likely to influence LPNs’ ability to work to their full scope. A Scope of Practice Factors Model was designed to guide the research. It was organized into four main types of factors that could influence scope. These included:

- the individual LPN and related characteristics,
- the care team in which the LPN worked and the model of care employed,
- the organization or site in which the LPN practised along with environment and resources that might impact it, and
- the patient or client for whom the LPN provided care and the nursing care required.

A copy of this model is provided on the following page.

**The data collection matrix.** A research framework was developed to link the research questions with the Scope of Practice Factors Model. Known as the Data Collection Matrix (DCM), this tool guided all of the research activities in the study. Developed in collaboration with the research team and reviewed by the steering committee, the tool provided the study focus and deepened understanding of the research process. The DCM kept research activities focused and manageable and provided important documentation regarding the scope of the research prior to actual data collection. In addition, it provided a coding system for all of the data collection tools. It was also used as a tracking mechanism, creating an evidence trail that led from the Scope of Practice Factors Model through tool development, to the analysis and synthesis of data, and to the preparation of this final report. A copy of the Data Collection Matrix is provided in Appendix A.
**Project logic model.** In order to facilitate effective reporting, a project logic model (Figure 1) was developed and used to structure reporting about project implementation. A copy is provided in Appendix B.
Figure 1. Scope of Practice Factors Model.
Data Collection Methods

A brief description of the research methods and tools used in this study follows.

**Literature review.** The purpose of the literature review was to inform the methodological approach for this study to develop a sound rationale for the approaches chosen. It had three main objectives:

1. to gain an understanding of the evidence available to provide a strong foundation for this research study,
2. to highlight the methodological challenges associated with examining one professional group in a complex and interactive healthcare system, and
3. to identify gaps in knowledge associated with the impact of LPNs’ scope utilization on quality of care and on patient outcomes.

To date, very little research has focused on LPNs. While the PubMed database, which comprises more than 20 million citations for biomedical literature from MEDLINE, found 156,046 publications containing the word “nurses,” only 374 included the term “licensed practical nurse(s)” anywhere in the text. Thus, the search strategy was expanded to include occupational titles similar to LPN, such as “registered practical nurse,” “enrolled nurse,” and “state enrolled nurse” that are used in other jurisdictions and countries. Only 29 references also related to “scope of practice” with these combinations. Related searches were extended to the Cochrane Library and to the ProQuest Research Library in order to identify policy briefs and reports in the grey literature. Ultimately, nearly 100 documents were reviewed in depth for this study. The findings of the literature review are summarized in Chapter 2 of this report and a more extensive discussion is available under separate cover.
Provincial LPN Survey. As case studies were an important element of the study, it was important to ensure that selection of the sites was based on objective, credible data rather than opinions regarding high scope or low scope of practice. To meet this requirement, and to obtain current information about LPNs in Alberta, the research team developed and implemented an online and mail-in survey that was disseminated to all practicing LPNs who were members of CLPNA. A draft version of the survey was reviewed by the steering committee. With minor revisions, the survey underwent a further validation process by LPNs using a method developed for the Social Science and Humanities Research Council (SSHRC) (Barrington Research Group, 2005).

Based on the Scope of Practice Factors Model, the survey went beyond perceptions of scope (as reported in the literature) to explore actual recorded practice, using the legislated competencies of LPNs as a basis for assessing the level of scope of practice. The survey asked questions about location, work setting, specific site details, and utilization of competencies. Other questions about the work environment were included in order to inform the case study tools with regards to communications, team environment, safety culture, job satisfaction, and stress – all of which have been shown in other studies to be related to quality of patient care.

The survey was sent to all LPNs listed as current active members in the CLPNA database as of May 2011. LPNs with email addresses were sent a recruitment email from the CLPNA with a link to the survey and two subsequent reminder emails. In total, 8,549 online and mailed surveys were sent out to LPNs. The online version of the survey was only accessible via the URL emailed to LPNs. LPNs without listed email addresses were sent hard copies in the mail along with one subsequent reminder. In addition, two reminder emails were sent, a survey reminder was posted on the CLPNA Facebook page, and an advertisement for the survey was published in
the CLPNA Care Journal (Vol. 25, Issue 1, Spring 2011, p. 4). The online version of the survey was created using FluidSurveys online questionnaire software.

Data from mail-in and online surveys were merged into a database, cleaned, and analyzed using the Statistics Package for the Social Sciences version 19. LPNs who indicated that they were not currently working as LPNs in Alberta were excluded from the analysis. A total of 2,313 valid surveys were used in the analysis and represented a response rate of 27.9%. The findings of the survey are reported under separate cover and are also summarized in Chapter 4 of this report. A copy of the survey and consent form can be found in Appendix C.

Identification of case study sites. Rather than rely on subjective perceptions of scope utilization as done in previous studies, a Scope Indicator variable was produced to provide an objective measure of LPN competency utilization. The Scope Indicator was then used as a basis for the site selection process. The Scope Indicator was based on LPNs’ individual responses to two survey items (Q24 and 28), which asked them to indicate the extent to which they utilized the 20 competencies listed in their daily work. The Scope Indicator was a composite site score that was based on an average of the individual LPNs’ scores across all the listed competencies. It is important to note that the analysis excluded competencies that individuals had identified as Not Applicable. Thus, only competencies appropriate to a particular work setting were measured. LPNs working in long-term care, for example, would not be scored for competencies only used in acute care. Scope Indicator scores could vary between 20 (worst possible score) and 100 (best possible score), and actual values ranged from 30 to 100. The distribution was approximately normal with a mean value of 77.8 (SD = 1.5, n = 1,569).

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2 Science-Metrix, an independent research evaluation firm based in Montreal and a leader in bibliometric analysis, was contracted to perform the site selection analysis.
Further statistical analysis and modeling was conducted to prepare a data set for case study site selection. Respondents with less than 75% valid answers were removed (invalid answers included blanks and not applicable answers), reducing the sample size from 2,313 to 950 cases. Cases were further filtered to remove sites with less than five respondents as aggregated statistics for these sites would be too small to be considered reliable. This resulted in 52 out of 71 possible sites being retained for further analysis. They were combined into a single graphical display to use as an objective tool for site selection (see Figure 2).

Dimension 1 on the horizontal axis discriminates well between acute care settings, which score high on this measure (right end side of graph), and long-term care settings, which score low on this measure (left end side of graph). This factor is mainly composed of variables that relate to nursing interventions typical in acute care but not necessarily in long-term care settings (the administration of intravenous medications, administration of blood products, and providing tube, line, and drain care/maintenance).

Dimension 2 reflects nursing processes, including developing and revising care plans and teaching clients and families. It should be noted that the respective positions of sites in the graph do not directly relate to their overall level of scope as these dimensions explain only 60% of the total variance. While this graph allows discrimination between sites, it does not adequately take into account all of the 12 variables from Dimension 1. Thus, in the top left area of the graph, there may be more than one type of site (i.e., sites with similar characteristics across the 12 variables). In a sampling approach for case studies, increasing the discriminative power is important as one would be interested in sampling from as many different types of sites (colours on the graph) as possible in both the low and high scope categories.

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3 This was subsequently clarified to mean monitoring and regulating the administration of blood products.
Once groups of sites with similar characteristics were identified, the goal was to find those who performed to the highest scope and the lowest scope in acute and long-term care settings to assist the selection process for the case study analysis. In this way, it was possible to sample various types of sites in both the low and high scope ranges. The overall Scope Indicator score of a site is proportional to the size of its bubble in the graph. Size of the facility, geographical location, sample size, variation within sites, and overall Scope Indicator score were also used to select sites. Specialty facilities such as children’s hospitals were excluded from the final site selection process.

Once this analysis was completed, six sites were selected that were most representative of high and low scope. The six sites identified for inclusion in the study were made up of three acute care sites, one mixed site that provided both acute and long-term care, and two long-term care sites. Three sites were identified as high scope and three were low scope; three were located in urban areas and three were in rural areas. These sites were invited to participate in the case study portion of the study and all six sites accepted the invitation.
Figure 2. Cluster graph displaying the six sites chosen for case studies.

Case studies. This project utilized a comparative case study methodology. According to Yin (1989), the case study method is an empirical approach that investigates phenomena within real-life contexts when the boundaries and causal links between the phenomenon and its context are not clearly evident, where there is no single set of outcomes, and where multiple sources of evidence are available. It allowed for using a variety of research strategies to provide in-depth, objective evidence related to the research questions. By comparing key findings across the six sites, common themes as well as unique features could be identified.

It must be noted that Yin (1989) also pointed out that the real-life context in which case studies are conducted can be unpredictable and chaotic and is beyond the control of the researcher. Because data collection is not routinized in a case study as it is in an experiment or
survey, it is considered among the most challenging types of research to do. As a result, the researchers also employed a developmental research process as promulgated by Patton (2011) to respond appropriately to some of the complexity encountered in the field. A developmental approach accepts turbulence as the way the world unfolds in the face of complexity and adapts to the realities of complex non-linear dynamics rather than trying to impose order and certainty on a disorderly and uncertain world. Thus, the stringent case study design of careful site selection, a clear program model, and rigorous data handling was tempered with a developmental approach to recruitment, scheduling, and data collection.

**Case study tool development.** A number of tools were developed for the case study research. To reduce potential bias and provide credible and reliable evidence, standardized instruments were used when they were available. When they were not available, customized tools were developed and validated. The research tools were distributed to a group of approximately 20 participants representing practitioners at different levels of the system and members of the steering committee, including experienced researchers and senior managers. The tools were reviewed and assessed using a short validation tool that asked the participants to rate the clarity, relevance, and utility of each tool and to provide feedback to the researchers with any recommendations for change. The data from these questionnaires was analyzed and changes were made to the research tools based on the findings of the validation process. A sample interview, consent form, validation tool, and patient survey are provided in appendices D to G.

To further enhance utility of the tools, once the first site visit was completed the tools were reassessed by the research team and minor changes were made to clarify wording. At this time, a specific tool for RN interviews was developed and added to accommodate the RNs’ busy task schedules.
care schedules since they could not participate in a focus group and had to be interviewed one at a time.

Finalized tools included the following (for a sample, see appendices D, E, and G).

1. Senior Administrator Interview & Consent Form
2. Team Leader Interview & Consent Form
3. RN Interview & Consent Form
4. LPN Interview & Consent Form
5. Nursing Team Focus Group Protocol & Consent Form
6. Patient Experience with Nursing Care in Acute Care Facilities in Alberta & Consent Form. The survey was adapted from the H-CAHPS® Hospital Survey. CAHPS, or Consumer Assessment of Healthcare Providers and Systems, is a program of the Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services.
7. Resident Experience with Nursing Care in Long-Term Care Facilities in Alberta & Consent Form. The survey was adapted from the CAHPS® Long Stay Resident Survey in a manner similar to #6 above.
8. Family Experience with Nursing Care in Long-Term Care Facilities in Alberta & Consent Form. The survey was adapted from the CAHPS® Nursing Home Family Member Survey in a manner similar to #6 above.

With the exception of the CAHPS® surveys, all tools were coded according to the DCM.

Case study ethics approval. The research team adhered to the Tri-Council (SSHRC, NSERC, and CIHR) policies for ethical standards to ensure that the privacy and confidentiality requirements of all participants were addressed and that legislated requirements were met. A
Request for Review Application was submitted, along with a research protocol, to the Community Research Ethics Board of Alberta (CREBA) on August 25, 2011. Approval was received on October 28, 2011, and the accompanying document stated, “The scientific design is found to be both sound and ethical within the limitations of research involving human subjects.” As Bow Valley College policy requires that all research conducted by College employees receives approval from the Bow Valley College Research Ethics Board, an application was also submitted to this Board. Approval was granted on November 14, 2011.

*Case study site access.* Following approval by CREBA, a process to obtain institutional approvals was undertaken with each jurisdiction. The approval process for site access proved to be fairly cumbersome, involving a multi-layered approval process that took over three months to complete.

The process began with a request to the senior vice president and chief nursing and health professions officer at Alberta Health Services to support access to the selected sites and approval in principle was obtained from the vice presidents of the respective zones. The executive director, research portfolio, Alberta Health Services, was then able to provide the names of individuals in each zone from whom an additional level of approval was required.

The researchers contacted these zone representatives to determine their specific requirements. Significant delays occurred in some cases to identify and receive a response from the appropriate person. Detailed information was provided to each zone as their requirements varied. For example, approval at one site required the research team to conduct an in-person presentation to senior administrators. Four of the five zones required their own formal ethics approval to gain access to the sites, in addition to the CREBA approval. Once approval was obtained for each site, research agreements between the site and the principal investigator were
signed and returned to zones. Overall, the different requirements and procedures resulted in significant administrative work for the research team and delayed data collection by three months.

The process for conducting the site visits evolved under the guidance of members of the steering committee with experience in site-based nursing research or in senior management. They advised us on the least intrusive processes for gaining cooperation and collaboration at the sites. Once zone approval was received, the Project Manager sent a letter to each zone to request the names of the site leader and patient care manager for each site. One site required a change of the unit in which the study was to take place, and this resulted in a further three-week delay.

The next step in the process involved negotiations with the site leaders and the units. The organization of the entry of the research team into the sites was coordinated by the study’s project manager. This involved much diplomacy and negotiation. Letters were sent to the site managers providing the background to the study and a request to meet in order to discuss the site visit. Once a contact name at the site was provided, a series of communications ensued to work out the details of the site visit. The project manager suggested two possible dates for the site visit, and once selected, unit managers were requested to send a list of staff who could be available on those dates. Letters of invitation were then sent to the participants along with posters advertising the visit and a suggested interview schedule. The goal was to complete most of data collection at each site within two full working days, including both day and evening shifts, in order to ensure maximum participation of both patients/residents and staff. Interviews were also scheduled with site managers and unit leaders. Every attempt was made to schedule these during the site visit; however, this was not always possible and sometimes a telephone interview followed the visit.
It is important to note that the care with which site access was negotiated yielded positive results. The research team experienced full cooperation and collaboration from the units involved in the study. The first site was visited on November 29, 2011 and site visits then continued until March 14, 2012.

**Case study conduct.** Generally, the team was welcomed by every site. Despite careful recruitment plans, the process of data collection was quite complex. Each site presented a new set of recruitment challenges. Staff did not always read invitation letters and for the most part did not sign up on the schedules provided. The rosters provided by unit managers actually changed on a daily basis due to shift swapping, illness, and vacation days. In some cases, individuals had not received a letter but wanted to be included anyway (e.g., four EMTs at one site were added at their own request). The patient, resident, and family surveys were done in consultation with the unit manager or team leader, who identified individuals who were well enough, available, and willing to participate. Few were identified that met these criteria.

All participants received a Tim Hortons card as a thank-you at the end of their interview or focus group. This strategy was very well received. At the completion of data collection, a thank-you letter was sent to each site administrator, recognizing the contribution that had been made by both their staff and themselves.

Following each site visit, the team held a debriefing meeting that was taped and subsequently transcribed. Topics included identifying what worked well, any surprises that were encountered, and any process changes recommended for the next site. This allowed the researchers to collect data more effectively in subsequent sites, for example, working split shifts and long hours to reach as many individuals as possible.
Case study site reports. The tape-recorded data obtained during the site visits was transcribed into individual Word documents. Each transcribed text was validated by a second researcher. The data was imported into a qualitative software program, MAXQDA, for analysis. This information was then written as a narrative in site-specific reports using the Scope of Practice Factors Model as a guide. Following extensive validation by the research team, the revised case study reports were sent in final draft form to the senior administrator at each site. They were asked to review the report for accuracy and to complete a validation survey rating the report’s validity, relevance, utility, and value. Their feedback was then incorporated into the final version of each site report, which was subsequently returned to each administrator for their own use. It must be noted that at no time were the administrators and staff apprised of the researchers’ label of high or low scope that was attached to their site. Confidentiality was ensured throughout the process and the sites were simply described as sites 1 through 6.

Cross-case analysis. The final step in the case study method was to prepare a cross-case analysis, which is presented in Chapter 5 of this report. In general terms, the analysis describes the site characteristics and the demographics of participating LPNs. Key findings that were seen to promote or inhibit scope utilization are presented, including individual, team, organizational, and system factors. Finally, quality of care is discussed. In keeping with the individual site reports, no site names are identified and only very general setting descriptors are used, such as urban, rural, acute, and long-term care. Some trends that relate particularly to high or low scope sites are also identified. The findings of the case studies are in no way intended to be generalized. Instead, they provide a rich and detailed description of six particular healthcare facilities or units in Alberta and as such can inform the broader discussion about LPNs’ scope of practice. When triangulated with findings from the literature review, the provincial survey, and
the policy study, they fill an important gap by describing what is actually occurring “on the ground.”

Policy Study

At the recommendation of the Steering Committee, a series of interviews were conducted with several key decision makers in AH, AHS, and CH. This provided a systems perspective and created a policy context in which to embed the other findings of this study. In addition, an online search was conducted of relevant policy documents that were available in the public domain.

Semi-structured interviews were conducted with six senior representatives of AH, AHS, and CH who had responsibility for policy development and implementation. The participants were selected using a purposeful sampling that focused on identifying individuals who could provide rich information about the phenomenon under investigation (Creswell, 2012). Members of the steering committee assisted with identification of some of the participants. The interview questions were derived from the research questions and DCM of the larger study as well as from the web search.

This research was carried out in a manner that was consistent with the ethical guidelines of the overall study. Participants were advised that their names and positions would be identified in this report but that no individual comments would be attributed to them. They were also advised that the researcher’s notes would not be shared with members of the research team and that these notes would be destroyed as soon as the final project report was completed. The researcher returned the interview portion of the report to them for review and changes were made based on their comments. The full policy study is available under separate cover and key findings are provided in Chapter 6.
Data Analysis and Reporting

The quantitative data obtained from the surveys and questionnaires was analyzed using the Statistical Package for the Social Sciences (SPSS) version 19 for the indicators identified in the DCM. Open-ended comments and qualitative data were analyzed using traditional content analysis techniques and overall themes were identified. Qualitative data from the case studies was analyzed using MAXQDA software for qualitative data analysis (Belous, 2010). Data was then compiled into data summaries organized by DCM topic and emergent themes as described by Barrington (2011). For the purposes of synthesis, and where appropriate, themes were mapped using Mind Manager software (Jetter, 2010). Findings were summarized and triangulated across data collection tools. In every case, the research team validated study findings through extensive dialogue and fact checking.

Study Strengths and Limitations

There were several strengths demonstrated in the conduct of this study, as well as a number of challenges and limitations. These are described below.

Particular strengths associated with this study include:

- extensive involvement of members of the Steering Committee, who provided input into study design, instrument design, and report preparation to ensure appropriateness, relevance, and clarity;

- approval by CREBA and the Bow Valley College Research Ethics Board as well as adherence to the Tri-Council Research Ethics Policy, the Code of Conduct of the Canadian Evaluation Society, and the Guiding Principles of the American Evaluation Association;
adherence to privacy and confidentiality requirements and maintenance of data security;

support of the CLPNA in recruitment for the provincial survey of its members, which greatly aided in ensuring that the survey was representative;

support of senior members of AHS in accessing zone and site approvals;

welcome by and openness to participation by facility administrators and staff at the case study sites;

use of a statistical modeling approach to identify case study sites, which minimized potential bias;

triangulation of findings from three separate studies (i.e., the survey, the case studies, and the policy study), each of which used different research methods and included participants from different stakeholder groups;

involvement of a very experienced LPN as a member of the research team throughout the project;

involvement of a project manager to spearhead study administration, negotiations, and scheduling;

extensive teamwork on the part of all researchers and support staff involved; and

broad senior researcher experience in studies of a similar scope and nature.

Several challenges or limitations were also experienced in conducting this research and these could limit the robustness of the findings. As a result, this report should be read with the following in mind:

the limited availability of literature on the topic of LPNs in general and on their scope of practice in particular;
• the review of government documents was limited to those available in the public domain;

• a rotating Canada Post strike during the provincial survey may have affected response rates even though the survey was extended by 12 days in an attempt to account for this disruption;

• a response rate of 27.9% for the survey may have allowed for some bias among respondents;

• site administrators selected the particular units of study for the case studies and therefore the description of the sites may relate to specific facility components rather than to the entire facility;

• identification of patients, residents, and family members by team leaders and supervisors at the case study sites was likely to have produced a sample biased in favour of their fairly robust level of health and their good relationships with management; and

• the limited number of individuals who participated in the policy study may have affected the validity of its findings although each participant held a senior position related to the nursing workforce.
Findings of CLPNA Membership Survey

LPN – Individual Characteristics

Of the 2,313 LPNs who responded to the survey, 94% (n = 1,873) indicated that they were currently working as an LPN in Alberta. Over 85% were working in direct patient care, 5% were in nursing but not involved in patient care, and nearly 2% were nursing instructors. The individual characteristics of respondents are described below.

Location of LPN respondents. Alberta Health Services, which delivers healthcare in the province, is divided into five geographical health zones (see Figure 3). More respondents reported working in the Edmonton Zone (32%) and Calgary Zone (28%), and fewer reported working in the Central Zone (17%), North Zone (13%), or South Zone (11%). For response rates by health regions, see Table 1.
**Figure 3.** Response rate by Alberta Health Services zones (2009 map).

Table 1

*Survey Response Rates Compared to CLPNA Membership Database (2010)*

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Survey Findings</th>
<th>CLPNA Database (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinook</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Palliser</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Calgary</td>
<td>28%</td>
<td>24%</td>
</tr>
<tr>
<td>David Thompson</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>East Central</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Capital</td>
<td>32%</td>
<td>34%</td>
</tr>
<tr>
<td>Aspen</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>Peace County</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Northern Lights</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Note: Health Regions represent the 2003 structure in Alberta.*

In terms of their location, nearly 2.5 times more LPNs worked in urban areas (municipalities with populations of at least 10,000 as of 2009) than in rural or remote areas (72%
vs. 28%, respectively). In contrast, 78% of LPNs in Alberta worked in urban areas in 2009 while 22% worked in rural or remote areas (CIHI, 2010).

In general, commute times were modest, with a mean commute time of 40 minutes per day to their workplace and back. The maximum reported commute time was 250 minutes, or just over 2 hours each way. Most respondents (53%) travelled between 1 and 25 km per day; only 4% travelled more than 100 km.

**Work setting.** The highest proportion of LPNs reported working in the acute care setting most (46%), followed by long-term care (19%), community care (10%), clinic (8%), and rehabilitation (4%), as noted in Figure 4. Those who answered “other” (13%) provided further information about their work settings, which were mainly in assisted living (n = 48), dialysis (n = 25), education (n = 19), home care (n = 13), urgent care (n = 11), and palliative care (n = 9).

![LPN Care Setting](image)

*Figure 4. Frequencies of LPNs in different work settings.*

**Demographics.** Nearly all of the LPNs who responded to the survey were female (95%), spoke English at home (94%), worked in direct patient care positions (86%), and held only one job as an LPN (76%). However, 20% indicated that they worked two jobs and 4% worked three or more.
The mean age of the LPNs was 43.7 years, but their ages ranged from 21 to 72 years. The distribution of their ages was bimodal (SD = 12.4 years) with one peak around the mid-twenties and the other larger peak in the early fifties (Figure 5).

Figure 5. Histogram of age.

These demographic characteristics are very similar to the 2010 membership statistics reported by the CLPNA, including regional representation, age, and gender (Table 2). This suggests that the survey respondents are representative of all practicing LPNs in Alberta.

