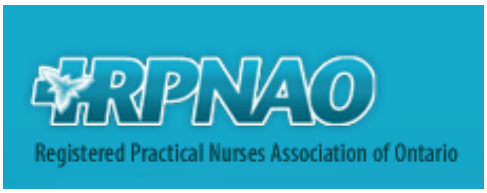

2012 NURSE STAFFING LITERATURE REVIEW©

October 2012

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Organizational and Human Capital Research

ABSTRACT

The RPNAO is interested in learning how a series of publications centred on the differences between Registered Practical Nurses (RPNs) and Registered Nurses (RNs) is affecting or could affect the nursing profession as a whole and RPNs in particular. The association leadership also identified a need to investigate and evaluate the roles, functions, and activities of State Enrolled Nurses (SENs) in the United Kingdom (UK). An independent research consultant was engaged to perform a comprehensive literature review to address these concerns. In a two phase study, literature supplied by the RPNAO and material discovered by the consultant from publicly available information sources and databases were searched, compiled, and evaluated. The findings indicated that the information gleaned from the 2012 review largely corroborated that of 2011, although greater attention seemed to be devoted to the working environments and categorization of nurses. In addition, with the rise of the Assistant Practitioner nurse in the UK, it appears that a licensed practical nurse is being reintroduced into Britain's NHS through an evolving process. Ultimately, with the complementary roles of different levels of nurses becoming the norm in different jurisdictions, licensed nurses in Ontario should develop cooperative relationships amongst themselves to cope better with the continuing change faced by the province's health care system.
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TABLE OF CONTENTS

INTRODUCTION

Overview

The Registered Practical Nurses Association of Ontario (RPNAO) is the professional body representing Registered Practical Nurses (RPNs) who practice in Ontario. In 2011, in response to a series of publications centred on the differences between RPNs and Registered Nurses (RNs), the association undertook an assessment of the academic and professional literature that examined the functions, roles and practices of nurses. The RPNAO is interested in learning how these studies are affecting or could affect the nursing profession as a whole and RPNs in particular. Dr. R. Owen Parker was engaged to conduct the literature review.

As part of its mandate, the RPNAO has committed itself to the Ontario government to evaluate new RPN related research on an annual basis. One way of keeping this pledge is appraising the scientific literature associated with the nursing profession, in general, and the roles of RPNs, in particular. Hence, a follow-on assignment is to build on the results from the 2011 review by investigating any pertinent studies that have been published since the last report.

Nursing in Canada is continually evolving. Because of these changes, the RPNAO leadership identified a need to investigate and evaluate the roles, functions and activities of State Enrolled Nurses (SENs) in the United Kingdom (UK) and Enrolled Nurses (ENs) in other British Commonwealth nations. Such an analysis will help the RPNAO to understand the advantages and disadvantages to patient care and any human resource outcomes associated with the conversion to only one category of licensed nurse, that being RNs. The literature review will also include an examination of any studies or materials related to the effects resulting from the elimination of "enrolled nursing" in the UK and the current state of ENs in other Commonwealth nations.

Objectives

The objectives of the RPNAO literature review project are to:

- Perform a literature search of any articles, reports, documents or studies published since the 2011 literature review that focus on the issues and topics raised in the previous summary report.
- Assess any literature dealing with the changes to the "enrolled" nursing role in the UK, Australia and New Zealand.

Purposes

The purposes of this report are to

- Describe the methods employed in conducting the literature search and review.
- Delineate the variables applied in the review.
- Discuss the major findings produced from nursing any literature since the 2011 RPNAO report.
- Highlight any results pertaining to the employment of SENs and ENs in specific British Commonwealth countries.

APPROACH

Overview

Because the current study encompasses two distinct objectives, the activities involved reflect two separate phases, specifically:

- Phase One – Replication. The initial phase will focus on the academic and professional literature published since the 2011 RPNAO study.
- Phase Two – EN Extension. The second phase will concentrate on the academic, professional and government literature regarding the role and responsibility changes involving "enrolled" nurses as occurred in the UK, Australia and New Zealand.

Although the focus of the phases was somewhat different, the methods employed in each were comparable. Similarly, even though the individual searches targeted different topics and materials, some overlap with respect to information sources and timelines transpired.