Table 2

Key Survey Demographics Compared to CLPNA Membership Database (2010)

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Survey Findings</th>
<th>CLPNA Database (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>43.7 years</td>
<td>41.4 years</td>
</tr>
<tr>
<td>Demographic</td>
<td>Survey Findings</td>
<td>CLPNA Database (2010)</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Female</td>
<td>95%</td>
<td>94%</td>
</tr>
</tbody>
</table>

**Education and training.** Of the LPNs who participated in the study, more than half (59%) had completed a community college diploma, while an additional 24% had completed some university or had an undergraduate or graduate/professional degree. Only 16% indicated that they had some community college, high school, or the equivalent as their highest level of education.

About half of the respondents (52%) had attained an LPN Certificate and the other half had earned the more recent LPN Diploma (47%). Ninety-five percent indicated that they had all of the qualifications and certificates needed to perform their current job and 46% planned to take further post-basic training within the next year. When considering their LPN education and training, 86% of respondents felt prepared to work to full scope of practice either to a considerable or great extent.

**Employment status and experience.** Although the LPNs indicated that on average they had worked as an LPN for 14.2 years, there was a considerable amount of variation in their work experience (SD = 12.6). Their answers ranged from 0 to 52 years of work experience and followed a bimodal, positively skewed distribution, with the largest proportion of LPNs having worked for less than 10 years and a lesser group having worked for approximately 30 years. See Figure 6.
Nearly half (45%) of the LPN respondents were employed part time while a similar number (44%) were employed full time. Only 11% of respondents worked on a casual basis and very few were on call (0.2%). Their jobs were predominantly permanent (93%) rather than temporary (6%) or seasonal (1%). The number of hours per week worked ranged from 1 to 84 hours; seven LPNs reported working 80 hours or more per week. The most frequently reported number of hours worked per week was 40 hours and the mean was 33.6 hours. If given the choice, 60% indicated that they would work the same number of hours as they currently work. Approximately 20% preferred to work fewer hours and the same percentage preferred to work more.
To provide context for these figures, the CIHI (2010) reported that in 2009, 45% of all practicing LPNs in Alberta worked full time, which was very similar to the findings of this survey. However, it reported that only 41% worked part time (somewhat less than reported in this survey). CIHI (2010) also reported slightly more casual workers, at 14%.

Nearly half of the LPNs (45%) who participated in the survey worked day shifts and 21% worked afternoons/evenings. Approximately 15% worked either rotating shifts or night shifts. Only 5% indicated that they worked irregular/on-call shifts. Most (64%) reported working an eight-hour shift and about 20% worked a 12-hour shift. The remainder worked variable hours.

**Years of experience and level of education.** Survey data revealed that a relationship existed between the LPNs’ years of experience and their level of education. In fact, there was a moderate negative correlation (r = -0.38, p < 0.01, n = 1,674) between education and experience, suggesting that the fewer years of experience an LPN had, the more likely it was that the individual had undergone more formal education such as a graduate or professional degree. Similarly, more experienced LPNs were more likely to have received less formal education. As demonstrated in
Table 3 and Figure 7, LPNs with an undergraduate, graduate, or professional degree were more likely to have less than five years of experience. However, regardless of years of experience, the majority of LPNs were found to have completed community college. It should be noted that LPNs in Alberta who entered the program prior to 1990 attended the Alberta Vocational Centre (AVC) and would not have considered their training to be at the community college level. Experience categories are displayed based on percentiles.
Table 3

*Years Working as an LPN and Level of Education*

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Years Working as an LPN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>% (n)</td>
</tr>
<tr>
<td><em>High school or equivalent</em></td>
<td>100%</td>
</tr>
<tr>
<td>Some community college</td>
<td>100%</td>
</tr>
<tr>
<td>Completion of community college</td>
<td>100%</td>
</tr>
<tr>
<td>Some university</td>
<td>100%</td>
</tr>
<tr>
<td>Completion of undergraduate degree</td>
<td>100%</td>
</tr>
<tr>
<td>Graduate/professional degree</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Note:* Respondents who completed LPN training at the Alberta Vocational Centre (AVC) from 1965-1990 would not have considered their training to be at the community college level.

*Figure 7.* Years working as an LPN and level of education.

**Health and stress.** Nearly three quarters (73%) of the LPNs who participated in the survey reported that their overall health was either *Excellent* or *Very Good* while nearly one
quarter (23%) indicated that their health was Good. Only 4% indicated that their health was Fair or Poor. However, when asked about their physical health, including physical illnesses and injury, the LPNs’ responded on average that their physical health was “not good” 2.2 days per month; 35% indicated that their physical health was “not good” on at least one day per month.

When considering issues associated with their mental health, such as stress, depression, and emotional problems, a total of 53% of the LPNs indicated that they experienced mental health issues at least one day per month. On average, LPNs indicated that they experienced mental health issues an average of 3.5 days per month. During the month previous to the survey, respondents reported that poor physical or mental health had kept them from doing their usual activities, such as self-care, work, or recreation, for an average of 1.9 days.

Overall, the LPNs who were surveyed reported moderate levels of stress, with 43% finding their job stressful About half the time while 32% found their jobs stressful Most or All of the time. One quarter said that they found their jobs to be stressful Seldom or Never.

**Job satisfaction and plans.** When the LPNs were asked how satisfied they were overall with their current job, their satisfaction was quite high. Overall, the respondents rated their mean satisfaction 4.1 on a five-point scale (where 1 = very dissatisfied and 5 = very satisfied). In fact, 37% were very satisfied and 48% were somewhat satisfied with their current job and less than 10% were somewhat or very dissatisfied.

When asked if they would recommend practical nursing as a career choice to a friend or family member, 73% responded that they would. The most frequent comment about this positive recommendation was that being an LPN is a rich career filled with opportunities for ongoing learning. The 28% who would not recommend the career frequently commented that they would rather encourage a friend or family member to become an RN instead.
The LPNs were asked if they had wanted to leave their current job during the past year; 56% indicated that they had considered this option. The main reasons that respondents provided for this view included workload issues (37%) and scope issues (18%). When asked for further information in an open-ended question, the most frequent responses related to management issues and, to a lesser extent, conflict with other workers. These responses were not elaborated upon in the survey.

When asked whether they received any recognition for doing their jobs well, such as an award, a bonus, or a promotion, 75% responded that they did not.

The LPNs were asked to select options to describe their plans for the following year. Most planned to continue working as an LPN (65%) while nearly one quarter (22%) planned to take an educational program. Other responses included taking a different role in healthcare (8%), working outside of healthcare (3%), and retiring (3%).

The mean age of planned retirement was 61.6 years (SD = 29.4), but many comments were received (n = 599) that suggested that these individuals might be encouraged to stay in the profession longer if they had higher wages and better benefits. In addition, 186 individuals commented that they might stay on longer if they could expand their scope of practice. It was interesting to note that while on the topic of being encouraged to stay in their careers longer, 174 individuals simply indicated that they loved their jobs.

**Competencies.** A list of general nursing competencies drawn from the CLPNA Competency Profile (CLPNA & AHW, 2005) was provided in the survey. Using a five-point scale (where 1 = *not at all* and 5 = *a great extent*), respondents indicated the extent to which they could use these competencies in their current job. Table 4 summarizes their responses.
It can be seen that communication and interpersonal skills, professionalism, and safety were used extensively by the LPNs in their current jobs. Their nursing knowledge, practice, and process were also used to a considerable extent, although variability in their responses was greater, particularly with regard to the nursing process. Leadership and specialty skills (e.g., respiratory care, cardiovascular nursing, and emergency nursing) were used quite extensively, but responses varied widely.

Nursing processes were explored in greater depth in a subsequent survey item. The LPNs were presented with a list of nursing processes and asked to indicate on a similar five-point scale the extent to which they were allowed to use specific competencies in their daily work. To account for the fact that LPNs’ daily tasks differ according to their work environment (e.g., acute care, long-term care), respondents could indicate if an item was not applicable in their particular work setting. Those responses were then removed from the analysis. Table 5 summarizes the results of this item.

Table 4

<table>
<thead>
<tr>
<th>Competency</th>
<th>Number (n)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication and interpersonal skills</td>
<td>1,721</td>
<td>4.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Professionalism</td>
<td>1,725</td>
<td>4.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Safety</td>
<td>1,725</td>
<td>4.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Nursing knowledge</td>
<td>1,729</td>
<td>4.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Nursing practice</td>
<td>1,717</td>
<td>4.2</td>
<td>0.8</td>
</tr>
<tr>
<td>Nursing process</td>
<td>1,725</td>
<td>4.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Leadership</td>
<td>1,715</td>
<td>3.8</td>
<td>1.3</td>
</tr>
<tr>
<td>Specialty skills</td>
<td>1,703</td>
<td>3.8</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Table 5

*Nursing Processes*¹

<table>
<thead>
<tr>
<th>Nursing Process</th>
<th>Number (n)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing tube, line, and drain care and maintenance</td>
<td>1,398</td>
<td>4.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Ongoing assessments</td>
<td>1,633</td>
<td>4.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Evaluating/documenting client response to nursing care</td>
<td>1,617</td>
<td>4.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Teaching clients and families</td>
<td>1,638</td>
<td>4.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Admission assessments</td>
<td>1,544</td>
<td>4.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Administering narcotics</td>
<td>1,499</td>
<td>4.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Developing care plans</td>
<td>1,494</td>
<td>3.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Revising care plans</td>
<td>1,493</td>
<td>3.6</td>
<td>1.2</td>
</tr>
<tr>
<td>Leading and supervising others</td>
<td>1,593</td>
<td>3.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Participating in interdisciplinary team meetings</td>
<td>1,544</td>
<td>3.3</td>
<td>1.4</td>
</tr>
<tr>
<td>Administering intravenous medications</td>
<td>1,272</td>
<td>3.0</td>
<td>1.7</td>
</tr>
</tbody>
</table>

It can be seen that the most frequently reported nursing processes related to tube, line, and drain care and maintenance, ongoing assessments, evaluating and documenting client responses to nursing care, and teaching clients and families. More variability was observed among responses regarding admission assessments and administering narcotics. To a somewhat lesser extent, the LPNs indicated that they developed and revised care plans, led and supervised others, and participated in multidisciplinary team meetings. They indicated that they were only allowed to a moderate extent to administer intravenous medications and responses varied widely. They also indicated that the process they were least likely to be allowed to do was to administer intravenous medications. Again, responses varied.

When general nursing competencies were explored further by type of work setting, it was found that significant differences existed in the level of utilization of some competencies between LPNs in acute care and those in long-term care. Figure 8 displays the competencies that

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¹ Responses to relating to monitoring and regulating the administration of blood products were omitted from this table due to a lack of clarity in the wording of the question.
differed significantly in terms of utilization by nurses in long-term care as compared to acute care settings. Utilization was measured on a five-point scale where 1 = not at all, 3 = somewhat, and 5 = a great deal. Respondents who indicated that a competency was not applicable were excluded from the analysis.

Figure 8. LPN competencies that differed significantly in utilization between acute and long-term care settings.

LPNs utilized most competencies to a greater extent in the acute care setting compared to the long-term care setting. These competencies included:

- performing admission assessments;
- performing ongoing assessments;
- teaching clients and families;
- providing tube, line, and drain care/maintenance; and
- administering intravenous medications.
On the other hand, leadership was more frequently reported by LPNs in a long-term care setting. These LPNs identified leadership as one of their competencies and reported that they led and supervised other workers significantly more frequently than did LPNs in acute care.

**Perceptions of scope.** The definition of scope of practice varies widely among LPNs. The CLPNA defined it as:

> the roles and responsibilities of the Licensed Practical Nurse to perform safe, competent, and ethical nursing care as defined by education, legislation and the regulatory authority. Under HPA (2000), this is described as Area of Practice. (CLPNA, 2008a, p. 4)

Survey participants were asked to define what scope of practice meant to them. Responses fell into four main categories.

- Scope of practice means using material taught in LPN courses (e.g., *Utilizing my taught/learned skills through my education/training to the full extent*).
- Scope of practice means the boundaries provided by the regulations of the CLPNA or by practice as defined by a specific employer (e.g., *Working within the guidelines of the CLPNA and government regulations and guidelines*).
- Scope of practice is specific to individual LPNs based on skill proficiency (e.g., *the ability to perform these skills competently*).
- Scope of practice is defined by performance or outcome such as giving the best possible patient care (e.g., *Being able to . . . provide the best possible care for patients*).

LPNs were asked “Do you believe you are FULLY utilizing your knowledge, skills, and clinical judgement in your current work?” This question was asked of LPNs in Alberta in 2002 and again in 2007 (CLPNA, 2007). In 2002, only 33% felt fully utilized; that number rose to
50% by 2007. In this survey (2011), there was no change. About half of the LPNs (49%) still believed that they were not fully utilizing their knowledge, skills, and clinical judgment in their current work, reporting on average that they were using 67% (SD = 18.6) of their skills, competencies, and knowledge in their work setting.

Several personal, organizational, and environmental factors were reported to affect the LPNs’ ability to work to full scope. Table 6 summarizes these factors.

Table 6

Perceived Factors Affecting LPNs’ Ability to Work to Full Scope

<table>
<thead>
<tr>
<th>Factor</th>
<th>Number (n)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staffing policies</td>
<td>1,590</td>
<td>3.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Direct supervisors</td>
<td>1,544</td>
<td>3.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Government regulations</td>
<td>1,494</td>
<td>3.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Patient complexity</td>
<td>1,571</td>
<td>3.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Relationships with staff</td>
<td>1,544</td>
<td>2.9</td>
<td>1.4</td>
</tr>
<tr>
<td>Personal confidence</td>
<td>1,540</td>
<td>2.6</td>
<td>1.4</td>
</tr>
</tbody>
</table>

It can be seen that staffing policies were perceived as having more impact on LPNs’ ability to work to full scope than any of the other factors studied. Direct supervisors, government regulations, and patient complexity were perceived to have a lesser effect. Relationships with other staff and personal confidence were perceived to have the least impact on scope. The perceived impact of all these factors did not differ between acute care and long-term care settings.

LPNs in Their Care Team Environment

Several items on the survey explored the care team environment in which the LPNs worked. In particular, the LPNs were asked if they received enough information to do their job and if they were treated with respect. They were also asked about the extent to which they trusted

5 Please note that the survey did not differentiate between formal policies and practice.
the management at their workplace. Finally, they were asked to rate a general statement about workplace effectiveness. A four-point scale was used where 4 = very true and 1 = not at all true.

Table 7 summarizes the findings.

Table 7

**LPN Views on Workplace Factors**

<table>
<thead>
<tr>
<th>Workplace Factors</th>
<th>Number (n)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I get enough information from my team to do my job</td>
<td>1,644</td>
<td>3.6</td>
<td>0.6</td>
</tr>
<tr>
<td>At my workplace, I am treated with respect</td>
<td>1,652</td>
<td>3.5</td>
<td>0.7</td>
</tr>
<tr>
<td>I trust the management at my workplace</td>
<td>1,667</td>
<td>3.2</td>
<td>0.9</td>
</tr>
<tr>
<td>My workplace is run in a smooth and effective way</td>
<td>1,648</td>
<td>3.0</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Overall, the LPNs indicated that they tended to get enough information from their team to do their job and generally were treated with respect. LPNs’ views about their trust in management were still positive, but less so, and there was more variability in their responses. Similarly, their views about their workplace being run in a smooth and effective manner were even more moderate and again, variability was high.

Interestingly, when LPNs were asked to report the extent to which their employer supported their professional growth and development, the item was found to have strong or moderate positive correlations with all of the above questions about communications and the nursing team environment (see Table 8). Most strongly related to employer support was trust in the management at their workplace.

Table 8

**Relationship of Employer Support to Communication/Team Environment**

<table>
<thead>
<tr>
<th>Question</th>
<th>Number (n)</th>
<th>Correlation Coefficient (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I trust the management at my workplace</td>
<td>1,493</td>
<td>0.47*</td>
</tr>
<tr>
<td>My workplace is run in a smooth and effective way</td>
<td>1,509</td>
<td>0.44*</td>
</tr>
</tbody>
</table>
These same communication and team environment factors were also strongly correlated to job satisfaction. As shown in Table 9, LPNs who reported working in a workplace that is run smoothly and effectively have higher levels of job satisfaction.

Table 9

<table>
<thead>
<tr>
<th>Communication/Team Environment</th>
<th>Number (n)</th>
<th>Correlation Coefficient (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>My workplace is run in a smooth and effective way</td>
<td>1,562</td>
<td>0.54*</td>
</tr>
<tr>
<td>I trust the management at my workplace</td>
<td>1,546</td>
<td>0.52*</td>
</tr>
<tr>
<td>At my workplace, I am treated with respect</td>
<td>1,566</td>
<td>0.49*</td>
</tr>
<tr>
<td>I get enough information from my team to do my job</td>
<td>1,555</td>
<td>0.34*</td>
</tr>
</tbody>
</table>

*Correlations were significant at the 0.01 level (2-tailed).

These interesting relationships begin to paint a picture of the type of team environment in which LPNs seem to be most satisfied; that is, a team where trust in management is high, the workplace is managed effectively, they feel respected, and their professional growth and development are encouraged.

LPNs in Their Organization

Communications about safety. The LPNs were asked to consider communications about safety in their workplace. They rated a series of statements on communications related to safety on a five-point scale from Never to Always. Table 10 provides a summary of their responses.
Table 10

*LPN Views on Communications About Safety*

<table>
<thead>
<tr>
<th>Communications About Safety</th>
<th>Number (n)</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff will freely speak up if they see something that may negatively affect patient care</td>
<td>1,663</td>
<td>3.8</td>
<td>0.9</td>
</tr>
<tr>
<td>In this work setting, we discuss ways to prevent errors from happening again</td>
<td>1,663</td>
<td>3.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Staff members are not afraid to ask questions when something does not seem right*</td>
<td>1,670</td>
<td>3.5</td>
<td>1.0</td>
</tr>
<tr>
<td>We are informed about errors that happen in this work setting</td>
<td>1,665</td>
<td>3.5</td>
<td>1.1</td>
</tr>
<tr>
<td>Staff members feel free to question the decisions or actions of those with more authority</td>
<td>1,663</td>
<td>3.2</td>
<td>1.1</td>
</tr>
<tr>
<td>We are given feedback based on incident reports</td>
<td>1,662</td>
<td>2.9</td>
<td>1.2</td>
</tr>
</tbody>
</table>

* Please note that this question was originally worded in the negative.

Overall, the LPNs responded positively on topics related to communications about safety. In particular, they felt they could speak up if they saw something that negatively affected patient care and felt that they could discuss error prevention. It is also interesting to note that in general they were not afraid to ask questions when something did not seem right. It appeared that LPNs received feedback based on incident reports only some of the time.

Each of the factors related to communication about safety was also strongly or moderately associated with all of the communication and team environment factors (see Table 11).
Table 11

Relationship Between Communications About Safety and General Communication/Team Environment

<table>
<thead>
<tr>
<th>Communication about Safety</th>
<th>General Communication/Team Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I get enough information from my team to do my job</td>
</tr>
<tr>
<td></td>
<td>( n )</td>
</tr>
<tr>
<td>We are given feedback on incident reports</td>
<td>1,551</td>
</tr>
<tr>
<td>Staff will freely speak up if they see something that may negatively affect patient care</td>
<td>1,550</td>
</tr>
<tr>
<td>We are informed about errors that happen in this work setting</td>
<td>1,552</td>
</tr>
<tr>
<td>Staff members feel free to question the decisions or actions of those with more authority</td>
<td>1,551</td>
</tr>
<tr>
<td>In this work setting, we discuss ways to prevent errors from happening again</td>
<td>1,550</td>
</tr>
<tr>
<td>Staff members are not afraid to ask questions when something does not seem right</td>
<td>1,555</td>
</tr>
</tbody>
</table>

*Correlations were significant at the 0.01 level (2-tailed).

It appeared that communication about safety issues was associated with general communications in the care team. Trusting management and discussing error prevention were the most strongly associated. The LPNs who answered the communication and team environment questions more positively were significantly more likely to also answer the communications about safety questions in a positive way.

LPN job satisfaction also correlated strongly or moderately with communications about safety. As communications about safety improved, so did LPN job satisfaction (Table 12). The factor that was most strongly associated with LPNs’ job satisfaction was their confidence in
questioning the decision or actions of those with more authority. Receiving feedback on incident reports was least related, although it was still a moderate relationship.

Table 12

*Correlations were significant at the 0.01 level (2-tailed).

<table>
<thead>
<tr>
<th>Communications About Safety</th>
<th>Number (n)</th>
<th>Correlation Coefficient (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff members feel free to question the decisions or actions of those with more authority</td>
<td>1,571</td>
<td>0.45*</td>
</tr>
<tr>
<td>In this work setting, we discuss ways of preventing errors from happening again</td>
<td>1,570</td>
<td>0.44*</td>
</tr>
<tr>
<td>Staff will freely speak up if they see something that may negatively affect patient care</td>
<td>1,570</td>
<td>0.38*</td>
</tr>
<tr>
<td>Staff are not afraid to ask questions when something does not seem right</td>
<td>1,578</td>
<td>0.35*</td>
</tr>
<tr>
<td>We are informed about errors that happen in this work setting</td>
<td>1,572</td>
<td>0.33*</td>
</tr>
<tr>
<td>We are given feedback based on incident reports</td>
<td>1,570</td>
<td>0.29*</td>
</tr>
</tbody>
</table>

Professional development. The LPNs were asked to rate the extent to which their professional growth and development was encouraged by their employer on a five-point scale where 1 = Not at all and 5 = To a great extent. Their mean response was fairly high at 3.7 (SD = 1.1, n = 1,770). The extent to which their employer supported professional growth was significantly correlated with having an accurate job description (r = 0.37, p<0.01, n = 1,298). It also correlated with the factors associated with communication and team environment. As Table 13 shows, all communication/team factors were strongly or moderately correlated with employer support for professional development. Trusting the management in the workplace was most strongly related.
Table 13

*Relationship Between Employer Support for Professional Growth and Development and Communication/Team Environment*

<table>
<thead>
<tr>
<th>Communication/Team Environment Factor</th>
<th>Number (n)</th>
<th>Correlation Coefficient (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I trust the management at my workplace</td>
<td>1,493</td>
<td>0.47*</td>
</tr>
<tr>
<td>My workplace is run in a smooth and effective way</td>
<td>1,509</td>
<td>0.44*</td>
</tr>
<tr>
<td>At my workplace, I am treated with respect</td>
<td>1,512</td>
<td>0.38*</td>
</tr>
<tr>
<td>I get enough information from my team to do my job</td>
<td>1,505</td>
<td>0.31*</td>
</tr>
</tbody>
</table>

*Correlations were significant at the 0.01 level (2-tailed).

**Job description.** Approximately one-third of respondents (505 out of 1,549) reported not having a job description that represented what they actually do. It was interesting to see how the extent to which job descriptions matched reality was associated with a number of other factors. These included LPN job satisfaction ($r = 0.30$, $p<0.01$, $n = 1,200$), employer-specific factors including employer support for professional development ($r = 0.37$, $p<0.01$, $n = 1,298$), and all of the communications about safety questions (see Table 14). The more accurate the job description, the more LPNs were satisfied were with their jobs, employers supported their professional growth and development, and communications about safety improved.
Table 14

Correlations Between Job Description and Communications About Safety

<table>
<thead>
<tr>
<th>Communications About Safety</th>
<th>Sample Size (n)</th>
<th>Correlation Coefficient (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff members feel free to question the decisions or actions of those with more authority</td>
<td>1,199</td>
<td>0.33*</td>
</tr>
<tr>
<td>In this work setting, we discuss ways of preventing errors from happening again</td>
<td>1,199</td>
<td>0.33*</td>
</tr>
<tr>
<td>Staff will freely speak up if they see something that may negatively affect patient care</td>
<td>1,197</td>
<td>0.28*</td>
</tr>
<tr>
<td>We are informed about errors that happen in this work setting</td>
<td>1,200</td>
<td>0.27*</td>
</tr>
<tr>
<td>We are given feedback based on incident reports</td>
<td>1,199</td>
<td>0.26*</td>
</tr>
<tr>
<td>Staff are not afraid to ask questions when something does not seem right</td>
<td>1,204</td>
<td>0.23*</td>
</tr>
</tbody>
</table>

*Correlations were significant at the 0.01 level (2-tailed).

Scope Indicator Analysis

The following figures and discussion reflect the Scope Indicator statistical analysis conducted to select sites for the case study component of this study. The Scope Indicator variable provided an objective measure of LPN competency utilization, with values ranging from as low as 30 to a maximum possible value of 100. The distribution was approximately normal with a mean value of 77.8 (SD = 1.5, n = 1,569) and a slight negative skew, resulting in a larger proportion of LPNs with a Scope Indicator scope greater than the mean (see Figure 9).
Since the Scope Indicator excluded questions that were answered as “not applicable,” the remaining scores should only measure competencies that are appropriate for a particular work setting. With this in mind, LPNs working in acute care had significantly higher scores than those working in long-term care (79.6 and 75.9, respectively). (See Figure 10.)
*LPNs working in acute care settings had significantly higher Scope Indicator scores than those working in long-term care ($t = 4.147, df = 466.252, p<0.001$).

**Figure 10.** Mean scope indicator difference by care setting.

The Scope Indicator was used as an objective measure of LPN skill utilization and this value was compared with the more subjective question that asked respondents, “What percentage of your skills, competencies, and knowledge do you use in your work setting?” Figure 11 displays these two measures of skill utilization in four quadrants as practice (Scope Indicator) and perception (skills utilization estimate). The vast majority of LPNs (75%) had values greater than 50% for both measures and were in the High Practice, High Perception quadrant. Very few LPNs were in either of the Low Practice quadrants having a Scope Indicator score of less than 50 (5% of LPNs in total). There was, however, a considerable number of LPNs (20%) in the Low Perception, High Practice quadrant, suggesting that one-fifth of respondents underestimated the percentage of skills they use.
Figure 11. Scatterplot of scope indicator and estimation of skill utilization (%).

The objective measurement of the Scope Indicator was not found to vary across demographic factors. Scope perception, however, did differ according to age. Figure 12 shows the mean Scope Indicator values for LPNs who were divided into 3 age groups according to percentiles. Mean Scope Indicator values are approximately equal across all age groups. Even though all age groups had approximately equal mean values for the Scope Indicator, the LPNs in the youngest age group, those aged 21 to 36, were significantly less likely to report fully utilizing their skills compared to the other age groups. A similar but slightly weaker trend was observed in terms of experience in that LPNs with the least years of experience were most likely to underestimate their skill utilization ($\chi^2(2, n = 1,567) = 33.0, p <0.01$).
Significantly fewer LPNs born after 1975 reported fully utilizing their skills compared to other age groups, $\chi^2(2, n = 1,450) = 43.3, p < 0.01$.

Figure 12. LPN age groups and perception of full scope.

LPNs who had the highest Scope Indicator values also appear to be more satisfied at work. Figure 13 demonstrates that satisfaction was significantly higher overall in LPNs classified as high scope (M = 1.6, SD = 0.8) compared to low scope (M = 2.1, SD = 1.0). Scope Indicator scores of 82.1 or greater were classified as high scope, and scores that were less than 82.1 were considered low scope. This cut point was chosen based on percentiles in order to have more equal group sizes.
LPNs classified as low scope were significantly less satisfied with their jobs than LPNs classified as high scope (p<0.001, 95% CI of difference: 0.6 to 0.4, n = 1,450).

Figure 13. Job satisfaction by scope level.

Summary of Findings

Table 15 provides a brief summary of survey research findings organized by research question.
Table 15

Summary of Research Findings by Research Question

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Related Results</th>
</tr>
</thead>
</table>
| 1. What can we learn about LPNs’ practice that promotes or inhibits their ability to practice to full scope? | **Education and Training**<br>• LPNs who have been in the profession for less than 5 years were more likely to have undergone more formal education such as a graduate or professional degree<br>• 52% of LPNs surveyed had an LPN Certificate and 47% had an LPN Diploma<br>• 46% of LPNs planned to take further post-basic training within the next year<br>**Experience**<br>• Years working as an LPN ranged from 0 to 52, with an average or 14.2 years (SD = 12.6); the majority of LPNs had been working less than 10 years<br>• 44% of LPNs worked full-time, 45% part-time, and 11% were casual<br>• 93% of LPNs were in permanent positions, with only 6% being temporary<br>**Job Satisfaction**<br>• Overall, job satisfaction among LPNs respondents was high; mean = 4.1 on 1-5 scale<br>• LPNs who used more of their skills had a higher level of job satisfaction<br>• 56% had wanted to leave their job during the past year (37% for workload issues and 18% for scope issues)<br>• Factors that could encourage them to stay in the profession (not retiring): higher wages and better benefits; expanding their scope of practice<br>**Individual Competencies and Scope Utilization**<br>• Half of the LPNs perceived that they used all of their possible skills; however, one-fifth greatly underestimate their skill usage<br>• Those who reported not fully utilizing their skills estimated that they used 67% of their skills on average<br>• Younger LPNs were the most likely to underestimate the extent to which they used their skills<br>• Taking into account skills that were not applicable/appropriate to the setting, LPNs in acute care used more of their skills overall than those working in long-term care<br>• The competency that LPNs were least allowed to utilize was...
<table>
<thead>
<tr>
<th>2. What can we learn about LPNs’ work teams and systems that promote or inhibit their ability to practice to full scope?</th>
<th>Team Leadership and Supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer support for professional growth and development was associated with positive communication and team environment factors</td>
<td></td>
</tr>
<tr>
<td>Team Dynamics</td>
<td></td>
</tr>
<tr>
<td>Positive communication and team environment factors were associated with higher LPN job satisfaction</td>
<td></td>
</tr>
<tr>
<td>Team communications about safety were positive overall and were associated with increased LPN job satisfaction and positive communication and team environment factors</td>
<td></td>
</tr>
<tr>
<td>Having an accurate job description was associated with better communications about safety</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. What can we learn about LPNs’ organizations that promote or inhibit their ability to practice to full scope?</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPNs working in acute care used more of their skills overall than those working in long-term care; however, LPNs in long-term care were more likely to use leadership-related competencies than their colleagues in acute care</td>
<td></td>
</tr>
<tr>
<td>Of all the team and organizational factors listed, staffing policies were reported to have the most impact on LPNs’ ability to work to full scope (M = 3.5 on a 5-point scale, SD = 1.3)</td>
<td></td>
</tr>
<tr>
<td>Resources and Funding</td>
<td></td>
</tr>
<tr>
<td>The extent to which professional growth and development was encouraged by employers was 3.7 on a 5-point scale (SD = 1.1)</td>
<td></td>
</tr>
<tr>
<td>Organization and Scope Utilization</td>
<td></td>
</tr>
<tr>
<td>One-third of LPNs reported not having a job description that represented what they actually do</td>
<td></td>
</tr>
</tbody>
</table>
Findings of the LPN Cross-Case Analysis

This chapter describes the key findings obtained from case studies conducted at six Alberta healthcare facilities between November 2011 and March 2012. Using statistical modeling and individual responses to the provincial LPN Scope of Practice Survey, it was possible to produce composite scores that related to scope utilization by site. In this way, three high and three low scope sites were selected for the case studies. Interviews or focus groups were conducted with administrators, unit managers, team leaders, RNs, LPNs, HCAs, and other staff at each site. Registered psychiatric nurses (RPNs) were not employed in any of the units of study. In addition, standardized surveys were distributed to a number of clients as well as to several family members (Table 16). In total, 193 individuals participated in this case study research.

Table 16

<table>
<thead>
<tr>
<th>Participant Group</th>
<th>Site #1</th>
<th>Site #2</th>
<th>Site #3</th>
<th>Site #4</th>
<th>Site #5</th>
<th>Site #6</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPN</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>34</td>
</tr>
<tr>
<td>Nursing Team - RN</td>
<td>N/A&lt;sup&gt;a&lt;/sup&gt;</td>
<td>7</td>
<td>10</td>
<td>7</td>
<td>10</td>
<td>5</td>
<td>39</td>
</tr>
<tr>
<td>Nursing Team - HCA/NA</td>
<td>9 (2 groups)</td>
<td>7 (2 groups)</td>
<td>3</td>
<td>26 (9 groups)</td>
<td>6</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>Team Lead/Supervisor</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>N/A&lt;sup&gt;d&lt;/sup&gt;</td>
<td>14</td>
</tr>
<tr>
<td>Senior Site Administrator</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Acute Care Patient</td>
<td>N/A&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3</td>
<td>10</td>
<td>N/A&lt;sup&gt;b&lt;/sup&gt;</td>
<td>7</td>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>LTC Resident</td>
<td>4</td>
<td>N/A&lt;sup&gt;c&lt;/sup&gt;</td>
<td>N/A&lt;sup&gt;c&lt;/sup&gt;</td>
<td>4</td>
<td>N/A&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>LTC Family Member</td>
<td>3</td>
<td>N/A&lt;sup&gt;c&lt;/sup&gt;</td>
<td>N/A&lt;sup&gt;c&lt;/sup&gt;</td>
<td>0</td>
<td>N/A&lt;sup&gt;c&lt;/sup&gt;</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4 EMTs</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>26</td>
<td>36</td>
<td>47</td>
<td>32</td>
<td>28</td>
<td>193</td>
</tr>
</tbody>
</table>

<sup>a</sup> - Two RNs were interviewed at this site, but the Team Lead/Supervisor tool most accurately described their roles.

<sup>b</sup> - This was a long-term care facility.

<sup>c</sup> - This was an acute care facility.

<sup>d</sup> - The site administrator also acted as unit manager and team leader at this site.

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<sup>6</sup> The term “client” is used to encompass both acute care patients and long-term care residents. When discussing specific types of sites, the term “patient” or “resident” is used accordingly.
An individual site report was prepared and sent to each of the six senior site administrators to review for accuracy and provide feedback. Each administrator completed a validation survey to capture their perception of their report’s validity, relevance, utility, and value. Changes to the final site reports were made accordingly.

This chapter provides a summary of key findings from the six individual site reports as well as a cross-case analysis. Each site is described briefly and is followed by a general review of the characteristics of participating LPNs. Factors associated with LPN scope utilization are described using the Scope of Practice Factors Model (p. 22) as a framework. The individual, team, organizational, and client-related care factors are discussed in terms of their impact on LPNs’ ability to work to full scope. A brief discussion of quality of care follows, based on the data obtained from staff interviews and focus groups and from the standardized surveys administered to clients and family members. The surveys did not focus on the care provided specifically by LPNs, but instead examined overall perceptions of the quality of care provided by the nursing team.

**Site Characteristics**

The case study sites included acute care and long-term care facilities in both rural and urban locations in Alberta. At least one site was located in each of the five provincial health zones as defined by Alberta Health Services. Features of each site studied are presented in Table 17.
Table 17

Case Study Site Characteristics

<table>
<thead>
<tr>
<th>LPN Scope (Based on Survey)</th>
<th>Type of Care</th>
<th>Site</th>
<th>Location</th>
<th>Unit(s) of Study</th>
<th>Beds (Approximate)</th>
<th>Study Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Long-Term</td>
<td>Site 1</td>
<td>Urban</td>
<td>1 floor</td>
<td>75</td>
<td>24</td>
</tr>
<tr>
<td>High</td>
<td>Acute</td>
<td>Site 2</td>
<td>Urban</td>
<td>1 unit</td>
<td>30</td>
<td>26</td>
</tr>
<tr>
<td>Low</td>
<td>Acute</td>
<td>Site 3</td>
<td>Urban</td>
<td>6 units</td>
<td>100</td>
<td>36</td>
</tr>
<tr>
<td>Low</td>
<td>Long-Term</td>
<td>Site 4</td>
<td>Rural</td>
<td>Facility (2 wings)</td>
<td>100</td>
<td>47</td>
</tr>
<tr>
<td>Low</td>
<td>Acute</td>
<td>Site 5</td>
<td>Rural</td>
<td>Facility (2 wings)</td>
<td>30</td>
<td>32</td>
</tr>
<tr>
<td>High</td>
<td>Acute &amp; Long-Term</td>
<td>Site 6</td>
<td>Rural</td>
<td>Facility (2 wings)</td>
<td>40</td>
<td>28</td>
</tr>
</tbody>
</table>

The selection of the unit of study at each site depended on several factors. Senior administrators provided advice and direction regarding which facility, unit, or group of units would be most appropriate for participation. The size and nature of each facility were also considered. For example, some facilities contained only one or two units or wings and employed a small number of staff. Others were large, complex organizations with many units from which to select a study component. Data collection was limited to work settings where LPNs were employed; therefore, emergency departments, outpatient clinics, and certain other specialized areas were excluded from examination. The unit manager(s) were then invited to participate, and once they had agreed, staff also received invitations. All relevant permissions were obtained.

Site 1 was a long-term care facility located in a large urban centre. In total, 24 individuals at the site participated in the study. Researchers interviewed staff and administered surveys to residents and family members on one floor of this facility, which housed approximately 75 residents. Many residents were elderly and required some assistance with mobility and activities for daily living (ADLs). According to a unit manager, an estimated 30% of the resident population had been diagnosed with Alzheimer’s disease or other forms of dementia. Based on
statistical analyses from the LPN survey, Site 1 was identified as a high scope site in terms of LPN practice.

Site 2 was located in a large urban centre and provided acute medical and alternate levels of patient care. Twenty-six staff members and patients from this large facility participated in the study. The unit studied housed 30 patients, including both acute care and transitional beds. As such, patients on the unit were said to vary widely in terms of the complexity of their health status. At the time research was conducted, the average length of stay on the unit was reported to be between 70 and 80 days, largely due to the longer stay of the transitional patients. Site 2 was identified as a high scope site in terms of LPN practice.

Site 3 was a large acute care facility in a large urban centre. Thirty-six participants took part in the study. The unit of analysis consisted of six of the facility’s units, which served approximately 100 patients in total. The units housed mostly orthopedic, urological, and general surgical patients, and thus conditions related to bone fractures and surgeries were among those reported to be most common. Site 3 was identified as a low scope site in terms of LPN practice.

Site 4 was a long-term care facility located in a rural Alberta community. A total of 47 staff and residents participated in the study, which included both wings of the facility. Approximately 100 residents lived on site and services included continuing care and dementia care. Residents were mostly elderly, and few were independent enough to move about without some assistance from staff. Those who had been diagnosed with dementia resided in one wing, and those most at risk for unpredictable or “disruptive” behaviour were grouped in a unit within that wing. Site 4 was identified as a low scope site in terms of LPN practice.

Site 5 provided a range of acute medical services (including emergency and obstetrics services) to a rural population. Because the site was located on the edge of a large outdoor recreational area, there were dramatic fluctuations in the population served on weekends and at
certain times of the year. Thirty-two individuals participated from the facility’s two acute care wings, which together held about 30 patient beds. The emergency department and the labour and delivery areas were not included in the study. Site 5 was identified as a low scope site in terms of LPN practice.

Site 6 was a mixed acute care and continuing care facility located in a small agricultural community in rural Alberta. The site held approximately 40 beds across two wings. The long-term care wing provided geriatric and dementia care. The other wing served the community’s acute care needs, including obstetrics, palliative care, and emergency services. Because the facility was located near several busy highways, the emergency department could be quite busy. In all, 28 staff and clients participated in the study. The site was identified as high scope in terms of LPN practice.

LPN Characteristics

Thirty-four LPNs were interviewed across the six sites. In addition to being asked to describe their work, their teams, and their units, LPNs were asked several questions related to their employment status and history. Participant responses by site are presented in Table 18.
Table 18

LPN Characteristics and Demographics by Site

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Site #1</th>
<th>Site #2</th>
<th>Site #3</th>
<th>Site #4</th>
<th>Site #5</th>
<th>Site #6</th>
<th>Total/Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td># of LPNs</td>
<td>4</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>34</td>
</tr>
<tr>
<td>Diploma</td>
<td>1</td>
<td>3</td>
<td>1(^a)</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Certificate</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Years on Unit (avg.)</td>
<td>1.8</td>
<td>1.5</td>
<td>13.4</td>
<td>11.4</td>
<td>7.25</td>
<td>12.7</td>
<td>9.35</td>
</tr>
<tr>
<td>Total Years as LPN (avg.)</td>
<td>4.25</td>
<td>3.1</td>
<td>19.7</td>
<td>13.5</td>
<td>7.4</td>
<td>12.9</td>
<td>10.94</td>
</tr>
<tr>
<td>Full-Time</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>11</td>
</tr>
<tr>
<td>Part-Time(^b)</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>23</td>
</tr>
</tbody>
</table>

\(^a\) Unclear for one participant whether a certificate or diploma was obtained.
\(^b\) Responses below 1.00 Full-Time Equivalent (FTE) hours were considered part-time.

In 2005, the Practical Nurse (PN) diploma was introduced as the necessary credential for newly graduated practical nurses to practice in Alberta. The year represented a significant benchmark for practical nursing education, as prior to this a certificate was the required credential. In this study, there was an even division between LPNs who had graduated from a certificate program and those graduating from a diploma program. The LPNs at rural sites were twice as likely to have a diploma, while their urban counterparts were twice as likely to have a certificate. In many cases, the LPN’s credential was related to the number of years worked in the profession, creating generational cohorts.

On average, the LPNs had been employed in the profession for 10.9 years and had been working in their current unit for a similar length of time.\(^7\) However, the median years of work experience was 5.5, indicating that a considerable proportion of LPNs were new to the profession. Cross-site comparisons revealed that LPNs from low scope sites had nearly twice the experience as those at high scope sites: 13.9 years on average at low scope sites compared to 7.0 years at high scope sites.

\(^7\) Several LPNs indicated they had previously worked on the unit as an HCA prior to entering the LPN profession.
Generally, the LPNs at study sites worked part time. Over two thirds of those interviewed (68%) were employed part time. At two sites no full-time LPNs were interviewed. Typically, the LPNs in rural sites were more likely to be employed part-time while more LPNs worked full-time at urban locations. Many LPNs expressed satisfaction with their employment status and, while a few expressed the desire for more shifts, most enjoyed their part-time work, as the following comment suggests.

I like working out here because it’s different every day. It can be the same patients, but it is different problems every day . . . . And I especially love working part-time, because once I have had those days off, I want to come back and I am fresh and I enjoy my job.

- LPN, Site 6

Factors that Promote LPN Scope Utilization

A variety of themes emerged from the case study data regarding the factors that promote or hinder LPNs’ use of skills within their scope of practice. Using the Scope of Practice Factors Model as a guide, the information obtained from the study has been organized by individual, team, organizational, and system factors. Instances are noted where there may be a relationship between the factor and site characteristics (e.g., rural or urban location, acute or long-term care, high or low scope).

**Individual factors.** Participants identified several individual factors that supported the ability of LPNs to work to full scope. In particular, nursing skills, experience, education, and personal initiative were found to positively influence their scope utilization.

**Nursing skills.** The skills utilized by LPNs at each site were influenced by a number of factors, including the status of clients and their needs, facility policies, resources, and available staff. Table 19 depicts the frequency with which LPNs used specific skills at the six case study sites.
Table 19

Reported Frequency of LPN Skill Utilization by Number of Sites<sup>a</sup>

<table>
<thead>
<tr>
<th>Skill</th>
<th>Frequency by Site</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Often</td>
</tr>
<tr>
<td>Ongoing Assessments</td>
<td>6</td>
</tr>
<tr>
<td>Client &amp; Family Teaching</td>
<td>6</td>
</tr>
<tr>
<td>Evaluation and Documentation of Client Response to Care</td>
<td>6</td>
</tr>
<tr>
<td>Administer Narcotics</td>
<td>6</td>
</tr>
<tr>
<td>Initial Assessments</td>
<td>5</td>
</tr>
<tr>
<td>Initiate Intravenous Access</td>
<td>2</td>
</tr>
<tr>
<td>Administer Intravenous Medication</td>
<td>1</td>
</tr>
<tr>
<td>Central Line, Tube, and Drain Care Maintenance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0</td>
</tr>
</tbody>
</table>

<sup>a</sup> Responses relating to monitoring and regulating the administration of blood products were omitted from this table due to a lack of clarity in the wording of question.

<sup>b</sup> At some sites, LPNs reported providing tube and/or drain care. Central line care, however, was rarely reported to be performed by LPNs.

Though the skills used by LPNs varied by site, LPNs at several sites indicated that the use of their nursing skills improved the client care they provided, helped them work to a fuller scope, and enhanced their confidence. Education and on-the-job experience were identified as strategies to improve their nursing skills.

**Experience.** LPNs at all sites associated greater work experience with greater scope utilization. More experience with aspects of their delivery of care such as assessment, diagnosis, and critical thinking helped them to improve these skills and was associated with greater scope utilization. As one commented:

You learn more by doing, and you learn by having all of these different environments and clients. And that helps because you are more experienced to deal with problems that come. - LPN, Site 4

At one high scope site, participants indicated that hands-on experience was very important as a supplement to education because it allowed nursing staff to meet the expectations held for them at this facility. Thus, experience was reported to be an important component of
LPNs’ ability to work to full scope. At another site it was reported that more experienced nurses (LPNs and RNs) were more likely to be assigned to more complex patients than those with less experience due to their broader range of skills. Finally, increased confidence was also associated with experience. Over a quarter of the LPNs as well as a number of other care providers commented that experience had a positive effect on confidence, making them more comfortable in their practice.

**Education.** Overall, LPNs believed that their education (both basic LPN and post-basic) contributed to improved nursing skills, greater confidence, and a higher quality of care. Some LPNs from a long-term care facility held the view that education prepared them to better communicate with and educate residents and their families. A number of LPNs also spoke positively of the effect of post-basic training on their skill utilization. Knowledge of symptoms, diseases, and medications was said to be improved through continued training after graduation.

Other care providers also indicated that education promoted LPN scope utilization. Some RNs at acute care facilities noted that enhanced education for LPNs resulted in the need for fewer interventions from RNs. A manager at a low scope site also referred to this relationship between LPN education and RN workload, with another manager from the same facility adding that more training could smooth out differences in individual competency levels of LPNs and would ease the process of expanding their responsibilities at the facility.

Some participants compared past and present PN programs, noting that recent graduates were exceptionally strong. A senior administrator noted that, in particular, critical thinking and math skills were stronger for new graduates when compared to LPNs with more experience.

**Personal motivation.** There tended to be a relationship between the personal motivation of LPNs and their level of scope utilization. Several LPNs indicated they were motivated to take on additional responsibilities, such as taking advantage of opportunities provided by RNs and
team leaders to practice their skills. LPNs at the three high scope sites (sites 1, 2, and 6) reported that their personal motivation had increased their willingness to pursue further education as well as to continue learning on the job. A charge nurse and an administrator at two of these sites described LPNs as “eager” to learn and to improve their skills. At one site where LPNs were sometimes in charge of a long-term care wing, one HCA indicated that LPNs were motivated to work hard in order to “prove themselves” to RNs.