Phase One – Replication

Scope

As established in the 2011 study, the replication literature search had some limitations placed on its scope to comply with the project timelines and to reduce the sizable amount of published material available. In particular, the documents and articles examined during the review comprised two components:

- Independent variables reflecting:
  - specific nursing related attributes, such as entry level education, continuing education, certification, experience levels and employment conditions,
  - delivery of care models and continuity of care, and
  - work setting context, including acute care, long-term care, hospital unit, staffing mix, support levels and type, etc.
- Dependent variables dealing with patient outcomes encompassing patient mortality and morbidity, and nurse job satisfaction.

Literature Sources

In 2011, the project incorporated information gleaned by both the RPNAO and the research consultant. Again, for the present study, the RPNAO supplied several relevant articles. These were added to a variety of articles, documents and reports located by the consultant in publication databases found in publicly available information sources and databases

Literature Analysis

Analyzing information for the review included the critical examination of literature, data and sources collected to answer original research questions. In addition to coordinating and summarizing individual items, the analysis involved assessing the value and appropriateness of the information gleaned from all materials, as a whole.

Conducting a meta-analysis of the results from the various studies was considered. However, the range of research topics, methods and data sources precluded this option.

The analysis of the various published materials involved:

- Reading and scanning the assembled material.
- Recording and categorizing individual items and overall themes.
- Synthesizing and summarizing any findings.

Phase Two – EN Extension

Scope

Although constrained by the same realities that exist for the Replication phase, the EN Extension phase also had to consider other relevant factors that influenced the changes in the employment of ENs within their respective jurisdictions. These other matters revolved around the unique historical and political dynamics occurring in their respective healthcare environments. While the independent and dependent variables specified for the first phase also apply in this phase, a broader range of articles and publications were accessed for inclusion in the study so that the historical and political aspects would be addressed.

Moreover, since a paucity of research articles existed, it was difficult to find materials that met the rigorous standards of scientific investigation. Hence, many of the additional documents went beyond purely academic journals and professional publications to include newsletters, editorials, commentaries, professional magazines, and so forth. As such, opinion pieces were consulted along with the typical research articles and empirical studies. This deficiency in suitable academic sources underscores the need for additional research to be conducted in the areas of EN/RPN education and employment.

Literature Sources

As part of their initial, exploratory investigation into the issues surrounding EN conditions, the RPNAO obtained 17 pertinent documents from various academic and professional sources. The RPNAO materials were built upon and the search expanded to embrace publicly available databases and resources.

Literature Analysis

The analysis of the EN Extension phase literature generally duplicated the process outlined for the replication phase, as follows:

- Reading and scanning the assembled material.
- Recording and categorizing individual items and overall themes.
- Synthesizing and summarizing any findings.

FINDINGS

Phase One - Replication

Overview

The results from the 2011 literature review revealed that materials could be grouped according to a set of five major themes. These included:

- Education.
- Staffing.
- Work environment.
- Nurse categorization.
- Models of care.

For the purposes of continuity and comparing the findings from the previous report with those of the present effort, the decision was taken to segment the published material according to the thematic categories discovered previously. In many cases, however, individual studies often exhibited overlaps in the various theme areas.

As was done in 2011, the primary focus was on finding and analyzing articles, reports and documents that had a distinctly Canadian or Ontario connection. Nevertheless, the reality was that much of the material originated in the U.S., Europe, Asia or Australia.

Education

Introduction. In last year's study, entry-level education standards and continuing education performance accounted for a number of the studies contained in the literature search. However, this number appeared to be proportionally lower in 2012.

Most of the papers and articles focused on the educational requirements of RNs, particularly as they pertained to the links with patient health and wellness outcomes. The attainment of a baccalaureate degree for RNs as an entrance requirement and its importance to nursing professional standards was a dominant theme.

Research. Building on her earlier research, Aitken et al (2011a) linked data from hospital discharge records for 1,262,120 surgery patients and a random sample of 39,038 staff nurses, across 665 hospitals in four American states. The primary dependent variables were instances of patient mortality and "failures-to-rescue". The independent variables included categories of nurse staffing, nurse education and work environment (as determined by the Practice Environment Scale of the Nursing Work Index (PES-NWI) completed by participating nurses). They found that, while decreasing workloads (i.e., patient to nurse ratio) had no effect on hospitals with poor environments[1] a decreased workload lowered the number deaths and failure to rescue incidents in hospitals with mixed and good working environments.[2] Similarly, having more nurses with bachelor degrees decreased patient negative outcomes, regardless of the working environment. Their conclusions were that having better educated nurses improved patient outcomes but changing nursing workloads only impacts outcomes in already good environments. Regrettably, the study did not differentiate amongst the different kinds of hospital staff nurses (e.g., RNs, LPNs or Nursing Assistants (NAs)). Hence, it is difficult to establish the staffing mix reflected in the study and the effects this may have had on the results.