The sources of personal motivation were varied, but many LPNs referred to job satisfaction as a motivator. Job satisfaction among LPNs was high at most sites, including at two high scope sites where all of the LPNs interviewed reported enjoying their work. LPNs described their work as “rewarding” and “challenging”. As one commented, “I feel really good about myself when I leave my job.” Several other LPNs explained the reason for their satisfaction:

I enjoy working with the residents. Above all I became an LPN because I really want to care for people and help them. I really feel good helping somebody that needs help.

- LPN, Site 1

I love the seniors. I love everybody I work with . . . they become like family. Sure, you have your ups and downs just like family, [but] I look forward to coming to work every day.

- LPN, Site 4

For LPNs working on long-term care units, working with residents motivated them to provide high-quality care. This finding was less evident with LPNs who worked in acute care units.

**Team factors.** A number of aspects of LPNs’ work teams contributed to the ability of LPNs to use their skills fully. Specific factors included client assignment and workload, team dynamics, and team leadership and supervision.
**Assignment and workload.** At three of the four sites that offered acute medical services, staff assignment was largely based on patient complexity. Those patients who were deemed more complex were typically assigned to RNs, while LPNs were assigned the less complex patients. However, at two of these sites, LPNs reported that their assignment to more complex patients had allowed them to practice higher level skills, even when RN assistance was required. Staff assignment was also said to be at the discretion of the charge nurse on duty.

Many participants associated LPN scope utilization with RN workload. RNs were often required to assist LPNs with patient care when tasks were deemed beyond their scope at that site, either due to site policies or to individual LPN levels of training. LPNs at two sites expressed frustration over not being permitted to give IV medications (although this competency is within their scope of practice) and this policy was seen to cause more work for RNs. Participants from the three low scope sites and from one high scope site indicated that if LPNs were able to practice to a fuller scope, RNs would be “freed up” to focus on other tasks. As one RN commented, greater scope utilization for LPNs would improve the delivery of care “because the time I would have spent to go and do the LPN’s meds, I can spend it with my patients.” At Site 3, where expanded responsibilities for LPNs were being contemplated, a number of LPNs, RNs, and a manager supported this approach as a way to alleviate the RN workload.

RNs have said it would be much easier if we were able to practice to full scope, so that we can look after our patients and they can, you know, look after theirs. I have already seen the positive outcomes for patients. - LPN, Site 3

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8 Throughout this chapter, references are made to facility practices or policies that promote or inhibit the ability of LPNs to practice to full scope. It is important to note that, in most cases, the researchers did not know whether references to policies related to formal facility policies or simply to informal policies or typical practice.
At another site, RNs also commented that greater LPN skill utilization would provide “workload relief” for RNs by removing the need to assist LPNs with more complex tasks. One also suggested that LPN scope utilization would affect RN scope as well, stating:

If [LPNs] were allowed to work in a broader scope of practice it would free up the RNs to be more what the RN has been trained to do, and down the line. It would be a whole shift, if they were allowed to do more. - RN, Site 4

At Site 6 (a high scope site), two LPNs mentioned that freeing up RNs was an organizational strategy and the administrator concurred, commenting that by allowing LPNs to perform a wider range of tasks, the RN role had been enhanced, allowing them to focus on the most complex patients.

**Team dynamics.** RNs played a significant role in LPN scope utilization in other ways. LPNs and RNs at two sites identified opportunities provided by RNs for LPNs to practice new or infrequently used skills, such as changing complex dressings or starting IVs. RN acceptance of LPN role expansion appeared to link to such opportunities. As one RN remarked, “We all need to be working to our level of ability and our level of training. Otherwise, we are frustrated.”

A number of LPNs spoke positively about the support and assistance provided by their RN coworkers and charge nurses. Guidance, demonstration, instruction, and mentoring were identified as supportive RN strategies. Several LPNs indicated their appreciation for this support.

Other members of the care team also supported greater LPN scope utilization. Interprofessional communication and practice was one supportive strategy that was identified. Participants from several sites referred to the advice and support provided by physicians and therapists on their units. LPNs at three sites were said to provide helpful advice and support to their peers. In contrast, at the other three sites, only one LPN worked on the unit for each shift. At one site, EMTs provided care on the unit while remaining on call for emergencies. An LPN
mentioned that orienting new EMTs to the facility gave her an opportunity to practice her own skills.

Both formal and informal communication mechanisms helped LPNs obtain useful information. Shift reporting was identified by LPNs at all three high scope sites while group meetings were seen as an aid to problem solving at one low scope site. The administrator there saw the meetings as a way to eliminate the hierarchy between workers. Conversations on breaks or at the end of a shift were useful informal reporting mechanisms seen at three sites as a way to share information about client needs or care plan changes. At one acute care site, a unit manager was credited with setting up a system of reporting between coworkers whenever one of them went on a break. Another strategy used at that site was a “problem board” on which staff could write questions for the unit’s physicians to address.

**Team leadership and supervision.** Team leaders, including charge nurses, educators, managers, and administrators, were credited by participants at all sites for helping LPNs to expand their scope. LPNs at the three high scope sites, as well as at one low scope facility, commented on the role of leadership in teaching and in promoting scope utilization. As one LPN described, a teaching style that emphasized demonstration and guidance was particularly helpful:

> A very experienced charge nurse, if I have a problem or question she will not tell me what to do, but she will remind me. “Have you thought about this, have you thought about that?” So it really helps me to think about things in a different way and it definitely improves the patient care.

- LPN, Site 2

Individual managers were also said to provide direct support for professional development by encouraging LPNs to pursue opportunities such as training in specialized competencies or to pursue a Bachelor of Nursing (BN) degree. LPNs also emphasized trust as an important supervisory quality. Some noted that their charge nurse or unit manager did not
“interfere” with their work if it was known that the competency was within their scope of practice. Other important supervisory qualities reported by LPNs included friendliness, approachability, supportiveness, and calmness.

LPNs at five of six sites reported that their team leader had provided them with opportunities to practice newly learned or infrequently used skills. At one high scope site, three RNs who had served as charge nurse spoke of encouraging LPNs to practice unfamiliar tasks. Two reported encouraging LPNs to communicate with physicians and physical therapists working on the unit, while another used the example of a tracheostomy patient to explain an empowerment approach to delegation:

Just because an LPN comes to me and says, “you know what, I have never had a [patient with a] ‘trach’ before,” that is not a reason for me . . . to take them off that assignment. It’s a reason for me to be able to empower that LPN to provide confident and knowledgeable care, so I don’t have a problem with going in and showing them how to do it or assigning a nurse to help them with it.  

- RN, Site 2

Two LPNs at the same site mentioned that the charge nurses or other team leaders checked to make sure they were comfortable with the complexity of their patient assignment. Participants at three of the acute care sites commented that supervisor monitoring was helpful for LPNs when performing new tasks. At one of the high scope sites, an LPN described a strategy used by the administrator to increase LPN responsibilities incrementally. For example, LPNs began to administer medications during the least busy medication pass and gradually built up to administering all medications during the shift.

Organizational and system factors. Organizational factors affected LPNs’ use of their skills in a number of ways. These included the overall organizational vision and approach to LPN scope utilization, unit staffing, employer support for professional development, resources,
and other facility policies and practices. A system-wide factor that also emerged was the relationship between the site and the United Nurses of Alberta (UNA) union.

**Organizational vision.** Senior administrators were asked to describe their vision for nursing care. At all sites, the administrators referred to the need to provide quality nursing care. Two administrators at long-term care sites emphasized the need for holistic care for their residents. At three sites, administrators reported that they used a collaborative model of care, while at two other sites the administrators described using a team-based model. Findings point to some inconsistency between the care model stated by the administrator and that reported to be practiced by staff on the case study units. Specifically, at three sites some unit-level staff said they practiced a primary nursing model whereas only one site administrator reported that this was the case. At two acute care sites, however, administrators did note that the model could vary from unit to unit.

All of the administrators indicated that LPNs played an important role in providing care at their facilities. One administrator (from a high scope site) summed up her position on LPN scope utilization by saying, “I think if people can do the job, let’s let them do it.” At all six sites, administrators reported that LPNs were either currently or soon to be expected to work according to their full scope of practice, although the administrator from a long-term care facility qualified this statement in noting that LPNs "work to full scope to what is appropriate in this setting.”

The importance of fostering a culture of staff acceptance for an expanded LPN role was mentioned by two administrators. At Site 3, a low scope site that was in the process of expanding LPN scope utilization, the administrator reflected on the dynamic between RNs and LPNs, stating that there could be resistance from RNs to the increases in LPN responsibilities, and that although “the education for LPNs has changed…it [will take] time to change the culture as well.” At Site 6, a high scope site that had recently expanded LPN practice, the administrator agreed
that certain RNs had been reluctant initially to accept this change. However, citing examples from emergency situations where RNs and LPNs had worked together and achieved positive outcomes, she noted that such experiences contributed to the RNs’ acceptance of the LPN scope.

**Staffing assignments.** Staff assignment influenced LPN skill utilization. At two sites it was reported that an increase in the ratio of LPNs to RNs had been under discussion. At one site they planned to increase their number of LPNs over time as they continued to increase their competency training and as RNs retired. At the other site, some increase in scope utilization had already been implemented. LPNs occasionally replaced RNs by supervising the long-term care wing as long as an RN remained in a nearby wing to provide advice as needed. The LPNs at this site saw this as a way to increase their leadership and decision making responsibilities. However, it was assumed by many RNs and managers at two sites that LPNs were not permitted to fill the role of charge nurse. One supervisor spoke of informally permitting LPNs to take on this supervisory function, commenting:

> Personally I trust [our LPNs] to the same degree as the RNs. Because I am an RN, I am around here and [if] the RN calls in sick or something … under my supervision, informally I allow [LPNs] even to be in charge of the whole floor. I think they are brilliant here. - Manager, Site 1

Sometimes the lack of availability of RNs inadvertently contributed to increased LPN responsibilities. Several LPNs at one low scope site indicated that when fewer RNs were present on the wing, the LPNs had more opportunity to practice their skills. For example, if an RN was unavailable for a shift or was called away during the shift, the LPN would assume more responsibility and “step up to a higher scope.” LPNs also took on additional responsibility during night shifts, when one RN was on staff in each wing. At another low scope site, LPNs also reported using a wider range of skills during the night shift due to a heavy workload and reported
understaffing. Limited staffing and unit workload were identified at one site as factors to facilitate LPN scope utilization. At Site 6, a rural facility that staffed only one LPN and one RN on acute care, an LPN remarked:

I can tell you exactly why we work to full scope. It is because there are only two of us. If we don’t work to full scope, things aren’t going to get done. - LPN, Site 6

Support for professional development. LPNs were asked about the support they received from their employers for professional development (PD), which was loosely defined as including competency training, workshops, conferences, seminars, and other educational or training events related to the LPN field. The approach to PD varied from site to site. In general, all sites were reported to encourage LPNs to pursue professional development, but when asked to rate their employer’s support for PD on a scale from 1 (“not at all”) to 5 (“a great deal”), the 33 LPNs who responded provided a mean rating of 3.3 with a median of 3.5. Support was slightly higher at urban sites compared to rural sites and at high scope sites compared to low scope sites.

Participants identified several positive elements about their organization’s approach to PD. At three sites, many appreciated the paid “education days” provided by their employer. Educational in-services and reimbursement for conference travel were also mentioned at several sites. An on-site educator was highly regarded by those sites that had one; LPNs reported that working with an educator allowed them to practice and build competence in new skills. An LPN at Site 5 (a rural low scope site) indicated that managers there were willing to adjust their schedules so that LPNs could attend courses.

Patterns of dissatisfaction with organizational support for PD were found at four sites (including the three rural facilities and the three low scope sites); however, the reasons differed by site. LPNs at two low scope sites expressed frustration because courses were “of no use” due to site restrictions on their scope. At one acute care site, where a broader scope was planned,
participants reported feeling “pushed” through the training in order to meet organizational targets. Some LPNs reported that they did not have enough time to study or prepare for their competency exams and this sense of being rushed was associated with their reluctance to accept the expanding role for LPNs. At a rural site, two participants spoke of approval “roadblocks” regarding their attendance at courses and workshops. There, one LPN had been asked to work additional shifts in order to attend a PD session. Lastly, staff at another rural facility reported that there was little or no financial support for them to travel to PD events. As one participant said, “they encourage [PD], but they do not make it easy.” However, the facility did provide a well-resourced education room where teleconferences were observed in progress during the research period.

**Organizational resources.** Senior site administrators were asked to comment on the extent to which LPN assignment, productivity, and cost influenced their decisions related to the delivery of care. All of the administrators commented on the financial advantage of staffing LPNs; however, only some indicated that this was indeed a factor in assignment decisions. As one commented:

> I think that LPNs cost less than an RN, so we have more LPNs. So I think from that perspective we [have revised] the care model so that the LPNs are mostly responsible for doing the delivery and the RN is responsible for doing complex nursing situations.

- Administrator, Site 1

RN availability was also a staffing consideration at two sites. One unit manager reported that if no RNs were available to take a shift, an LPN would be called in rather than going into an overtime arrangement with an RN. This situation was said to occur “pretty regularly” and could result in LPNs caring for more complex patients. At another site, RN availability was often an
issue and the administrator commented that it made more financial sense to staff more LPNs rather than to pay overtime to an RN for “almost every shift.”

*Supportive policies and practices.* Participants at three acute care sites reported that LPN responsibilities were in the process of expanding. At a high scope site, a team leader mentioned that newly hired LPNs were being trained on central lines “right away” to get “them up to scope as soon as possible,” though this was not a formal policy of the facility. Two low scope sites were planning to train LPNs on the administration of IV medications. Senior administrators for both sites noted that further changes to LPN responsibilities were being considered. One site planned to add central line care, physician orders, and lab reports to the LPN role. At the other site, management was exploring the possibility of having LPNs work in specialized units such as Emergency and Labour and Delivery. The third low scope site had permitted LPNs to contribute to Minimum Data Set (MDS) reporting and had also permitted LPNs who were certified in IV administration to perform this competency.

*Supportive system factors.* One administrator reported an innovative solution to problems posed by a local RN shortage. The administrator sought – and received – a letter of understanding from the United Nurses of Alberta. The agreement allowed LPNs to take on greater leadership responsibilities and a broader range of tasks within their scope of practice. Even though team leadership was included in the provincial LPN competency profile, the letter was seen by the administrator to be an essential component of implementing this change. As the team leader on the long-term care wing, LPNs received staff reports, assigned HCA tasks, gave all medications, managed IVs, and received reports from physicians. If a competency was out of their scope of practice or if an issue arose, the LPN contacted the RN on the other wing. This letter of understanding had been in effect for several years, and had produced, in the view of the administrator, “beautiful” results.
Factors That Inhibit LPN Scope Utilization

The sections that follow describe factors that were seen to inhibit LPNs’ use of their full range of skills and these are presented in relation to individual, team, and organizational factors. Where appropriate, site characteristics are noted.

Individual. At the individual level, differences in LPN experience, education, and motivation were found to affect their ability to practice to full scope. Findings related to these themes and their potential for inhibiting scope utilization are presented in this section.

Experience. Scope utilization was limited at several sites by a lack of experience along with few opportunities to gain more. Five managers at two acute care sites commented that an LPN’s experience could limit the tasks and types of patients to which they were assigned and some LPNs corroborated this view.

In addition, both RNs and LPNs noted that lack of experience could affect an LPN’s confidence with new or unfamiliar tasks. The LPNs emphasized the importance of providing opportunities to practice skills in order to build their comfort level (e.g., in initiating IV access) while RNs noted that certain LPNs required encouragement in order to be “more independent” (e.g., when communicating with doctors and therapists).

Education and time since graduation. Time since graduation and variation in formal education were found to be significant factors affecting LPN scope utilization. The changing requirements of PN training over the years contributed to considerable individual differences in formal training and these were widely reported to hinder LPNs’ ability to work to full scope. Variations in training in certain competencies, such as care related to IVs and chest tubes, were reported to affect LPN assignment at three of the four acute care sites. Further, some LPNs faced individual barriers to training such as lack of time and, in rural locations, lack of adequate funding for travel.
A longer time since graduation was associated with a narrower range of skills for LPNs. Those who had graduated either with a certificate or prior to provincial scope increases required more supplementary training to practice to full scope. Two administrators also associated educational credentials obtained prior to provincial scope increases with lower critical thinking skills.

At the two low scope sites where skill upgrading for LPNs was in progress, some LPNs indicated that their fewer years of formal education were associated with less self-confidence. In fact, there was some resistance to increased scope utilization on the part of some LPNs. Some expressed the sentiment that they had not “signed up for” these new responsibilities when they had decided to become an LPN. Not all were motivated to complete post-basic training. One also indicated that there was little incentive to learn new skills, as they would not lead to higher compensation. Upcoming retirement also negatively affected some LPNs’ motivation to work to full scope.

**Personal motivation.** When speaking about the potential for greater LPN responsibility in long-term care, a site administrator remarked that the “biggest catch” was LPNs’ desire to accept that responsibility, commenting, “because if they don’t want to accept it, then it is never going to work.” This belief was reported by staff at five sites by managers, RNs, and LPNs, specifically that a minority of LPNs displayed a lack of initiative. Several participants expressed frustration with what was seen to be the unwillingness of some LPNs to expand their skill set. RNs at two sites reported instances where LPNs declined offers to practice new skills. At one site, resistance to learning new skills was also perceived to hinder the ability of other LPNs to practice to full scope:

Some of the [other LPNs here] don’t want to work to full scope, and it makes it harder for me to work to full scope. Because a lot of them, there is no way they want to be in the
Labour and Delivery [room], and if you ask them, they don’t even want to do the IV medications and were very upset about taking the course and having to do it.

- LPN, Site 5

Another factor linked to LPN motivation was job satisfaction. Though overall job satisfaction was high at most sites, two of the low scope sites yielded mixed results. At one acute care site, over half of LPNs were dissatisfied with their job. One source of their dissatisfaction appeared to stem from resistance to managerial “pressure” to enroll in competency training. At the other site, a long-term care facility, LPNs spent the majority of their time working alongside HCAs, prompting some participants to refer to their role as that of a “glorified health care aide.” The absence of a clearly defined role for LPNs led to some of their dissatisfaction.

While the topic of compensation for LPNs was not raised by the researchers, at least one staff member at each site associated LPN motivation and job satisfaction with compensation. While some LPNs acknowledged feeling that their compensation should be higher, it was more common for RNs and HCAs to express this view on the LPNs’ behalf. Ten RNs, four HCAs, and a manager all suggested that LPN compensation was too low compared to that of RNs. Several speculated that LPNs would be frustrated because they were doing many of the same tasks as RNs for lower pay and suggested that LPNs could feel “undervalued” by their employer. Some also suggested that LPNs’ compensation could affect their motivation, as the following comment suggests.

I think there [are] even some LPNs that don’t want to go full scope, and I understand.

Why should they go full scope and have to do the full workload as an RN and get paid less than us? 

- RN, Site 5

Despite the recurrence of this theme, LPN compensation was not reported to be a significant source of team conflict at any of the sites studied.
**Critical thinking skills.** Few references to LPNs’ critical thinking skills were obtained, although two senior administrators mentioned the topic. One was critical of LPNs entering the profession, but the other commented that recent PN graduates were now demonstrating higher level thinking skills. Of the 39 RNs interviewed, only two provided examples where certain critical thinking skills were lacking; the first related to deciding what information to report, and the second related to determining the urgency of reporting specific information.

**Team factors.** Several team factors were identified that could hinder LPN scope, including client assignment, territoriality of RNs, staff awareness of the LPN scope in general and of individual LPN competencies in particular, and team leadership.

**Assignment.** LPNs at the three acute care sites reported that their patient assignment affected the skills they were able to use and tended to believe that their assignment was largely dependent on the individual charge nurse on duty. Patients were assigned based on complexity at these sites and the more complex patients were generally cared for by RNs. Several LPNs saw this practice as a barrier to their ability to practice to full scope.

Confusion about overall LPN scope and about individual differences in scope were associated with RN hesitancy in assigning LPNs to more complex patients. At least one participant at each of the four acute care facilities indicated that they were uncertain about which tasks fell within the LPN scope. Two RNs indicated that they would like to know more about the tasks LPNs could do, as they might ask for more help if they were better informed. LPNs agreed that their scope was not well understood by some coworkers, thus limiting their opportunities to practice the skills within their scope. Individual differences in LPNs’ skill levels could also make it difficult to assign LPNs to more complex patients. Many RNs preferred to perform higher level tasks themselves. The degree of trust held by the RN for the individual LPN was also reported by both RNs and LPNs as a factor affecting assignment decisions.
**Territoriality.** The theme of territoriality was identified at four sites, including the three identified as low scope. LPNs, RNs, managers, and senior administrators described situations where RNs were either reluctant to accept an expanded LPN role or did not allow LPNs to perform certain tasks. In many cases, territorial attitudes and practices were said to be rooted in the perceived threat posed by LPNs to RN job security. As LPNs were seen as less expensive to employ and yet were capable of many of the same tasks, RNs reported “nervousness” or felt “insecure” with regard to their own job stability. Some RNs perceived an absence of managerial support for themselves compared to that given to LPNs and this was also seen by some as a threat, as the following comment suggests.

There has been no message … to support the Registered Nurse or to reassure the RN. They have been just left out there kind of to let their imaginations create big scary thoughts for them. That we are going to get all out of jobs. But for the LPN, yeah, a lot of support and the expectation is, “nobody will fail you” [i.e., in competency training]. We will make them successful. - Manager, Site 3

At another site, where the LPN role had recently expanded, some RNs acknowledged that initially they had been reluctant to accept this change. One remarked that the RNs had felt LPNs “were kind of overstepping. But [the change] has actually worked out well.” The senior administrator at that site also referred to some discomfort among RNs about the possibility of eliminating the RN role; however, she stated that the LPN role increase had actually allowed the facility to enhance the RN role as well.

Another reason for RN resistance related to RNs’ own level of experience. An LPN at one site, and a manager at another, suggested that recent RN graduates might be anxious to “prove themselves” and thus could be hesitant to ask for help from an LPN. Some also indicated
that longer tenured RNs might be used to the pre-expansion LPN scope of practice, making it “hard to break out of that” routine and “allow [LPNs] to do more.”

**Leadership and supervision.** In most of the sites, unit managers and other team leaders were said to be supportive of LPNs. However, at one site, the unit manager reportedly did not know the names of staff members after several months on the job and this affected LPN willingness to approach this person for guidance. At another site, three LPNs reported that they had limited communication with managers, with one stating that managers seemed to be “a little disconnected from what is really going on” on the unit. Finally, some supervisors were not fully aware of the LPN scope of practice, including one manager who reported that:

> I think the management philosophy here really encourages [LPNs] to work at their full scope of practice. From what my understanding of their… I don’t know… I couldn’t tell you what their full scope of practice is. I haven’t read it. I haven’t investigated it.

- Manager, Site 4

**Organizational and system factors.** A number of organizational and system factors affected the ability of LPNs to work to full scope. The manner in which units were staffed was found to be one of these features, as well as formal and informal facility practices and the availability of resources. Some factors related to broader system factors (such as regulatory and professional organizations) are also summarized in this section.

**Staffing model.** At one low scope site, the staffing model involved having the LPN float between facility units throughout the course of a shift. This was widely seen by participants as a barrier to scope utilization. The LPNs floated according to a schedule of tasks (e.g., time to deliver medications) and according to the needs of other staff members. Sometimes they worked alongside the HCAs and performed a very similar role; at other times, they participated in higher level care tasks based on the request of an RN.
As a manager noted, the LPN’s role was “defined by the fact that part of their time is [in] an HCA role, so of course then that would inhibit their ability to perform in full scope.” According to one RN, LPNs did serve as a “nurse’s eye on the floor” while providing basic nursing care to residents. However, the only nursing task that was an explicit part of their assignment was to support the RN by distributing medications during the heaviest period of the day. Other opportunities to provide nursing care were dependent on the needs and discretion of the RN.

Workload and understaffing were concerns identified by a number of participants at this site. LPN assistance was often needed simultaneously by staff on both units. Comments from LPNs, RNs, and managers suggested that the LPN was often seen as a more highly skilled or “glorified” HCA. As one LPN commented, “I am an HCA until I am needed as an LPN, and then I just change my hat [and] become an LPN.”

**Role ambiguity.** Confusion and a lack of clarity about the LPN role were evident at several sites. The LPN job description provided some of the confusion. When LPNs were asked if they had seen a formal job description for their current position, just over half (18 of 34) reported that they had seen it, but a number of those indicated that it needed updating or that it did not accurately reflect their actual work. At one site where considerable role confusion was reported, the absence of a written job description for LPNs was cited as one important reason for role ambiguity; other reasons related to differences in individual LPN competency levels based on their experience and training.

During the interviews and focus groups, participants were asked to identify role similarities between LPNs and RNs and between LPNs and HCAs. There is considerable overlap in roles. All of the roles of LPNs are also performed by either HCAs or RNs, with no areas of practice unique to LPNs. While some discrepancies were observed, in general both LPNs and
HCAs delivered hands-on care and performed ADLs and client transfers. Across all sites, both RNs and LPNs performed client assessments and administered medications; additional similarities varied from site to site. At one site where LPNs used a comparatively wide range of skills within their scope of practice, some participants suggested that the roles of RNs and LPNs were beginning to blur. Two RNs at the site remarked on the similarities between the two professional groups:

I see some confusion in a sense … sometimes the people don’t understand the difference between what an RN does and what an LPN does, and those areas are not often seen or sometimes they are not very tangible . . . I don’t understand the situation sometimes, but I know it would be unfair for me to give an LPN a really sick person and expect them to do exactly what I’m responsible for.

- RN, Site 2

It seems like we are getting so close [RNs and LPNs] that we should merge them. Just have one kind of nurse. Otherwise, they should make the roles much more different.

- RN, Site 2

Limiting policies and practices. Every site had some policies or practices that limited LPNs’ scope. In the acute care sites, opportunities for LPNs to provide care tended to be limited for more complex patients. Monitoring and regulating the administration of blood was not performed by LPNs at any of the sites, although some LPNs had received the required training. Similarly, central line care (including central venous lines and peripherally inserted central catheters) was reported to be performed almost exclusively by RNs. At the three low scope sites, LPNs did not take physician orders or make requests for diagnostic tests. Lastly, LPNs at one high scope site were not allowed to mix IV medications.

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9 Note that some of these skills would rarely be needed in a long-term care setting.
At the two urban acute care sites, patient assignment was seen to restrict opportunities for LPNs to maintain their skills. For example, they were rarely allowed to provide care to patients who were recently out of surgery or to those suffering from the early stages of substance withdrawal. At both facilities, patients were assigned to nurses based on complexity and not necessarily on the skill set and training of each individual nurse. As one LPN put it:

Some of the [patients] they consider unstable I feel I am competent enough to take care of . . . . But it is not that they think the LPNs could not take care of them. They just do it in order of the most unstable person will just go to the RN. - LPN, Site 2

At two low scope sites, LPNs were not permitted to work in units where patients required specialized care. At Site 3, LPNs did not work in trauma units. At Site 5, they were not permitted to work in emergency or in the labour and delivery rooms. At both sites, however, managers indicated that these practices might change as a greater proportion of LPNs obtained the relevant training.

**Inhibiting system factors.** A few wider system factors also inhibited LPN scope utilization. For example, participants at two sites referred to tasks that LPNs were not legally permitted to perform. A manager at one long-term care site believed that LPNs were capable of handling charge nurse duties, but noted that regulations would not allow this arrangement (unless an RN was present on the unit). An RN at an acute care facility also noted that many LPNs knew how to provide care for patients with controlled analgesics, but that they could not do this legally. This points to a lack of clarity about what regulations were in effect as they were not able to identify the source.

One senior administrator wanted more policy direction from government and/or regulatory bodies about how LPNs should be utilized. The administrator noted that:
We have never seen anything on paper that people are to encourage full scope. Managers are out there just doing their own thing. But we have never seen anything formal that [says LPNs should] practice to full scope to the capabilities of what is appropriate for that site … it's just a concept that’s out there. - Senior Administrator, Site 4

Participants from four sites, including all low scope sites and all rural sites, also described inconsistencies in LPN scope. The researchers often heard about LPNs at other facilities (or even in other units at the same facility) who could perform certain tasks that they were not allowed to do. Some called for greater consistency across facilities and patient populations.

MDS reporting contributed to workload concerns at two long-term care sites. As the reporting was tied to facility funding, staff had to devote time during each shift to enter resident data into a database. A manager at one site stated that this process took at least one hour per shift. This individual indicated that the facility would lose money – and would therefore need to cut staff – if reports were not submitted properly. An LPN at the site described the process as follows.

I am assigned nine people [for MDS reporting]. For these nine residents I am responsible for their monthly review and I am responsible for updating their care plans. I am responsible for all of the interventions and all changes that need to be done. I am responsible for entering all of this information in the computer. And now you tell me, how do I get that time? Because of lack of time sometimes, although it is not good to say, but the assessment is being missed. - LPN, Site 1

Quality of Care

The quality of care for patients and residents was an important component of the case study research. For the purposes of this study, care is understood as the client experience through interactions with nurses and other care providers. Client perceptions of care were measured
through the administration of surveys to clients and family members. They were asked to evaluate nursing staff’s ability to meet their needs, the manner in which care was provided, and the competence and promptness of service. In addition, staff offered perceptions on factors that facilitated or inhibited the quality of client care. Factors affecting the safety of both clients and staff are also discussed.

**Patient, resident, and family survey findings.** A total of 35 questionnaires were completed across the six sites. Participants were identified by unit leaders as individuals who were available and well enough for study involvement and included 22 acute care patients, nine long-term care residents, and four resident family members. Nineteen people were surveyed at urban facilities, compared with 16 in rural locations. Fourteen surveys came from high scope sites and 21 from low scope sites. When asked to rate the nursing care received on a scale from 0 (“worst care possible”) to 10 (“best care possible”), respondents provided an average rating of 8.5. No single site stood out as providing exceptionally great or poor nursing care. Ratings were consistent between high and low scope sites and between rural and urban locations. Nursing care was rated somewhat higher in acute care sites (8.9) than in long-term care sites (7.7), although the sample sizes are too small to make any generalizations.

Overall responses indicated that nursing staff *always* treated clients in a courteous and respectful manner and *always* did all they could to manage clients’ pain. All respondents felt that they *usually* or *always* received assistance from nursing staff as soon as needed. However, not all felt that staffing on their unit was adequate: five of 19 patients answered *No* when asked if they felt there was enough nursing staff on their unit, and three of nine residents reported that there was *never* enough nursing staff (with three more indicating there was only enough staff *sometimes*).
**Facilitators of quality of care.** Study participants offered a number of comments regarding care facilitators. At each site they reported that delivery of high-quality care was a goal of their work team as well as part of their organization’s vision. Client care was emphasized as the priority on their unit and took precedence over workload issues or personal conflicts. LPNs and other staff identified their personal passion to provide quality care and contributed to both a positive team environment and high job satisfaction. As one staff member commented:

I love it here. The team environment is really good . . . . No one is above anybody else . .

. . Everybody has the same goal and that is to make the patient feel better.

- EMT, Site 6

Participants from two high scope sites praised the LPNs’ people skills. Examples of their patience, listening skills, and client teaching abilities were provided. At a long-term care site, an RN reported having learned from the compassion displayed by the LPNs, citing their ability to communicate effectively with residents diagnosed with dementia.

LPNs’ use of a broader range of skills tended to be associated with a better quality of care. A number of LPNs, RNs, managers, and administrators suggested that if LPN scope was utilized more fully, there would be a positive effect on the client experience. At one acute care site, such perceived outcomes included giving patients a more consistent primary nurse, reducing confusion over who to call for support, and increasing clients’ confidence in their nurse. At one low scope site, eight of ten RNs shared the view that patients would receive a higher quality of care in a timelier manner if LPNs worked closer to their full scope rather than being “restricted to some duties.”

When RNs were asked if they felt that LPNs had an impact on the delivery of care or the client experience on their unit, over half (18 of 34) indicated that LPNs had a positive impact on the quality of care. They referred to the workload relief that LPNs provided to RNs, enabling
both nurses to focus more on their clients. Thirteen indicated that LPNs had no impact on the delivery of care, commenting on teamwork and the similarity of care provided by RNs and LPNs. Only one RN, from a low scope site, reported that LPNs had a negative impact on care (due to the need for RN intervention on LPN assignments).

Inhibitors of quality of care. Facility policies, short staffing, and unit workload were reported as inhibitors of care quality. Staffing policies and practices were reported to affect the timeliness of care. At four sites, including the three low scope sites, participants reported that an LPN often needed to find an RN to assist with certain competencies (e.g., IV initiation and care, central line care, and the administration of some medications) and care was delayed as a result.

One manager suggested that the RNs might prioritize their own clients, commenting:

I think sometimes medications aren’t given as timely as they could be [and] I think perhaps there are times when patients might have to wait for the complex dressing change because his nurse isn’t the one doing it. It is somebody else whose view on it or take on it is, “I have my own assignment and I have to do your dressing and so that can wait.”

- Manager, Site 3

Staff shortages were said to negatively affect care at three sites. LPNs reported that the extra workload due to understaffing made them less focused and unable to spend enough time with clients. At two sites, LPNs reported that being short-staffed created safety concerns. When staff were not available, call bell wait times increased, two-person lifts were frequently performed by a single staff member, and there was a greater risk of clients trying to transfer themselves. Participants at one site reported that they were not allowed to work more than four hours of overtime in the event that a coworker was unavailable for a shift. One LPN indicated that this practice affected the delivery of care, commenting, “For four hours, how can I deliver my job in a satisfying way if I have to rush to do [everything]?”
At four sites, participants reported that HCAs had at times worked beyond their scope of practice, either at the request of other staff or because of their own perceived need to provide care. Examples included HCAs giving pills to clients, applying medicated creams, removing medicated dressings, and performing glucose testing.

Staffing for night shift presented safety concerns at three sites. Participants at two acute care facilities worried about how to respond in the event of a night-time emergency as there were fewer staff. For example, if an LPN was called away to assist with an emergency, an HCA might be the only staff member present on the unit. Some LPNs said they were hesitant to take night shifts for this reason. In addition, the absence of security staff at night in two rural facilities made staff feel even more unsafe.

**Concluding Remarks**

The conclusions from this cross-case analysis will be presented in the next chapter and integrated with the findings from other components of this study. This chapter ends with some reflections on the experience of data collection in the six sites.

Overall, we saw very promising relationships between administrators, supervisors, team leaders, and staff who were registered nurses, practical nurses, and health care aides. We saw both challenges and promising practices related to maximizing the scope utilization of LPNs. We were truly impressed by the dedication of the study participants.

The willingness of staff at all sites to participate in the study was remarkable. Clearly, the first priority at each site was care of the residents and patients, and taking the time to both organize the site visits and participate in the interview and focus group placed a burden on both staff and management. However, the researchers were always welcomed, and staff and administrators spoke to us with openness and care.
A draft report of findings was sent to the senior administrator of each case study site, along with a brief validation survey and a request for feedback. The surveys asked administrators to rate their impressions of the reports’ validity, relevance, utility, and value on a five-point scale. Responses indicated that administrators felt their report accurately reflected the issues and concerns related to LPN scope of practice (mean = 4.5) and that the information provided in the report would be useful to their units (mean = 4.5).

In addition, administrator comments on the validation surveys indicate to us that there is an openness and willingness of all to reflect upon the current practices related to the utilization of licensed practical nurses. Typical comments received included the following.

I found the report to be an impartial and balanced perspective of the LPN scope of practice. Appreciated that it included possible areas for further study and some direction on care/assignment aspects that may require some education and discussion with all staff. Thank you for involving us in this study. - Senior Administrator, Site 2

It was a privilege to be involved in this study. I found the report fascinating. Although I thought I understood the LPN role at this site well, it was very advantageous to see the promoters and barriers that relate to work setting and scope of practice summarized in a table. This summary has prompted me to think about other ways we could utilize our work force at this site …. This report is excellent and is an excellent tool. Thank you for the data. - Senior Administrator, Site 4

I am really quite delighted that all of the information is so accurate and insightful, with only two days of interviews, to me it reflects exactly what is happening in our site. Thank you so much. - Senior Administrator, Site 6

We hope that the findings of these reports will provide helpful evidence-based background for their future planning and decision making.
Findings of the Policy Study

The Role of Policy in the Implementation of Full Scope of Practice for Licensed Practical Nurses

This chapter describes the key findings from a review of pertinent policy documents that are related to scope of practice and interviews with six leaders in Alberta’s healthcare system who assisted in the interpretation of these policies and who shared their views related to the project’s key research questions. These findings are discussed in light of broader strategies to support policy implementation. The intent of the chapter is to provide an understanding of some of the key features of the policy context in which the study resides.

Four major topics emerged from the interview data that are relevant to understanding the factors that have influenced the implementation of government and employer policy commitments to full scope of practice for LPNs. These include:

- organizational supports and barriers influencing full scope implementation,
- work unit supports and barriers,
- incomplete change management processes, and
- suggested interventions to support full scope implementation.

Organizational Supports and Barriers

The first topic focuses on organizational (AHS or CH) supports that have facilitated implementation of policy commitments to full scope of practice for LPNs. When AHS was created as a provincial system in 2008, the organization began the process of developing system-wide corporate and clinical policies to replace the legacy policies that the zones had retained as an interim measure after amalgamation. Given AHS’s commitment to full scope for all professionals and interdisciplinary and collaborative care, the transition to system-wide clinical policies placed all existing policies under review and affirmed that policy regarding scope of
practice can only exist at the system level rather than the site or work unit level. Changes in the administration of chemotherapy drugs were cited as an example of this transition, since all nurses, regardless of professional group, are required to take advanced practice training before they perform this task. This requirement focused on competencies, rather than professional boundaries, and validated overlapping scopes of practice. Similarly, CH deleted its medication administration policy because it was incompatible with its commitment to full scope of practice.

A number of examples of proactive change at the organizational level were identified. CH has undertaken a gap analysis with specific reference to LPNs in order to identify what they can do, the current gap between actual and potential, and what employer actions are needed. Similarly, CH has been moving away from clinical policies at the work unit level to system level policies, which will increase the alignment between its scope of practice policy and other clinical policies.

The participants also identified structural hindrances at the organizational level that influence policy implementation. While AHS has been moving to system-wide clinical policy since 2008, it has been a slow and time-consuming process because of the size and complexity of the new organization; this has indirectly slowed the implementation of full scope.

According to the participants, a major transition in scope of practice for LPNs occurred in 2003. While this was a large-scale change, its effects were clearly identifiable at the work unit level. Concern was raised by two participants that subsequent changes, while very specific, have been confusing at this lower level. One participant referred to changes occurring in “drips and drabs,” leaving managers wondering who could do what from month to month.

Labour relations issues were also identified. LPNs and RNs belong to different bargaining units with different pay scales. One participant indicated that some LPNs resisted working to full scope because they perceived their responsibilities to have moved closer to those
of RNs without commensurate salary recognition. Another participant spoke of “turf wars” between the professions. She reported that the CLPNA had published a document stating that LPNs could perform 70 percent of what an RN could do without recognizing the impact that context can have on professional practice. She felt that this statement had exacerbated turf issues.

**Work unit supports and barriers.** Shifting focus to the work unit level, participants identified change management processes that were facilitating policy implementation. These processes occurred at the unit or site level and resulted from the efforts of leaders at those levels or in response to problem situations. Numerous specific strategies were cited. In the case of AHS, zone level leaders made the conscious choice not to pursue zone level activities because it was important to respect contextual influences such as site-specific cultures. Change interventions were undertaken when problems arose at the unit or site level. In these cases, site leaders sought the support of individual RN personnel from the units as champions of full scope implementation for LPNs. Members of various leadership teams within AHS have been very conscious of their change management roles through modelling, knowledge of scope issues, and willingness to undertake interventions as problems arise. AHS leaders have invited representatives of the College of Licensed Practical Nurses of Alberta (CLPNA) and the College and Association of Registered Nurses of Alberta (CARNA) to present workshops about scopes of practice at the site and unit levels.

Several work unit level hindrances to policy implementation were identified. These related to lack of knowledge, individual and group attitudes, organizational culture, the historical development of the RN and LPN professions, and the particular pressures of healthcare work environments. Several participants indicated there was a lack of knowledge among RNs and other healthcare professionals about the current scope of practice for LPNs. The educational preparation, competencies, and scope of practice for LPNs evolved significantly over the past six
years. Not all work unit colleagues were fully aware of the current situation, and, as a result, they could fall back on their understandings from a previous era. One participant indicated that this was part of a larger pattern in healthcare with “senior” professions not necessarily knowing what “junior” professions could do. Another participant spoke of RNs who had not internalized an understanding of LPNs as a regulated profession who were accountable for their professional practice. Team relationships at the unit level could be adversely affected, in the eyes of one participant, by baccalaureate graduates who entered the workforce without a sufficient understanding of the overlapping scopes among the three nursing professions.

**Incomplete change management processes.** One participant pointed to incomplete policy implementation processes when she said, “People don’t know how to translate policy into the workplace.” While all relevant documents related to scope of practice have been circulated to nurse managers, they have not necessarily read those documents or, more importantly, internalized the policy intents in their management practice.

Numerous examples of individual and group attitudinal barriers were cited. On occasion, stresses could be created when RNs who graduated from a two-year program worked with LPNs from the new two-year diploma program. Despite similarities in the length of training, these two groups of nurses currently belong to different unions, receive different levels of pay, and have different scopes of practice. A limited number of LPNs who were educated in the old model lacked confidence and were afraid of the new responsibilities. Units sometimes restricted scopes, reflecting a lack of understanding that the scope of practice for LPNs is defined by legislation and the professional college rather than by informal policy at the work unit level.

One participant spoke of the particular pressures of a work unit characterized by heavy workloads, high patient turnover, and “a lot of in the moment decision making” about the highly individualized needs of patients. As nurse managers deployed RNs and LPNs for specific
assignments, they faced the challenge of translating knowledge about scopes of practice into the realities of the moment. A manager’s decisions in this context could create conflict between the two professional groups in the work unit.

**Suggested interventions from participants.** Participants were also asked to consider initiatives that could be implemented to facilitate policy implementation. Their responses can be grouped into three topics: change management strategies, leadership for change, and a problem resolution forum. Professional preparation of nurses, particularly RNs, received the most focus. Participants thought that students should graduate with an understanding of regulated health professions, the scope of practice for each profession, and the points of overlap. If new graduates came to work units with a readiness to understand overlapping scopes, then employer policy would have more impact. This understanding could best be achieved through interdisciplinary core courses for several professions.

While changes must occur at the unit level, participants recognized the importance of all levels of leadership in the change process. There was acknowledgement that leaders “don’t always understand the drivers for change. We could be more involved early on. We should give more attention to change management.” Similarly, another person emphasized the role of leadership in change management at the unit level: “Policy and professional body statements don’t make a difference. It is at the operational level. Change needs to be tactical and practical.”

One participant argued for an increased role for AH through targeted incentive funding to AHS and Covenant Health to stimulate research and change management projects.

Another participant developed ideas around a possible work unit problem identification and resolution process. In her view, there needed to be a forum for individual LPNs to come forward with their concerns about the implementation of scope of practice in their work units. At present, an LPN can consult with CLPNA, but it would be more effective, in this participant’s
view, to have a site-based confidential process in place as a first step in resolution. Systemic issues identified in this way could become the basis of change strategies at the unit level.

**Concluding Remarks**

This policy study sought to understand the policy framework that exists in Alberta in relation to the larger study’s focus on implementation of full scope of practice for LPNs as it is defined by legislation, regulation, and the CLPNA. Based on a broad definition of policy, there is ample evidence to suggest that policy commitments do exist. From a contextual perspective, the policy positions of AH, AHS, and CH identified in this report are relatively recent, reflecting the influence of HPA as proclaimed in December 2001. By replacing multiple pieces of legislation that emphasized exclusive scopes of practice with one piece of legislation governing all health professions and identifying “overlapping, non-exclusive scopes of practice,” the Act triggered a consideration of professional roles in relation to each other and encouraged a focus “on the concept of competence (knowledge, skills, attitudes, and judgment required to provide professional services), by comparison to focusing exclusively on tasks in many employees’ job descriptions” (AHW, 2004, p. ix).

The interviews with the senior representatives of AHS and CH demonstrated their solid commitment to their organizations’ policy positions and to implementation of those policies. They identified actions that had been taken to support policy implementation. At the same time, they provided examples of incomplete implementation of the policies and of barriers that hindered full implementation of policy.

This leads to a consideration of the role policy can play in facilitating organizational changes at the work unit level. Policies, by their nature, are organizational-level statements that are expressed in high-level language and written for all people and situations within the defined scope of the policy (Wood, 2011). Policies are necessary to ensure organizational commitment to
a desired direction and provide a justification for particular activities and changes. Policies, by their nature, cannot be expected to automatically bring about the desired state in an organization.

One useful way to think about the relationship between policies and the implementation of full scope for LPNs is to think about the process as generations of activity. The LPN profession completed a mandatory upgrade between 1996 and 1999, with all LPNs proving competence in physical assessment, pharmacology and medication administration, and infusion therapy. It developed the first version of the Competency Profile for LPNs in 1998 (CLPNA, 2005, 2009). The HPA introduced legislative change when it was proclaimed in 2001. This was followed by the LPN regulation of 2003 and the 2004 and 2005 updates to the LPN competency statements from CLPNA. Although LPN roles did not consistently reflect the mandatory competencies after the 1999 upgrade, subsequent post-HPA policy positions of AH, AHS, and CH affirmed government and employer commitment to full scope of practice for all health professionals. AHS and CH, as employers, have been facilitating organizational change through various informal strategies. The evidence provided by the interviews suggests that the full implementation scope of practice policies for LPNs and other health professionals now requires a focus at the work unit level. As one participant said, “Policy and professional body statements don’t make the difference by themselves. Change has to occur at the operational level.” This participant’s analysis is supported by the research literature on policy implementation.

McLaughlin (1987) reviewed the history of policy implementation research and pointed to a group of researchers “who showed that implementation dominates outcomes—that the consequences of even the best planned, best supported, and most promising policy initiatives depend finally on what happens as individuals throughout the policy system interpret and act on them” (p. 172).
By adapting the work of Klein & Sorra (1996) on innovation implementation, policy implementation can be viewed as a continuum. Implementation refers to the period between the adoption of a policy by a board of directors and its full operationalization as reflected, in this case, in the competencies, behaviours, and attitudes of a healthcare team. The stages of implementation may include initial avoidance, limited compliant acceptance, partial voluntary acceptance, and engaged and consistent acceptance. They observed that “the fundamental organizational challenge of innovation [policy] implementation is to gain targeted organizational members’ use of an innovation [policy]: to change individuals’ behavior” (Klein & Sorra, 1996, p. 1058).