Summary. In terms of connecting academic attainment with patient outcomes, only one empirical article was found that specifically dealt with the issue since the 2011 review. The present review supported the results of the earlier study by finding a connection between nurse education and patient care. Still, both literature review reports indicated that the linkages between education and patient care were not particularly definitive because other independent variables, such as staffing and environment, tended to obscure any direct relationship.

Staffing Issues

Introduction. Staffing concerns comprises three components:

- The number of nurses available.
- The amount of time devoted by nurses to patient care.
- The mix of different kinds of nursing staff

Unlike the situation with education, several articles and papers dealing with this issue published during the period in question were located. Many of these documents seemed to support the idea that a mix of nursing staff with a higher proportion of RNs corresponded with better patient medical outcomes.

[1] Poor environment hospitals were identified as those having less than a averaged score of 2.65 out of 4.0 from four aggregated PES-NWI sub-scores for nurse participation in hospital affairs, nurse foundation for quality care, nurse manager ability, leadership and support of nurses, and nurse physician relationships,

[2] Mixed environments had scores between 2.65 and 2.95 on the PES-NWI, while good enviroments rated a score above 2.95.

Research. Fasolino and Snyder (2012) examined the relationships between nurse characteristics, team member effectiveness and practice environment with medication error incidence. They applied a multi-method approach utilizing medical records, personnel files and surveys from 11 medical and surgical units in a large southern U.S. hospital. They found that older, more experienced RNs made fewer medication errors. However, the working environment and team membership were not strongly associated with errors. LPNs and NAs were included in the research but only as participants in the team effectiveness survey, not with other data collection devices. Hence, the full spectrum of nursing care, including the experience and knowledge of nursing staff other than RNs, was not considered in the study.

In response to a perceived inconsistency in nurse staffing research, Manojlovich et al (2011) undertook an examination of 26 units from hospitals in Ontario and Michigan. Financial and human resources information were compared with *methicillin-resistant Staphylococcus aureus* infections and patient falls. A nurse "dose" index was introduced incorporating variables for education, experience, skill mix, full-time employment, RN:patient ratio, and RN hours per patient day. LPN participation only arose as a factor in calculating the nursing skill mix. The researchers indicated that the nurse dose measure was associated significantly with both infections and falls: the higher the dose, the lower the outcome levels. The dose measure seems to be highly complex and prone to potential error. The sample size was comparatively small to conduct the required analyses, and the impact of LPNs was not assessed.

California is the only jurisdiction in North America where laws have been enacted pertaining to nurse staffing ratios in hospitals. However, these laws only apply to the employment of RNs, not other kinds of nurses. Hickey et al (2011) focused on the outcomes of this legislation when compared to other states in the U.S. Patient information was extracted from a database for paediatric cardiac surgery patients. Other sources provided information on nurse characteristics, hospital features and nursing FTE ratios. Not surprisingly, the nurse ratios decreased after passage of the legislation with more nurses handling fewer patients. The patient mortality rates decreased significantly and the complication levels decreased marginally, but the medical costs increased substantially. Cook et al (2012) also evaluated the consequences of the minimum nurse staffing regulations and also concluded that the law met the intended objective of decreasing patient/nurse ratios in California hospitals, but that the "improvements in staffing ratios do not appear to be associated with relative improvements in measured patient safety in affected hospitals". Hence, there seems to have been some ambiguity regarding the utility of implementing laws to impose minimum limits on RN staffing.

Needleman et al (2012) conducted a cross-sectional study of a teaching hospital with 43 units to determine the connections between mortality and patient exposure to nursing shifts where staffing by RNs was eight hours or more below the staffing target. The research revealed that, when RN staffing was below target levels, there were increased levels of patient mortality, which reinforces the need to match staffing with patients' needs for nursing care. The mix of nursing staff and the potential impacts of having higher proportions of non-RN nursing staff were not explored.