Policy may mandate change, but new scopes of practice are only effectively operationalized when work units and healthcare professionals internalize the new work roles and relationships. Organizational changes such as new scopes of practice can challenge individuals’ and groups’ identities, sense of purpose, and their understanding of their roles and responsibilities. For this reason, policy implementation has to be accompanied by change management processes that provide individuals and groups with the opportunity to personally redefine their understanding of their work units and their roles in relation to other healthcare professionals (Wood, 2011). Hendy and Barlow (2012) noted the disruptive nature of organizational change and the need for new meanings to emerge:

Organizational change, such as the introduction of an innovative model of healthcare delivery, can trigger changes that disrupt the basis of organizational identification. The organization may need to evolve, and change its internalized structure, in terms of what it stands for and where it intends to go. These changes require associated shifts in organizationally shared values and attitudes . . ., with aspects of member identification become redundant or destroyed. (p. 349)
The data suggests that the next generation of policy implementation should consist of change management processes at the work unit level and points to an important role for nurse leaders. Several authors identified some of the challenges associated with change at the work unit level. Shanley (2007), while writing for a nursing audience, deliberately focused on the change literature from organizational studies rather than nursing. The author presented 10 conclusions providing “personal reflections based on an analysis of a diverse literature” (Shanley, 2007, p. 544). Two points are particularly salient in this context:

- Political behavior is always part of change management but is often not openly acknowledged. It is better to bring political issues and behaviors more into the open rather than leaving them as covert influences. The way each person understands the issues [associated with change management] will depend on a number of factors, including their underlying worldview and their explicit or implicit theoretical understanding of change. (Shanley, 2007, p. 544)

- Hendy and Barlow (2012) explored the role of organizational champions in relation to health system change. Based on the literature, they defined a champion as a person who:
  - at least initially, emerges spontaneously and informally within an organization and actively and enthusiastically promotes innovation and change to others for the good of the organization. This definition is useful in reflecting a personal commitment to the role, as opposed to emphasizing expertise or seniority. (Hendy & Barlow, 2012, pp. 348-349)

- Salmela et al. (2011) suggested that “nurse leaders in essence play different roles during a change process by directing, guiding, motivating, supporting, and communicating without losing their cultural ethos of caring, and nurse leaders therefore need various leadership styles . . .” (p. 431).
The specific recommendations related to policy will be integrated into the final chapter of this report after discussion and input from the steering committee. The leaders in the healthcare system who helped inform this report are thanked for their input and participation.
Key Findings, Conclusions, and Recommendations

Summary and Conclusions

This final chapter provides a summary of key findings from the four components of this research study on LPNs and their scope of practice, including the review of the literature, the provincial LPN survey, the cross-case analysis, and the policy study. Using the Scope of Practice Factors Model as an organizing structure, a summary of triangulated findings is presented that confirms, contradicts, or expands on key literature to date. The fact that the same research questions elicited similar findings across different methods of inquiry and different populations provides an in-depth perspective on this important topic.

Individual LPN Factors

Scope utilization of LPNs. Scope of practice is much more than a set of skills, yet most nurses define scope in terms of daily tasks (Besner et al., 2005; White et al., 2008). Some Canadian studies (Allard et al., 2010; CUPE, 2003; White et al., 2008) indicated that LPNs perceived that they used approximately 50% of their competencies. While findings in this study were only slightly higher, the survey unpacked these subjective perceptions of scope utilization to examine actual competencies practiced within specific care settings. Our study revealed that there is a gap between LPNs’ perception of skill utilization and their actual practice. Approximately half of the LPNs perceived that they used all of their competencies. Those who did not estimated that they used 67% of the competencies required within their care context; however, an objective measure of competencies based on the survey data revealed that in fact they were using 78% of possible competencies. This suggests that when comparing their perception of scope utilization to a more objective measure, in practice LPNs used more competencies than they perceived to be the case. Overall, 20% of LPNs underestimated their
skill usage; age was a factor in this perception, with younger LPNs being more likely to underestimate their skills than older LPNs.

There were some differences between the competencies used in acute and long-term care; most particularly, leadership opportunities were more frequent for LPNs in long-term care. In acute care, administering IV medications was the competency that LPNs used the least. Even taking into account that some skills were not applicable to certain settings, LPNs in acute care used more of their competencies overall than those in long-term care. The case studies were able to explore in greater depth the work-based contexts in which LPNs could or could not practice these skills.

**Education.** The survey, case studies, and policy study shed light on the variation and individualized nature of the formal education of LPNs in Alberta. LPN participants’ range of education included graduation from certificate programs of long standing to more recent certificate programs to the current two-year diploma, which has higher admission requirements and a curriculum designed to enhance critical thinking skills. In the case studies, less formal education (usually a certificate as opposed to a diploma) was associated with more limited patient assignment and lower scope utilization, especially in acute care settings.

The LPNs also varied in terms of the amount and content of post-basic education they had attained. Findings suggest that more formal education was associated with improved nursing competencies, confidence, critical thinking, and math skills. In long-term care, more education was also linked to an improved ability to communicate with residents and families. In the acute care sites, some RNs noted that enhanced education for LPNs resulted in fewer demands for RNs to support LPN delivery of care, thus freeing them to focus on their own tasks. Managers also highlighted the relationship between LPN education levels and RN workload, indicating that more formal education and higher competency levels allowed an expanded scope for LPNs and
reduced workload for RNs. Participation in post-basic education was also associated with improved knowledge and competency. Survey data revealed that almost half (46%) of LPNs indicated plans to take further post-basic training within the coming year. Case study findings pointed out that there was higher motivation among LPNs at high scope sites to participate in post-basic education. However, several barriers to participation remained, including time, cost, travel, and family responsibilities.

**Experience.** The number of years since graduation was not a straightforward determinant of LPN scope utilization, but did tend to be associated with a narrower range of competencies. The case studies revealed that LPNs who had more experience with more complex patients and/or who had more specific skills also had increased confidence, were assigned to patients who required more complex care, and generally used a broader range of competencies.

**Job satisfaction.** Findings from this study confirmed the connection reported in the literature between utilization of skills and job satisfaction (Besner et al., 2005; CUPE, 2003). Job satisfaction among LPNs was found to be quite high, with survey results indicating an average of 4.1 on a 5-point scale for this item. LPNs who used more of their competencies had a significantly higher level of job satisfaction. Of the 34 LPNs in the case studies, 23 reported some level of job satisfaction and all of the LPNs who worked in two of the high scope sites were satisfied with their jobs. Of the 19 LPNs in the low scope sites, seven were dissatisfied. Thus, enhanced scope utilization was associated with higher job satisfaction.

While scope utilization was a factor in job satisfaction, survey findings suggested that LPNs were more likely to want to leave their employment due to workload issues (37%) than to issues related to scope (18%). Although neither the survey nor the case studies directly addressed the question of wages, when asked what would cause them to stay in their jobs longer, LPNs provided open-ended responses indicating that higher wages and benefits were much more likely
to encourage them to stay in the profession (n = 599) compared to opportunities to practice to their scope more fully (n = 184). In the case studies, the LPNs’ RN and HCA coworkers and supervisors mentioned wages as a workload issue for LPNs, although LPNs rarely referred to it themselves. In contrast to other studies (Vosco, 2006), survey findings indicated that LPN job satisfaction was not linked to employment conditions such as full or part time. Part-time employment was seen by both survey and case study LPN participants as a positive rather than a negative factor.

**Motivation.** Motivation appears to be linked to job satisfaction. High motivation was seen as a key reason for many LPNs to adopt new responsibilities, take advantage of opportunities to practice new skills, and pursue further education, all of which could lead to enhanced scope utilization. Conversely, a lack of motivation on the part of some LPNs was perceived by coworkers in the case studies as a barrier to their scope utilization. Particularly, the more experienced LPNs in acute care and at low scope sites were seen as lacking motivation to perform all of the work assigned or to develop more complex or newer competencies.

**LPN Work Team Factors**

**Assignment and workload.** The case studies yielded findings similar to those of Besner et al. (2005) and Oelke et al. (2008), as they related to the connection between resources, workload, and working to full scope. Interviews suggested a lack of time and a heavy workload interfered with the range of skills LPNs could perform. In addition, according to two case study managers, both fiscal and human resources were key factors in workload assignment. When appropriate, where LPNs could be used to substitute for RNs in an overtime situation, it was seen as a positive financial strategy. As well, the limited availability of RNs, particularly for night shifts, had the effect of providing more responsibility and a higher workload for LPNs.
The case studies provided detailed descriptions and examples concerning the assignment of patients to LPNs and found that variability in assignment was usually linked to the individual team leader. In particular, in acute care settings, assignment was determined by the charge nurse and was based largely on the patient’s level of complexity rather than on matching the individual LPN skill set with patient care needs.

Although a participant in the policy study reiterated the finding of Besner et al. (2005) that management’s fear of RNs being replaced by LPNs led to resistance from RNs regarding certain LPN competencies, overall the case studies revealed a wide acceptance of LPNs. A number of RNs described the higher scope utilization of LPNs as a positive strategy that freed them up for their own assignments and thus they tended to support LPNs working to full scope. In fact, 18 of the 32 RNs interviewed felt that LPNs positively impacted the delivery of care, and 13 said that there was no difference in the care patients received when LPNs delivered the care. This sentiment was also expressed by a number of HCAs and managers. However, when RNs had to leave their own patients to provide care that was outside LPN scope, their workload was increased.

**Team dynamics.** Consistent with previous research findings (e.g., Bateman, 2011; Besner et al., 2005; Brady & Cummings, 2010; Cummings, 2010; Oelke et al., 2008), management and leaders played a key role in team dynamics. Case study findings indicate that managers who had accepted LPNs’ full scope provided enhanced opportunities for them to practice their skills and to develop new ones. Among team leaders and managers, there was variation in both awareness and acceptance of LPN scope. Similarly, perceptions varied about the extent of individual LPN competencies. The policy study confirmed that variation existed regarding RN and management understanding of LPN scope.
Similar to findings reported by Oelke et al. (2008), collaboration and communication were related to optimization of roles, and poor communications was a significant barrier. Positive communications and positive team environment were associated with higher LPN job satisfaction in both the survey and case studies. Team dynamics was an important factor in determining LPN scope utilization. At high scope sites, positive team communications resulted in enhanced team roles and a greater degree of cooperation between LPNs and RNs. At those sites, LPNs reported that they received guidance, teaching, and mentoring from their team supervisors. Further, they suggested that team leaders who demonstrated trust, friendliness, calmness, approachability, and availability to answer questions supported their scope utilization. Also important was peer support as LPNs noted the value of providing each other with advice and support when more than one LPN was on a shift.

Organizational/System Factors

Role ambiguity. There are many references to role ambiguity in the literature (e.g., Besner et al., 2005; McGillis Hall, 2003; Oelke et al., 2008; Pearson, 2003; Szigeti et al., 1991), and the case studies provide a number of examples of this phenomenon. It was clear in the case studies that no roles or competencies were exclusive to the LPNs; this was further illustrated by a participant in the policy study who commented that scopes of practice are non-exclusive. It appears from the case studies that roles for LPNs are more often differentiated by “what LPNs are not permitted to do” than by a focus on areas of practice that utilize their key competencies. The lack of awareness present in many team supervisors and administrators of what LPN scope entailed was compelling evidence that the knowledge transfer related to scope of practice has been inadequate. This variation in scope awareness was more apparent in low scope sites.

Role ambiguity can at least in part be addressed by clear job descriptions. In the survey findings, having an accurate job description was associated with better communications,
particularly as they related to safety. In the case studies, some LPNs did not have a job
description that they were aware of or had one that did not reflect their current role. The survey
indicated that one third of LPNs did not have a job description that they thought represented their
role at their facility.

**Staffing.** Of all the team and organizational factors listed in the survey, staffing policies
were seen to have the most impact on LPNs’ ability to work to full scope, similar to findings
from the CUPE (2003) study. The term policy here includes formal written policies as well as
unwritten but pervasive rules and practices implemented in the workplace. The case studies
found that certain staffing policies were seen by LPNs to limit their opportunities to practice to
full scope. Examples included assignment based on patient complexity, the requirement to obtain
RN permission to use competencies within LPN scope, and restricted LPN assignments to
specialized areas such as emergency and labour and delivery departments.

**Professional development.** Organizational support for professional development has
been shown to facilitate the optimization of nurses’ roles (CUPE, 2003; Oelke et al., 2008).
Likewise, the case studies revealed expressed intent on the part of senior managers for LPNs to
work to full scope, but managerial encouragement for LPNs to enrol in post-basic training was
not always matched by funding and/or formal approval to participate. While employer support
for professional development was associated with positive communications and team
environment, post-basic training, PD opportunities, and organizational support for these varied
by site. At one site where post-basic training was mandated to raise competency levels, LPNs
reacted with mixed reviews, with some feeling that they were being rushed, which could result in
failure or a lack of confidence in their new competencies. Participants from rural sites noted the
difficulty in accessing PD due to the lack of travel funds and also to the limited support available
from an on-site educator.
System

The impact of professional organizations and unions was not a focus of our study. One important exception, however, was a special Memorandum of Understanding obtained from UNA by one case study site manager. It allowed her to hire LPNs for supervisory roles in long-term care; this was found to increase LPN scope utilization at the site. One participant in the policy study commented that potential issues may exist because LPNs and RNs belong to different unions.

Senior healthcare representatives who participated in the policy study commented that organizational culture was a mediating factor in scope utilization. Further, they suggested that the policies regarding scope of practice had been implemented in an uneven and sometimes ad hoc fashion. It appears that the translation of policy into practice has been addressed inadequately, and as such, change management processes related to scope are still incomplete. In the case studies, a number of managers commented that they would like to see more direction from government and professional bodies regarding the current LPN scope. A number of steps are currently underway at both the system and organizational levels to address some of the barriers to implementing full scope of practice for LPNs. Senior administrators have indicated strongly their commitment to policy change and have agreed that for now it is still a work in progress.

Patient Care

Given the methodological and attribution challenges related to assessing the impact of one particular professional group within a care team, patient and resident care experiences were only examined from an overall care perspective. We looked at their experience through their interaction with nurses and other care providers and we found that the clients were unable to differentiate between RNs and LPNs. The overall ratings of quality of nursing care were high
(mean 8.5), and there were higher ratings in acute sites (8.9) as compared to long-term care sites (7.7). Clients in both acute and long-term care reported that nurses treated them with courtesy, respect, kindness, and privacy. Their most common criticism related to understaffing, which was consistent with the views of LPNs, RNs, and HCAs. The case studies provided examples of incidents where understaffing was associated with increased safety risks and less than optimal care, or with missed, delayed, or omitted task delegation between nurses and other healthcare staff (Harris & McGillis Hall, 2012).

Discussion and Conclusion

The study suggests that LPNs are valued members of healthcare teams and in many cases are making a positive and recognized contribution to work team effectiveness. For the most part, LPNs love their jobs and prefer to work part time. There are two diverse generational cohorts who hold differing expectations: the older and more experienced group, which generally has a more narrow skill set, and the younger group, which has more formal education and a broader range of skills. LPNs received their qualifications in a variety of training programs, have been presented with varying opportunities in post-basic training over the years, and have a greater or lesser interest in practicing to full scope. There is a diminishing gap between the two groups as older LPNs begin to retire and more graduates emerge.

However, the LPNs’ scope utilization is not only affected by their personal demographics, but also by team dynamics and, most particularly, by leadership and the organizational culture in which they work. Skilled leadership and awareness of individual LPN competencies are needed to match the right LPN to the right setting with the right patient assignments. These assignment decisions are, in turn, influenced by a policy environment in which, although a commitment to full scope has been identified, much work still needs to be done. It will take not only research but also vision, leadership, and management skills to achieve
the effective and efficient use of LPNs so that safe and high-quality patient care can be maximized.

As often happens in changing systems, implementation levels vary. The case studies revealed that LPN scope implementation ranges from resistance, lack of awareness, and frustration to acceptance, teamwork, and increased job satisfaction. From one site, where strong leadership practices and a supportive culture allowed LPNs to practice a full range of competencies, to another site, where management was unaware of the current LPN scope of practice and restricted LPNs to the role of “glorified health care aide,” the case studies demonstrated that varied acceptance of Alberta’s six-year-old policy regarding LPN scope of practice is the norm.

The study occurred at a turbulent period in Alberta’s healthcare history. The system was in the midst of a transition from a regional model to a centralized, province-wide model and this had a pervasive impact on every level of care. Overall, however, the policies of Alberta Health, Alberta Health Services, and Covenant Health as well as the representatives from these organizations who participated in our interviews indicated that there was a definite and continued commitment to support a broader scope of practice for LPNs.

The Health Professions Act (AHW, 2008) provides a basis for overlapping scopes of practice, and while this can contribute to role ambiguity and unnecessary overlap, it can also lead to clearer and more differentiated practice. Areas of overlap can be examined to ensure that, where appropriate, LPN and RN competencies are articulated. For example, RNs might be able to concentrate on a number of areas such as coordination of care, enhanced assessment and evaluation of population health needs, and advanced care provision to clients with highly complex needs (White et al., 2008).
The combined findings of the literature review, survey, case studies, and policy study provide both a broad provincial picture of the work of LPNs and an in-depth depiction of how the policies related to scope play out in six Alberta sites. While it cannot be claimed that the case study findings are representative of all Alberta sites, the triangulation of many of the study’s overall findings with those of previous studies proves that our findings are robust. They tell us both good news and bad news.

On the positive side, the degree of nurse scope utilization appears somewhat improved. In the years since Besner et al. (2005) and others explored this topic in depth, there seems to be more readiness on the ground, and among managers, to make it work, and some very positive examples of collaborative inter-professional teams were identified. LPNs appear to be more widely accepted by their RN peers, supervisors, and managers than before, even though barriers still exist.

On the other hand, the similarity of our findings to previous studies carries a more discouraging message. Many of the same messages continue to surface. Some of the key barriers – role ambiguity, diversity in formal education and training of practical nurses, lack of a unified vision for nursing differentiation, and leadership and management strategies to make it all happen – have only been minimally addressed during the intervening period. This suggests that nothing short of a single vision, systemic solutions, and strong change management strategies will lead to significant change. While previous studies have focused almost entirely on RNs, this study has turned the lens on LPNs. It has broadened the foundation of evidence upon which to develop policies and practices that maximize the nursing workforce. It goes without saying that in an environment of shrinking resources and increasing healthcare needs, this must be done.
Recommendations

The researchers presented draft recommendations to the steering committee based on the study findings. Members of the committee suggested broader system-wide changes were needed in order to enable these recommendations. Three directions emerged from this discussion:

- The need for a clearly articulated common vision for nursing in the Province of Alberta;
- The need for a broad range of formal, informal, and interdisciplinary educational opportunities for LPNs and all nurses; and
- The need to support change at a variety of levels within the system.

The following section presents the broad recommendations required to enable the more specific recommendations made by steering committee members and researchers. These, along with the supporting key study findings, are presented in Table 20a, b, and c.

1. **The need for a clearly articulated common vision for nursing in the Province of Alberta.**

   The steering committee recommended that:

   *A strong case be made to Alberta Health to lead the creation and articulation of a clear, compelling and shared vision of nursing practice in Alberta, where there is clarity regarding the competencies and the roles of the three nursing designations LPN, RPN and RN.*

   The following recommendations can be enabled by this shared vision.

Table 20a

*Recommendations and Key Findings*
It is Recommended that: | Rationale Based on Key Findings:
---|---
1.1 Clear agreed-upon guidelines for differentiated practice be developed and provided to LPNs and other members of the care team. | The roles of LPNs in the case studies had considerable overlap with the roles of RNs and HCAs. 
1.2 Strategies be developed to assist managers in staying up to date regarding the competencies and scope of all members on their teams and to ensure that team members are also aware of them. | Managers played a key role in the utilization of LPNs, yet some managers and team leaders in the case studies were unaware of the competencies of their LPNs. 
1.3 Organizational strategies be enabled to keep team members informed of updated competencies. | Team leaders and members were unaware of individual LPN competencies; this was made more complex due to the variability of formal education and experience of LPNs in the workforce. 
1.4 Clear job descriptions are created and disseminated to facilitate understanding of LPNs’ role and their identity within the care team. | Many LPNs did not have clear, updated job descriptions; this was linked to role ambiguity. 
1.5 Knowledge transfer strategies to enhance scope awareness be provided to employers, staff, and educators. | Awareness of the competencies included in the current scope of practice for LPNs and other members of the healthcare team was limited. 
1.5 Successful examples and models of inter-professional collaboration that demonstrate mutual respect and effectiveness be shared broadly by the regulatory bodies and the employer. | Many examples of collaborative teamwork between RNs, LPNs, and other members of the care team were identified in the study. 

2. The need for a broad range of formal, informal, and interdisciplinary educational opportunities for LPNs and all nurses.

The steering committee recommended that:

**Regulatory bodies, employers, and individual LPNs assume joint responsibility and accountability to identify, provide, and access learning opportunities.**

The following recommendations can be enabled by the provision of these opportunities.

Table 20b

*Recommendations and Key Findings*
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<tbody>
<tr>
<td>2.1a) Practice sites provide ongoing formal and informal professional development to support nurses in enacting their full and meaningful role – considering local context, care settings and patient needs.</td>
<td>Attention to and encouragement of professional development by managers was highly valued by LPNs and was linked to enhanced competencies.</td>
</tr>
<tr>
<td>2.1b) Managers be supported in the implementation of professional development strategies.</td>
<td></td>
</tr>
<tr>
<td>2.2 Interdisciplinary education and professional development opportunities be provided so that by learning together health professionals can be more fully aware of each others’ roles within the team and the setting’s model of care.</td>
<td>Team leaders and members were unaware of individual LPN competencies; this was made more complex due to the variability of formal education and experience of LPNs in the workforce.</td>
</tr>
<tr>
<td>2.3 LPNs access opportunities to develop evidence-based skills in a practice setting through informal means – such as in-house teaching, mentoring, coaching, and self-reflection – in order to build competence and confidence.</td>
<td>LPNs valued the support, instruction, and mentoring that they received from RNs, particularly from team leaders; this was linked to increased competency and confidence.</td>
</tr>
<tr>
<td>2.4a) More stringent approaches be considered by regulatory bodies to ensure that members meet standards of practice.</td>
<td>The diversity in formal education and skill level among LPNs was seen as a barrier to scope utilization.</td>
</tr>
<tr>
<td>2.4b) The CLPNA, working with employers and LPNs, identify and address the learning needs of LPNs with certificate education who have not had experience with complex nursing competencies.</td>
<td></td>
</tr>
<tr>
<td>2.5 Collaboration between educational institutions, regulatory bodies, and employers be encouraged to maximize education for LPNs that is flexible, affordable, and accessible from a distance.</td>
<td>LPN access to professional development opportunities was limited by cost, distance, and family circumstances, especially in rural settings.</td>
</tr>
<tr>
<td>2.6 Opportunities for laddering should be made available to Licensed Practical Nurses, as for other members of nursing teams.</td>
<td>Formal educational attainment is a key factor in the extent of LPN scope utilization.</td>
</tr>
</tbody>
</table>

3. **The need to support change at a variety of levels within the system.**

The steering committee recommended that:
A detailed strategic plan and implementation plan be developed to assist all players with their role in implementing and facilitating change regarding scope of practice for all nursing professions.

The following recommendations can be enabled by the development of these plans.

Table 20c

Recommendations and Key Findings

<table>
<thead>
<tr>
<th>It is Recommended that:</th>
<th>Rationale Based on these Key Findings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Support and/or professional development be available to leaders who are responsible for implementing change.</td>
<td>Effective leadership at many levels is required to implement efficient models of differentiated practice.</td>
</tr>
<tr>
<td>3.2 Guidelines for practice be up to date and reflect a common vision for nursing care as well as the clarification of roles of practitioners.</td>
<td>At some case study sites, certain policies and procedures did not take into account current LPN competencies and prevented them from utilizing their skills.</td>
</tr>
<tr>
<td>3.3 Strategic support be provided for managers involved in change be provided in accordance with the needs of their settings and the patient populations served.</td>
<td>The managers at some of the case study sites indicated their need for more support in implementing change in their organizations.</td>
</tr>
<tr>
<td>3.4 Successful managers who are “champions of change” be used to support other managers.</td>
<td>The study revealed several sites where managers were successfully implementing broader scope utilization of LPNs.</td>
</tr>
</tbody>
</table>

4. Additional research and knowledge translation.

As an evidence-based profession, the importance of both acquiring new research-based nursing knowledge and utilizing existing research was emphasized. As there are limited studies that focus on LPNs and LPNs are currently entering new areas of practice, further research is required. Steering committee members also highlighted the need for an accessible resource consisting of pertinent research findings on the topic of scope utilization, and that this knowledge needs to be pulled together in a manner that is accessible to all stakeholders.

It was therefore proposed that:
4.1 More research be conducted to study the roles and opportunities for LPNs in areas such as emergency care, family care clinics and primary care, labour and delivery, mental health, home care, and leadership; and

4.2 Strategies be developed that ensure broader access to and understanding of relevant existing research.

The steering committee agreed that this report is relevant to a wide variety of stakeholders. It was therefore recommended that:

A knowledge translation plan be created with input from all stakeholders to ensure that the findings of the study and its recommendations are widely disseminated and used to reach the different levels of staff.

Final comments

The submission of this report signifies the end of a two-year research process, which has involved over 2,500 participants as well as senior key stakeholders who were a part of the steering committee. It is our hope that it also signifies the beginning of a concerted effort to continue the dialogue among stakeholders to move towards the translation of these recommendations into practice.
APPENDICES

A. Data Collection Matrix (DCM)
B. Logic Model
C. CLPNA Membership Survey
D. Case Study LPN Interview
E. Case Study LPN Consent Form
F. Site Report Validation Survey
G. Patient Experience with Nursing Care Survey
# Appendix A. Data Collection Matrix

## Data Collection Matrix

<table>
<thead>
<tr>
<th>Research Questions (High Level)</th>
<th>Indicators</th>
<th>Tools</th>
<th>Case Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Literature Review</td>
<td>Phase I Survey</td>
</tr>
<tr>
<td>2. LPN – Individual Characteristics</td>
<td></td>
<td>Q24</td>
<td>Q3-4</td>
</tr>
<tr>
<td></td>
<td>1.1. Competencies (Nursing Knowledge, Nursing Process, Safety, Communication &amp; Interpersonal Skills, Nursing Practice, Specialty Tasks, Professionalism, Leadership)</td>
<td>Questions 8-12</td>
<td>Questions 13 &amp; 14</td>
</tr>
<tr>
<td></td>
<td>1.2. Education/Credentials</td>
<td>Questions 13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.3. Experience (volume to expect) [If we determined that study participants will have &gt;/=/1 year’s experience]</td>
<td>Questions 13 &amp; 14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.4. Employment status (full-time, part-time, casual) &amp; other jobs; hours of work (last week, last month)</td>
<td>Pp. 5 &amp; 6, first two paragraphs in “Job Characteristics and Working Conditions”</td>
<td>Questions 17 - 22</td>
</tr>
<tr>
<td></td>
<td>1.5. Demographics (e.g., age, ethnicity, first language &amp; years in Canada if not born here)</td>
<td>Questions 1, 3, 5, 26, &amp; 1 – 45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.6. Physical health / fatigue as in “ability to perform physical tasks associated with job”</td>
<td>Pp. 6 &amp; 7, last two paragraphs in “Job Characteristics and Working Conditions”</td>
<td>Questions 32 &amp; 37 – 40</td>
</tr>
<tr>
<td></td>
<td>1.7. Job satisfaction of LPN (proxy for job satisfaction, burnout, turnover, stress, mental health issues, control/lack of control)</td>
<td>P. 6, two paragraphs under the numbered list</td>
<td>Questions 31 &amp; 36</td>
</tr>
<tr>
<td></td>
<td>1.9. Evidence of Scope Utilization</td>
<td>Questions 28</td>
<td></td>
</tr>
</tbody>
</table>

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**Applied Research and Evaluation**

*Final Report: Understanding Licensed Practical Nurses’ Full Scope of Practice* September 28, 2012

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## Case Studies

### 2. LPN in Core Team—Model of Care

<table>
<thead>
<tr>
<th>Research Questions (high level)</th>
<th>Indicators</th>
<th>Tools</th>
<th>Case Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.1 Model of Care [n=6 needs descriptors]</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• What are the characteristics of the work or unit team in which the LPN operates?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.2 Staff mix relative to patient volume/workload</strong></td>
<td>P. 9, paragraphs 2, 8, 4</td>
<td>Q2</td>
<td>Q6</td>
</tr>
<tr>
<td>• What is the impact of the LPN's scope utilization on the work team?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.3 Skill Mix: LPN:RN ratio (overlap, delegation, shared roles, boundary issues)</strong></td>
<td>P. 8, bullet 4, p. 7, first two paragraphs in “Organizational Factors...”</td>
<td>Q2</td>
<td>Q2</td>
</tr>
<tr>
<td><strong>2.4 LPN Job Description</strong></td>
<td>Question 23</td>
<td>Q2</td>
<td>Q1.1</td>
</tr>
<tr>
<td>• How do the work team characteristics impact full scope utilization?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.5 Communication/Team environment/leadership</strong></td>
<td>P. 7 &amp; 8, “Organizational Factors...”</td>
<td>Question 29</td>
<td>Q9.10</td>
</tr>
<tr>
<td><strong>2.6 Medical directives &amp; protocols</strong></td>
<td></td>
<td></td>
<td>Q5</td>
</tr>
<tr>
<td><strong>2.7 Safety culture</strong></td>
<td>Question 39</td>
<td></td>
<td>Q8</td>
</tr>
<tr>
<td>• What factors promote full scope utilization?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.8 Perceptions of scope utilization</strong></td>
<td>P. 3-5 “looking at scope of practice”</td>
<td>Q9.10</td>
<td>Q3.4</td>
</tr>
<tr>
<td><strong>2.9 Evidence of scope utilization</strong></td>
<td>Q2</td>
<td></td>
<td>Q9</td>
</tr>
</tbody>
</table>
### Tools

<table>
<thead>
<tr>
<th>Research Questions (high level)</th>
<th>Indicators</th>
<th>Case Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Type of organization/site (hospital, long-term care, community, etc.)</td>
<td>P. 4, bullet #5</td>
<td>Question 4</td>
</tr>
<tr>
<td>3.2 Location (urban-large, urban-middle, rural, remote)</td>
<td>P. 4, bullet #5</td>
<td>Question 4</td>
</tr>
<tr>
<td>3.3 Resources, Facilities &amp; Equipment</td>
<td>Q3</td>
<td>Q7, Q8, Q9, Q10, Q11, Q12</td>
</tr>
<tr>
<td>3.4 Staffing policies &amp; workload</td>
<td>Paragraph spanning pgs 11 &amp; 12, &quot;based on this comprehensive...&quot;</td>
<td>Q3, Q12</td>
</tr>
<tr>
<td>3.5 Management philosophy</td>
<td>Q3</td>
<td>Q7, Q12</td>
</tr>
<tr>
<td>3.6 Productivity &amp; cost-effectiveness</td>
<td>P. 11, 1st paragraph, &quot;a follow-up study...&quot;</td>
<td>Q3</td>
</tr>
<tr>
<td>3.7 Safety requirements</td>
<td>Q3</td>
<td>Q7, Q12</td>
</tr>
<tr>
<td>3.8 Legislation &amp; regulations</td>
<td>Q3</td>
<td>Q7, Q12, Q13</td>
</tr>
</tbody>
</table>

**Q3: What can we learn about LPN’s organizations that promote or inhibit their ability to practice to full scope? How can these supports be enhanced? How can these barriers be reduced?**

- **3.1 Type of organization/site (hospital, long-term care, community, etc.):**
  - P. 4, bullet #5
  - Questions 4, 7

- **3.2 Location (urban-large, urban-middle, rural, remote):**
  - P. 4, bullet #5
  - Question 4

- **3.3 Resources, Facilities & Equipment:**
  - Q3
  - Q7, Q8, Q9, Q10, Q11, Q12

- **3.4 Staffing policies & workload:**
  - Paragraph spanning pgs 11 & 12, "based on this comprehensive..."
  - Q3, Q12

- **3.5 Management philosophy:**
  - Q3
  - Q7, Q12

- **3.6 Productivity & cost-effectiveness:**
  - P. 11, 1st paragraph, "a follow-up study..."
  - Q3
  - Q7

- **3.7 Safety requirements:**
  - Q3
  - Q7, Q12

- **3.8 Legislation & regulations:**
  - Q3
  - Q7, Q12, Q13

**Q3: What can we learn about LPN’s organizations that promote or inhibit their ability to practice to full scope? How can these supports be enhanced? How can these barriers be reduced?**
<table>
<thead>
<tr>
<th>Research Questions (High Level)</th>
<th>Indicators</th>
<th>Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Patient/Client &amp; Required Nursing Care</td>
<td></td>
<td>Document Review</td>
</tr>
<tr>
<td>Q6. Is there any evidence of differences in the patient experience when LPNs are working to their full scope? What are these differences?</td>
<td></td>
<td>Q2</td>
</tr>
<tr>
<td>6.3 Complexity of care/quality/patient population</td>
<td>P. 11, 3rd paragraph. “Professionals...” (Questions 27)</td>
<td>Q2</td>
</tr>
<tr>
<td>6.2 Predictability of outcomes</td>
<td></td>
<td>Q5</td>
</tr>
<tr>
<td>6.4 What is the LPN’s current scope of practice?</td>
<td></td>
<td>P. 13, paragraph 3, “Nurses...”</td>
</tr>
<tr>
<td>6.5 What gaps or discrepancies exist between ideal and actual scope of practice?</td>
<td></td>
<td>P. 3, paragraph 2, 3, &amp; 4 (“In a longitudinal study...”)</td>
</tr>
<tr>
<td>6.6 Safety errors &amp; outcomes</td>
<td></td>
<td>P. 11, paragraph 5 &amp; 6, “In an evidence-based...”</td>
</tr>
<tr>
<td>6.7 Patient/family satisfaction and experience with nursing care</td>
<td></td>
<td>Q4</td>
</tr>
</tbody>
</table>
Appendix B. Logic Model

Understanding LPN Full Scope of Practice Study Logic Model

Process

1.0 Org Plan/Admin Supports/Enablers & Inputs
1.1 AHW funding
1.2 Background literature review
1.3 Steering Committee
1.4 Project staff
1.5 Research framework
1.6 Research ethics submission

2.0 Program Implementation/Activities/Process
2.1 Conduct targeted literature review
2.2 Develop Terms of Reference for Steering Committee
2.3 Develop & adapt & validate research tools
2.4 Develop & complete MOUs for sites
2.5 Plan research process
2.6 Gather & analyze data
2.7 Prepare Progress Reports
2.8 Prepare Data Summary
2.9 Prepare Final Report

Outputs (deliverables)
3.1 Terms of Reference approved by St. Com.
3.2 Research framework & tools approved by ERBs
3.3 Progress Reports submitted
3.4 Data summary of compiled findings prepared
3.5 Final Report with recommendations prepared & submitted

Outcomes

Short-Term Outcomes (March 2012)
4.1 Enhanced understanding of capacity of LPNs to work to full scope
4.2 Enhanced understanding of systemic supports & barriers to full productivity of LPNs in health care teams
4.3 Enhanced understanding of the organizational supports & barriers to full productivity of LPNs in health care settings
4.4 Enhanced understanding of the implications for ongoing education of LPNs
4.5 Evidence to support enhanced decision making for staffing

Intermediate-Term Outcomes (April 2012 – March 2015)
5.1 Enhanced productivity for LPNs
5.2 Enhanced productivity for health care teams
5.3 Enhanced productivity for participating organizations
5.4 Enhanced preparation for LPNs to work to full scope
5.5 Enhanced acceptance of LPNs working to full scope

Long-Term Outcomes (April 2015 – March 2017)
6.1 Enhanced quality of patient care
6.2 Enhanced patient outcomes
6.3 Enhanced efficiency for health care system
Appendix C. CLPNA Membership Survey

Understanding Licensed Practical Nurses’ Scope of Practice Research Study

Consent Form

This survey is being conducted as part of a comprehensive research study by Bow Valley College (BVC) and the College of Licensed Practical Nurses of Alberta (CLPNA) for Alberta Health and Wellness (AHW). The purpose of this study is to better understand the work of LPNs and the factors that promote or limit their ability to work to full scope of practice. We also want to explore differences in quality of care and patient outcomes when LPNs work to full scope.

You have been selected to complete this survey because you are a Licensed Practical Nurse. Your answers are important for us to identify ways to improve LPNs’ ability to work to full scope in Alberta. The survey asks for information about your employment status and scope of practice as well as some general information about yourself. It should take approximately 25 minutes to complete.

Before you begin, you will need to give your consent to participate. It is important that you read this Consent Form to be sure you understand what you will be asked to do and to check your agreement to participate in this survey. This Consent Form outlines the following:

- The purpose of this study
- The research team
- The benefits and risks of completing the survey
- The confidentiality of the information you provide.

The research team includes:

- Dr. Rena Shimoni, Co-Principal Investigator & Dean of the Office of Applied Research and Innovation, Bow Valley College
- Dr. Gail Barrington, Co-Principal Investigator, Barrington Research Group, Inc.
- Dr. Milosh Raykov, Lead Researcher, Bow Valley College
- Dr. Sean Clarke, Consultant, University of Toronto
- Sarah VanDusen, Research Assistant, Bow Valley College
- Violet Smith, Project Manager, Bow Valley College
The benefits of participating in this study include a better understanding of LPNs’ ability to work to the full scope. Although you may not receive any benefit from completing this survey, it is hoped that together participants will contribute to a better understanding of issues that LPNs encounter in their work and in this way may contribute to an improvement in overall healthcare services and patient care.

There are few risks to participating in this survey. If you have any questions or concerns about how to complete the survey, how this information will be used, or about the study in general, please contact:

Violet Smith, Project Manager at Ph: 403.355.4626, Fax: 403.441.1479  
Email: vsmith@bowvalleycollege.ca

Your participation in this study is voluntary and will not influence either your CLPNA membership status or your employment status. You are free to withdraw your consent and stop participating in the survey at any time without penalty or consequences of any kind. You can also choose not to answer any of the questions, or to only complete some of the questions before moving on to the next ones.

The researchers will keep all of the information you provide confidential, under the authority of the Freedom of Information and Protection of Privacy Act. Your responses will be stored on a computer and merged with the responses of other participants. It would be extremely difficult to identify the answers of any one participant. No information collected in this project will be connected with any individual’s membership file at CLPNA or elsewhere. As a precaution, the researchers will destroy any identifiable responses. Only members of the research team will have access to the data which will be password protected, and hard copies stored in a double locked office. All the data will be kept for two years after the completion of the study and will then be destroyed.

Agreement: Your agreement to participate in this survey indicates that:
- You have read the information in this Consent Form;
- You have had a chance to ask any questions you may have about the study;
- You agree to participate in the study;
- You are aware that you can change your mind and withdraw your consent to participate at any time;
- You understand that you are not giving up any of your legal rights; and
- By completing and submitting the survey, you are providing your informed consent to participate in this study.

After reviewing the Consent Form, do you agree to participate in this study and answer our survey questions?

☐ I agree to participate
☐ I do not agree to participate

Please mail this Consent Form and Survey on or before May 31, 2011.

Thank you for taking the time to complete this Consent Form! Now let’s turn to the questions....
CLPNA Full Scope of Practice Member Survey

**NB Screening questions for practicing members only**

1. a. Are you currently working as a Licensed Practical Nurse in Alberta?  
   - O Yes  
   - O No  
   - O Other (Please explain):

   *If you answered YES in Question 1 a. above, please complete the following question:*

   b. Which best describes your current primary position? (Please select one answer only.)  
   - O Direct patient care  
   - O Nursing but not patient care  
   - O Other (please specify):  
   - O Nursing instructor  
   - O Employed but not in nursing

2. For how many MONTHS during 2010 were you employed as an LPN?

3. How many jobs are you currently working as an LPN?  
   - O 1  
   - O 2  
   - O 3  
   - O 4 or more

   *[NB: For the rest of the survey, please answer the questions based on your PRIMARY LPN job only.]*

---

**Section 1**

**Type of organization & unit or site**

4. In what city or town do you work?  

5. In what work setting do you perform the majority of your work as an LPN?  
   - O Acute Care  
   - O Long Term Care  
   - O Community Care  
   - O Rehabilitation  
   - O Clinic  
   - O Other (Please specify):

6. Please tell us where you work by filling in the following:  
   - Employer (e.g. Alberta Health Services)  
   - Site name (e.g. Cross Cancer Institute)  
   - Unit # and type (e.g. Unit 52, Neurology or floor 2, Pediatrics)

7. Approximately how many nurses and care aide staff (HCAs) are currently employed in your work setting?  
   - LPNs:  
   - HCAs:  
   - RNs:  
   - RPNs:  
   - Other (specify):  

---

**Section 2**

**Education/Credentials**

8. What is the highest level of education you have obtained?  
   - O High school or equivalent  
   - O Some community college  
   - O Completion of community college  
   - O Some university  
   - O Completion of undergraduate degree (Bachelor’s Degree)  
   - O Graduate/professional degree (Master’s, PhD)
9. Please describe your LPN credential.  
O Certificate  O Diploma  O Other

10. Do you have all of the qualifications and certificates needed to perform your current job?  
O Yes  O No (please list them below):

11. a. Do you plan to take any post-basic training within the next year?  
O Yes  O No

b. If you answered yes to question 11 a. above, please list those courses/workshops.

12. Please select only one answer for each question listed below:

<table>
<thead>
<tr>
<th>Not applicable</th>
<th>Not at all</th>
<th>Very little</th>
<th>Somewhat</th>
<th>To a considerable extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

a. Based on your LPN education and training, to what extent do you feel prepared to work to full scope of practice?

O O O O O

b. To what extent is your professional growth and development encouraged by your employer?

O O O O O

Section 3

Work Experience

13. How many years have you been working as an LPN?

14. How many years have you been employed at the job you have now?

15. At what age do you plan to RETIRE?

O Don’t know

16. What would encourage you to work longer as an LPN?

Section 4

Employment Status

17. What is your employment status in your primary job?

O Full time  O Part time  O Casual  O On-call

O Permanent  O Temporary  O Seasonal

18. Is your job permanent, temporary, or seasonal?

19. How many hours do you usually work at your job in a normal week?
20. Given the choice, would you like to work more, less, or the same numbers of hours as you now work?  
- More  
- Less  
- Same

21. Which of the following best describes your usual work schedule? Please check all that apply.  
- [ ] Day shift  
- [ ] Split shift  
- [ ] Afternoon/Evening shift  
- [ ] Irregular shift/on-call  
- [ ] Night shift  
- [ ] Rotating shifts

22. How many hours do you usually work per shift?  
- [ ] 8 hours  
- [ ] 12 hours  
- [ ] Both 8 and 12 hours  
- [ ] Other (please specify): [ ]

### Section 5

**Job Description**

23. a. Do you have a job description for your current position?  
- [ ] Yes  
- [ ] No  
- [ ] Don’t Know

If you answered YES in Question 23. a. above, please complete the following question:

b. To what extent does your job description represent what you do?  
- [ ] Not at all  
- [ ] Very little  
- [ ] Somewhat  
- [ ] To a considerable extent  
- [ ] To a great extent  
- [ ] Don’t Know

### Section 6

**Competencies**

In your current job as an LPN, to what extent do you have the opportunity to use your competencies related to...

Please select only one answer for each question listed below:

<table>
<thead>
<tr>
<th>Competency</th>
<th>Not applicable</th>
<th>Not at all</th>
<th>Very little</th>
<th>Somewhat</th>
<th>To a considerable extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ... Nursing Knowledge</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>b. ... Nursing Process</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>c. ... Safety</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
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<tr>
<td>d. ... Communication and</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. ... Nursing Practice</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>f. ... Specialty Skills</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>g. ... Professionalism</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>h. ... Leadership</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
### Section 7

**Scope of practice**

25. What does “scope of practice” mean to you?

26. a. Do you believe you are FULLY utilizing your knowledge, skills and clinical judgement in your current work?  
   - [ ] Yes  
   - [ ] No  
   
   *If you answered NO in Question 26 a, above, please answer the following question:*  
   b. What percentage of your skills, competencies, and knowledge do you use in your work setting?  
   - [ ]

27. To what extent do the following affect your ability to work to full scope?  
   Please select only one answer for each question listed below:

<table>
<thead>
<tr>
<th>Question</th>
<th>Not applicable</th>
<th>Not at all</th>
<th>Very little</th>
<th>Somewhat</th>
<th>To a considerable extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Government regulations</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b. Your employer’s staffing policies</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c. Direct supervisor(s)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d. Relationships with other staff in your work setting</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e. Complexity of patient needs in your setting</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f. Personal confidence</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

28. Please indicate to what extent you are allowed to utilize the competencies listed below in your daily work:  
   Please select only one answer for each question listed below:

<table>
<thead>
<tr>
<th>Task</th>
<th>Not applicable</th>
<th>Not at all</th>
<th>Very little</th>
<th>Somewhat</th>
<th>To a considerable extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Performing admission assessments</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b. Performing ongoing assessments</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c. Developing care plans</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d. Revising care plans</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>e. Evaluating and documenting client response to nursing care</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>f. Teaching clients and families</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>g. Providing tube, line, and drain care and maintenance</td>
<td>Not applicable</td>
<td>Not at all</td>
<td>Very little</td>
<td>Somewhat</td>
<td>To a considerable extent</td>
<td>To a great extent</td>
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<tr>
<td>----------------------------------------------------------</td>
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<td>------------</td>
<td>-------------</td>
<td>----------</td>
<td>-------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>h. Administering narcotics</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>i. Administering intravenous medications</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>j. Administering blood products</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>k. Participating in interdisciplinary team meetings</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>l. Leading and supervising other workers</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Section 8**

**29. Communications/team environment**

Please select only one answer for each question listed below:

<table>
<thead>
<tr>
<th></th>
<th>Not at all true</th>
<th>Not too true</th>
<th>Somewhat true</th>
<th>Very true</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I get enough information from my</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>team to do my job</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. At my workplace, I am treated</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>with respect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. I trust the management at my</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>workplace</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. My workplace is run in a smooth</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>and effective way</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section 9**

**30. Safety culture**

How often do the following things happen in your work unit/team?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Most of the time</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. We are given feedback based on</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>incident reports.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Staff will freely speak up if</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>they see something that may</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>negatively affect patient care.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. We are informed about errors</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>that happen in this work setting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Staff members feel free to</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>question the decisions or actions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>of those with more authority.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. In this work setting, we discuss</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>ways to prevent errors from</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>happening again.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Section 10

**Job satisfaction**

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>31. Overall, how satisfied are you with your current job?</td>
<td>Very satisfied, Somewhat satisfied, Neither, Somewhat dissatisfied, Very dissatisfied</td>
</tr>
<tr>
<td>32. How often do you find your job stressful?</td>
<td>All of the time, Most of the time, About half the time, Seldom, Never</td>
</tr>
<tr>
<td>33. When you do your job well, are you likely to get any recognition for it (e.g., an award, a bonus, a promotion)?</td>
<td>Yes, No, Don’t know</td>
</tr>
<tr>
<td>34. a. In the past year have you wanted to leave your current job?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>If you answered YES in Question 34.a. above, please complete the following question: b. Which of the following reasons made you want to leave your job? Please check all that apply.</td>
<td>Scope of practice issues, Workload issues, Personal issues, Other work-related issues (please specify):</td>
</tr>
<tr>
<td>35. Which of the following best describes your plans for a year from now? Please check all that apply.</td>
<td>Continuing to work as an LPN, Taking an educational program, Working in a different role within healthcare (e.g., RN), Working outside of healthcare, Retiring, Other (please specify):</td>
</tr>
<tr>
<td>36. a. Would you recommend practical nursing as a career choice to a friend or family member?</td>
<td>Yes, No</td>
</tr>
</tbody>
</table>
| b. Why or why not? | }
### Section 11

**Health-Related Quality of Life**

37. In general, would you say your health is:
   - Excellent
   - Very good
   - Good
   - Fair
   - Poor

38. Now thinking about your physical health, which includes physical illness and injury, how many days during the past month was your physical health not good?

39. Now thinking about your mental health, which includes stress, depression, and problems with emotions, how many days during the past month was your mental health not good?

40. During the past month, how many days did your poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

### Section 12

**Demographics**

41. What is your gender?
   - Male
   - Female

42. What year were you born?

43. What language do you speak most often at home?
   - English
   - French
   - Other—Please Specify:

44. In total, how many minutes per day do you normally spend travelling from home to your workplace and back?

45. In total, approximately how many kilometres do you normally travel from home to your workplace and back?
   - Less than 1 km
   - 1-25 km
   - 26-50 km
   - 51-100 km
   - More than 100 km

---

**Thanks for your participation and the information you have provided.**

If you would be willing to provide more information for our research study, please provide your e-mail for future reference.
Appendix D. Case Study LPN Interview

Understanding Licensed Practical Nurses’ Full Scope of Practice Research Study

LPN Interview (02)

<table>
<thead>
<tr>
<th>Site:</th>
<th>Unit/Department/Section:</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Date:</th>
<th>Interviewer:</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

My name is ___________ and I am a member of the research team for the study entitled, Understanding Licensed Practical Nurses’ Scope of Practice Research Study. I work under contract with the Applied Research and Evaluation Unit at Bow Valley College. This study is sponsored by the College of Licensed Practical Nurses of Alberta and Alberta Health and Wellness. As stated in the Consent Form, the goal of this research study is to provide objective, research-based evidence which focuses on LPNs in real health care settings and explores the factors that promote and/or inhibit successful LPN scope utilization.

This interview should take approximately 40-45 minutes to complete. Your participation is voluntary and you may refuse to answer any question or end the interview at any time. Any information that you provide will remain confidential. The information that is collected in the study, including audio-recordings, will be stored in a double-locked, secure area for two years after the completion of the study and will then be destroyed. The results of the interviews will be reported in summary only, and will be combined with the responses of others. No individuals will be identified. If you have any questions about the study or need more information on privacy issues, please feel free to contact Violet Smith, LPN, Project Manager by phone at 403.355.4626 or by email at vsmith@bowvalleycollege.ca.

Do you have any questions? May we begin?

Because so much of this interview is about LPNs’ scope of practice, it would be helpful to review what is meant by that term. As described by the College of Licensed Practical Nurses (CLPNA), scope of practice is defined as follows:

... the roles and responsibilities of the Licensed Practical Nurse to perform safe, competent and ethical nursing care as defined by education, legislation and the regulatory authority. Under HPA (2000), this is described as Area of Practice.
1. **Patient Care and LPN Scope of Practice**

<table>
<thead>
<tr>
<th></th>
<th>3.4 Workload</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>First of all, let's talk about your typical shift.</td>
</tr>
<tr>
<td></td>
<td>a) How many hours do you work per shift?</td>
</tr>
<tr>
<td></td>
<td>b) Do you work days, evenings, or nights? [Probe “Other” responses.]</td>
</tr>
<tr>
<td></td>
<td>c) Do you work full time or part time? [Probe for # hours per week, hours of work, other jobs]</td>
</tr>
<tr>
<td></td>
<td>d) If you work more than one type of shift, is there a difference in your responsibilities, depending on the time of day?</td>
</tr>
</tbody>
</table>

| 2. | 4.1 Patient-based scope mediators: Complexity of care/acuity/patient population |
|    | Now let's talk about your typical patients or residents.                     |
|    | a) How many patients or residents do you care for at one time? (Probe for type of shift) |
|    | b) About how much time do you spend with each patient or resident?           |
|    | c) What are your patients’ or residents’ typical medical conditions or diagnoses? |
|    | d) Are there some types of patients or residents on your unit that you feel you could be caring for but that you are not assigned? |

| 3. | 1.1 Competencies                                                                 |
|    | How frequently do you do the following activities (where 1=Never and 5=Very Often). [Probe for reasons for response:] |
|    | a) Perform initial assessments                                              |
|    | b) Perform ongoing assessments                                              |
|    | c) Teach patients/residents and families                                    |
|    | d) Evaluate and document patient/resident response to nursing care          |
| 4. | **1.1 Competencies** | How frequently do you do the following activities (where 1=Never and 5=Very Often).  
**[Probe for reasons for response:]**  
\ a) Provide central line, tube and drain care/maintenance  
\ b) Initiate intravenous access  
\ c) Administer intravenous medication  
\ d) Administer narcotics  
\ e) Administer blood products |
|---|---|---|
| 2. | **Care Team and LPN Scope of Practice** | Now let’s talk about the nursing team you work with.  
How many staff do you work with on your nursing team on a typical shift?  
**[Probe for type of staff and # of each for day, evening, night]** |
| 5. | **2.2 Staff mix** | Let’s talk about how work is assigned in your nursing team. Is work assigned:  
\ a) By patient/resident  
\ b) By nursing task  
\ c) By team (e.g., LPN/RN/RPN/HCA)  
\ d) Other **[please explain]** |
| 6. | **2.1 Model of Care** | Let’s talk about your role in relation to the role of a RN on your nursing team  
**[probe and discuss as needed]:**  
\ a) What parts of your role as an LPN are similar to those of a RN on your nursing team?  
**[Probe for shared roles or overlaps]** |
<p>| 7. | <strong>2.3 Skill mix</strong> | |</p>
<table>
<thead>
<tr>
<th></th>
<th>2.3 Skill mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>b)</td>
<td>What parts of your role as an LPN are different from those of a RN on your team? [Probe for differences.]</td>
</tr>
<tr>
<td>c)</td>
<td>Do issues or conflicts ever result from the assignment of LPN and RN duties? [Please explain.]</td>
</tr>
<tr>
<td>d)</td>
<td>Do these differences or issues affect the delivery of care? [Please explain.]</td>
</tr>
</tbody>
</table>

8. | 2.3 Skill mix |
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>a)</td>
<td>What parts of your role as an LPN are similar to those of a HCA on your nursing team? [Probe for shared roles or overlaps.]</td>
</tr>
<tr>
<td>b)</td>
<td>What parts of your role as an LPN are different from those of a HCA on your team? [Probe for differences.]</td>
</tr>
<tr>
<td>c)</td>
<td>Do issues or conflicts ever result from the assignment of LPN and HCA duties? If so, please describe them.</td>
</tr>
<tr>
<td>d)</td>
<td>Do these differences or issues affect the delivery of care? [Please explain.]</td>
</tr>
</tbody>
</table>

(Repeat question for other types of nursing staff.)

9. | 2.8 Team-based scope mediators (positive) |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>2.5 Communication/Team environment/Leadership</td>
<td></td>
</tr>
<tr>
<td>How do the following affect your ability to use all your nursing skills? [If yes, to what extent? Probe what helps or hinders and discuss as needed]</td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>Your team leader</td>
</tr>
</tbody>
</table>
### 3. Organization and LPN Scope of Practice

#### 11. 2.4 LPN job description

Let’s talk about your formal role in this organization.

a) Do you have a job description?

b) Have you seen it?

c) Does it describe what you do on a daily basis? [Probe for reasons for response.]

#### 12. 3.9 Organization-based scope mediators (positive and negative)

In what ways do the following factors help or hinder your ability to use all your nursing skills? [If yes, how? Probe and discuss as needed]:

a) Government regulations
### 4. Individual Characteristics and LPN Scope of Practice

<p>| | | |</p>
<table>
<thead>
<tr>
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</table>
| 13. | **1.3 Experience** | Finally, let’s talk a little bit about you and your aspirations.  
   a) How many years have you worked as an LPN?  
   b) How long have you worked on this unit? [Probe for # years.] |
| 14. | **1.2 Education/credentials** | What is the highest level of education you have obtained? [Probe for community college or university education] |
| 15. | **1.2 Education/credentials** | Do you plan to take any post-basic or other training in the next year? [Probe for type of planned training] |
| 16. | **1.7 Job satisfaction** | To what extent does your employer encourage your professional growth and development (where 1=Not at All and 5=A Great Deal)? [Probe for reasons for choice.] |
| 17. | **1.8 Individual scope mediators (positive and negative)** | In what ways do the following factors help or hinder your ability to provide safe, competent, and ethical nursing care? [Probe and discuss as needed]:  
   a) Your nursing skills  
   b) Your experience as an LPN |
18. **1.7 Job satisfaction**  
Overall, what is it like for you to be an LPN on this unit?

19. **1.8 Perceptions of scope utilization**  
Overall, do you think you have the level of responsibility that you should have on this unit? Why or why not?

20. Do you have any recommendations for change?

Thank you for contributing to our study!
Appendix E. Case Study LPN Consent Form

Consent to Participate in a Research Study

LPN Interview (01)

Study Title: Understanding Licensed Practical Nurses’ Full Scope of Practice Research Study
Co-Principal Investigators: Rena Shimoni, PhD & Gail Barrington, PhD
Affiliation: Applied Research and Evaluation, Bow Valley College
Sponsors: College of Licensed Practical Nurses of Alberta and Alberta Health and Wellness

Introduction:

You have been asked to participate in this research study because you are an LPN and have experience working in a typical health care setting which employs a number of LPNs. Please read this explanation about the study and its risks and benefits before you decide if you would like to participate. Take as much time as you need to make your decision. Please ask the research team to explain anything that you do not understand. You can talk about this study with anyone you want to. Make sure that all your questions have been answered before signing this Consent Form. Participation in this study is voluntary. If you decide to participate, you will receive a signed copy of this form for your records.

Background:

We are examining how LPNs are being used in health care settings because there is currently not enough information about their role.

Purpose of this Research Study:

The goal of this research study is to provide objective, research-based evidence which focuses on LPNs in typical health care settings and explores the factors that promote and/or inhibit successful LPN scope utilization.

Study Design:

This study uses a mixed methods design. This is the third part of a three-part study that also included an intensive review of the literature and an Internet/mail survey of all practicing LPNs in Alberta. This part involves case studies of six selected sites that represent different LPN work settings. About 60-90 LPNs from four acute care and two long-term care settings will be asked to participate in individual interviews. Each interview should take about 45 minutes.
Study Procedures:
Eligible participants must be LPNs who are 18 years of age or older and have worked at this site for at least six months. The interviews will be scheduled during working hours and will be located at your work site. The interview will be conducted by one member of the study research team who will ask the interview questions and take notes. The interview will also be audio-taped to record details that the researcher may miss.

Risks Related to Being in the Study:
There are no known risks if you take part in this study but participating in the audio-taped interview may make you feel uncomfortable. Please remember that you can refuse to answer any question that is asked and that you may stop your participation at any time if you feel uncomfortable.

Benefits Related to Being in the Study:
You may or may not receive any direct benefit from being in this study. Information obtained from this site will be compiled into a case study report which will be shared with your administration. A summary report of findings with no identifying information from the six sites will be shared with our study sponsors. An honorarium of $50 will be provided to staff who participate outside of work hours.

Voluntary Participation:
Your participation is voluntary. You may decide not to be in this study or to be in the study now and change your mind later. You may leave the study at any time.

Confidentiality:
If you agree to join this study, the Co-Principal Investigators and research team will only have access to any personal information that you provide to us after you agree to participate. The information that is collected in the study, including audio-recordings, will be stored in a double-locked, secure area for two years after the completion of the study and will then be destroyed. Only the study team will be allowed to examine the study information. It will be kept confidential and will not be shared with anyone outside of the study unless required by law. You will not be named in any reports, publications, or presentations that may come out of this study. By signing this consent form, you do not give up any of your legal rights. Also, this does not relieve the researchers, sponsors or involved institutions of their legal responsibilities.

Ethics Approval:
The Community Research Ethics Board of Alberta (CREBA) has granted its approval to conduct this research study effective October 31, 2011.

Questions about the Study:
If you have any questions, concerns or would like to speak to the research team for any reason, please contact Violet Smith, LPN, Project Manager at vsmith@bowvalleycollege.ca or 403.355.4626.
Interview Consent Form

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to participate as a subject. In no way do you give up your legal rights or release the investigators or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time.

Please sign two copies of this form, give one copy to the researcher and keep one copy for yourself.

Do you understand that you have been asked to be in a research study? Yes ☐ No ☐

Have you read and received a copy of the attached Information Sheet? Yes ☐ No ☐

Do you understand the benefits and risks involved in taking part in this research study? Yes ☐ No ☐

Have you had an opportunity to ask questions and discuss this study? Yes ☐ No ☐

Do you understand that you are free to refuse to participate or withdraw from the study at any time? You do not have to give a reason. Yes ☐ No ☐

Has the issue of confidentiality been explained to you? Yes ☐ No ☐

Do you understand who will have access to your information? Yes ☐ No ☐

This study was explained to me by: _____________________________________________

I agree to take part in this study.

____________________________________  ___________________________  ______________________________________
Signature of Research Participant  Date  Signature of Witness

____________________________________  ___________________________
Printed Name  Printed Name

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

____________________________________  ___________________________
Signature of Investigator or Designee  Date

Thank you for taking the time to complete this Consent Form!
Appendix F. Site Report Validation Survey

### Site Report Validation Survey

Using a 5 point scale, to what extent does this draft site report meet the following criteria:
*Please select only one response for each question listed below.*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Validity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The report accurately reflects the issues and concerns related to LPN scope of practice and factors that facilitate or inhibit work to full scope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relevance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The information in the report is useful to your unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Utility</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>The report is balanced, in terms of the multiple perspectives of staff concerned</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The report is clear and concise</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The report accurately describes the unit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The tone of the report is appropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Value or worth</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The report relates directly to desired study components of quality patient care in relation to the practice, system, and administrative factors that support or hinder LPN scope</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please write any additional comments about your impressions of the site report below.
Appendix G. Patient Experience with Nursing Care Survey

Patient Experience with Nursing Care in Acute Care Facilities in Alberta* (09)

Adapted from the H-CAHPS® Hospital Survey. CAHPS, or Consumer Assessment of Healthcare Providers and Systems, is a program of the Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services.
Consent to Participate in a Research Study
Acute Care Patient Survey

Survey Information Sheet

Study Title: Understanding Licensed Practical Nurses’ Full Scope of Practice Research Study
Co-Principal Investigators: Rena Shimoni, PhD & Gail Barrington, PhD
Affiliation: Applied Research and Evaluation, Bow Valley College
Sponsors: College of Licensed Practical Nurses of Alberta and Alberta Health and Wellness

Introduction:
You have been asked to participate in this research study because you are a patient in an acute care facility and are being cared for by nursing staff that include Licensed Practical Nurses (LPNs). Please read this explanation about the study and its risks and benefits before you decide if you would like to participate. Take as much time as you need to make your decision. Please ask the research team to explain anything that you do not understand and you can talk about this study with anyone you want to. Make sure that all your questions have been answered before giving your consent to participate. Participation in this study is voluntary. If you decide to participate, you will receive a signed copy of this form for your records.

Background:
We are examining how LPNs are being used in health care settings because there is currently not enough information about their role.

Purpose of this Research Study:
The goal of this research study is to provide objective, research-based evidence which focuses on LPNs in typical health care settings and explores the factors that promote and/or inhibit successful LPN scope utilization.

Study Design:
This study has used a mixed methods design. This is the third part of a three-part study that has included an intensive review of the literature and an Internet/mail survey of all practicing LPNs in Alberta. Now we are conducting case studies at six selected sites that represent different LPN work settings. About 100 patients/residents from four acute care and two long-term care settings will be asked to participate in this survey, which should take about 10 minutes.

Study Procedures:
Eligible participants must be patients in acute care facilities in Alberta who are 18 years of age or older, are currently patients at this facility, are preparing for discharge, and can understand and speak English. The survey will be conducted by one member of the study research team who will ask the questions and take notes.

Risks Related to Being in the Study:
There are no known risks if you take part in this study. Please remember that you are free to refuse to answer any question that is asked and that you may stop your participation at any time if there is any discomfort.
Patient Experience with Nursing Care in Acute Care Facilities in Alberta

Benefits Related to Being in the Study:

You may or may not receive any direct benefit from being in this study. Information obtained from this study may be used to improve the quality of nursing care for patients in the future. You will also receive a $5 gift card as a thank you for participating.

Voluntary Participation:

Your participation is voluntary. You may decide not to be in this study or to be in the study now and change your mind later. You may leave the study at any time. No matter whether you decide to complete the survey or refuse to participate, your care here will not be affected in any way.

Confidentiality:

If you agree to join this study, the investigators and research team will only have access to any personal information that you provide to us after consenting to participate. The information that is collected in the study will be stored by the investigators in a double-locked, secure area for two years after the completion of the study and will then be destroyed. Only the research team will be allowed to examine the study information. It will be kept confidential and will not be shared with anyone outside of the study unless required by law. You will not be named in any reports, publications, or presentations that may come out of this study. By signing this consent form, you do not give up any of your legal rights. Also, this does not relieve the researchers, sponsors or involved institutions of their legal responsibilities.

Ethics Approval:

The Community Research Ethics Board of Alberta (CREBA) has granted its approval to conduct this research study effective October 31, 2011.

Questions about the Study:

If you have any questions, concerns or would like to speak to the research team for any reason, please contact Violet Smith, LPN, Project Manager at vsmith@bowvalleycollege.ca or 403.355.4626.
Survey Consent Form

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to participate as a subject. In no way do you give up your legal rights or release the investigators, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time.

Please sign two copies of this form, give one copy to the researcher and keep one for yourself.

Do you understand that you have been asked to be in a research study?

Yes ☐ No ☐

Have you received a copy of the attached Information Sheet?

Yes ☐ No ☐

Do you understand the benefits and risks involved in taking part in this research study?

Yes ☐ No ☐

Have you had an opportunity to ask questions and discuss this study?

Yes ☐ No ☐

Do you understand that you are free to refuse to participate or withdraw from the study at any time? You do not have to give a reason.

Yes ☐ No ☐

Has the issue of confidentiality been explained to you?

Yes ☐ No ☐

Do you understand who will have access to your information?

Yes ☐ No ☐

This study was explained to me by: ____________________________

I agree to take part in this study.

Signature of Research Participant  Date  Signature of Witness

__________  ____________  ____________

Printed Name  Printed Name

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee  Date

__________  ____________

Thank you for taking the time to complete this Consent Form!
**SURVEY INSTRUCTIONS**

- You should only fill out this survey if you are a patient in the hospital named in the survey information sheet. Do not fill out this survey if you are not a patient.
- Answer all the questions by checking the box to the left of your answer.
- You are sometimes told to skip over some questions in this survey. When this happens you will see an arrow with a note that tells you what question to answer next, like this:
  
  - Yes
  - No ➔ *If No, Go to Question 1*

Please answer the questions in this survey about your stay at the hospital named on the cover letter. Do not include any other hospital stays in your answers.

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
</table>
| 1. During your stay on this unit, when nursing staff first came to care for you, did they introduce themselves? | 1. Yes  
2. No                                                             |
| 2. During your stay on this unit, how often have the nursing staff treated you with courtesy and respect? | 1. Never  
2. Sometimes  
3. Usually  
4. Always |
| 3. During your stay on this unit, how often have the nursing staff listened carefully to you? | 1. Never  
2. Sometimes  
3. Usually  
4. Always |
| 4. During your stay on this unit, how often have the nursing staff spent enough time with you? | 1. Never  
2. Sometimes  
3. Usually  
4. Always |
| 5. During your stay on this unit, how often have the nursing staff explained things in a way you could understand? | 1. Never  
2. Sometimes  
3. Usually  
4. Always |
| 6. During your stay on this unit, after you pressed the call button, how often have you gotten help as soon as you wanted it? | 1. Never  
2. Sometimes  
3. Usually  
4. Always  
5. I never pressed the call button |
Patient Experience with Nursing Care in Acute Care Facilities in Alberta

7. During your stay on this unit, have you needed help from the nursing staff in getting to the bathroom or in using a bedpan?
   1. Yes
   2. No ➔ If No, Go to Question 9

8. How often did you get help in getting to the bathroom or in using a bedpan as soon as you needed it?
   1. Never
   2. Sometimes
   3. Usually
   4. Always

9. How often have the nursing staff made sure that you had privacy when they took care of you?
   1. Never
   2. Sometimes
   3. Usually
   4. Always

10. During your stay on this unit, have you needed medication for pain?
    1. Yes
    2. No ➔ If No, Go to Question 14

11. During your stay on this unit, how often have the nursing staff done everything they could to help you with your pain?
    1. Never
    2. Sometimes
    3. Usually
    4. Always

12. During your stay on this unit, how often have the nursing staff responded quickly when you asked for pain medication?
    1. Never
    2. Sometimes
    3. Usually
    4. Always

13. During your stay on this unit, how often has your pain been well controlled?
    1. Never
    2. Sometimes
    3. Usually
    4. Always

14. During your stay on this unit, have you been given any medication that you had not taken before?
    1. Yes
    2. No ➔ If No, Go to Question 17

15. Before giving you any new medication, how often have the nursing staff told you what the medication was for?
    1. Never
    2. Sometimes
    3. Usually
    4. Always

16. Before giving you any new medication, how often have the nursing staff described possible side effects in a way you could understand?
    1. Never
    2. Sometimes
    3. Usually
    4. Always
17. During your stay on this unit, have any problems or complications occurred?
   □ Yes
   □ No ➔ If No, Go to Question 19

18. How often were the nursing staff able to manage these problems and complications?
   □ Never
   □ Sometimes
   □ Usually
   □ Always

19. During your stay on this unit, how often have the nursing staff checked you as closely as you wanted?
   □ Never
   □ Sometimes
   □ Usually
   □ Always

20. During your stay on this unit, do you feel there are enough nursing staff?
   □ Yes
   □ No

21. During your stay on this unit, have the nursing staff talked with you about the help you may need when you leave the hospital?
   □ Yes
   □ No

OVERALL RATING OF NURSING CARE

Please answer the following questions about your stay at the hospital named on the cover letter. Do not include any other hospital stays in your answers.

22. How would you describe the quality of the nursing care you received?

23. Using any number from 0 to 10, where 0 is the worst nursing care possible and 10 is the best nursing care possible, what number would you use to rate the care you received from the nursing staff during your stay?

   □ 0 ➔ 0 Worst care possible
   □ 1
   □ 2
   □ 3
   □ 4
   □ 5
   □ 6
   □ 7
   □ 8
   □ 9
   □ 10 ➔ 10 Best care possible

THANK YOU! Please place your completed survey in the provided envelope and seal it.
References


Educational Standards Advisory Committee. (2010). *Standards for program approval*. Edmonton, AB: CLPNA.


Matchim, S. (2006). *Development and implementation of a survey to assess the skills and learning needs of licensed practical nurses within Newfoundland and Labrador*
(Unpublished master’s thesis). Memorial University of Newfoundland, St. John’s, NL.

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