High patient turnover, including admissions, discharges, and transfers, were determined by Park et al (2012) to be associated with the need for increased levels of nurse staffing. The researchers collected data from 42 hospitals, representing 759 nursing units and about 1 million inpatients in the U.S. They examined the relationship between RN staffing and proposed that failure-to-rescue (FTR) rates varied with patient turnover. The findings showed that higher levels of nurse staffing were associated with lower FTR levels. When patient turnover levels increased, however, the beneficial effects of nurse staffing levels on FTR were negated. The researchers concluded that RN staffing should be adjusted in accordance with patient turnover because turnover increased patient care requirements beyond the simple patient count.

Duffield et al (2011) assembled existing longitudinal (5 years) administrative and human resources data for 80 medical and surgical units across 19 hospitals in the state of New South Wales, Australia. The information compared nurse staffing, nursing workload and nurse working environments with patient outcomes, such as failure to rescue, falls, medication errors, length of stay and infections. RNs, clinical nurse specialists, ENs, assistants in nursing, and trainee ENs were included in the study but only results for RNs were reported. Fewer RNs on shifts, workload increases, and poor unit environments were

associated with negative patient outcomes including falls and medication errors. Although a very comprehensive piece of research, the absence of segmentation by the various nurse types, except when determining the nursing staff mix, diminishes the study's value.

In an international study, Hinno, Partanen and Vehvilainen-Julkunen (2011) investigated the connections between nurse staffing and nursing activities, and patient outcomes in two European countries, Finland and the Netherlands. Although RNs and LPNs were identified as working in both countries, only samples of RNs taken from their national nursing registries completed a descriptive survey. Even though the overall ratio of patients to nurses did not vary much between each country, far fewer RNs and significantly more LPNs were found in Netherlands' hospitals. Finnish nurses performed non-nursing and administrative activities to a greater extent and reported more dissatisfaction with the availability of support services. Also, Finnish nurses reported adverse patient outcomes more frequently. The researchers argued that important links were found between nurse staffing and adverse patient outcomes, such that higher workloads resulted in higher levels of adverse effects. Notably, the Finnish staffing situation, with more RNs and fewer LPNs, appeared to result in more patient problems and greater nurse dissatisfaction. Hence, LPNs in the Netherlands may carry a greater amount of the administrative and support load, allowing their RN colleagues to have more time with patients. Additional research is needed to pursue this line of research.

McGahan. Kucharski, and Coyer (2012) carried out a detailed review of the literature pertaining to nurse staffing levels, and the incidents of patient mortality and morbidity in intensive care units (ICUs). In total, they located 19 pertinent articles. The researchers reported that most of the studies were observational in nature and based on information gleaned from large hospital databases. They concluded that, "while a statistical association between increased nurse staffing levels and decreased adverse patient outcomes was not found in this review, most studies demonstrated a trend between increased nurse staffing levels and decreased adverse patient outcomes in the intensive care unit which is consistent with previous literature." Hence, this particular study raises some questions regarding the reliability of nurse staffing results but is also limited in its small sampling, narrow focus on ICUs, and the methodology of a literature review. Differences between the various types of nurses (i.e., RNs vs. LPNs) were not discussed.

Summary. Research undertaken since the submission of the 2011 RPNAO literature review does not appear to have altered substantially with respect to nurse staffing issues. With a few exceptions, the current research-related materials seem to confirm that the proportion of RNs in relation to an entire healthcare institution's nursing workforce constitutes an important effectiveness measure, particularly when evaluated against patient adverse outcomes. Still, the limitations and reservations mentioned in the previous report remain largely unchanged, including the link between education and nurse type, the diversity of units comprising the research samples, and the different tasks performed by different categories of nurses. Moreover, the material reviewed in the present section clearly highlights the urgent need to segment LPNs from RNs when researching the larger staffing issue. In particular, separate studies are necessary to examine LPNs as a distinct group within the nursing community.

Work Environment

Introduction.

A substantial amount of the nursing research has focused on the work and demographic characteristics of nurses. However, people do not normally work in a vacuum; the environments around them affect them. This is also true of nurses. These work environment considerations also impinge upon the productivity and performance of nurses, and, ultimately, patient outcomes. Until recently, relatively little research linked the environment with nursing practices and patient outcomes.

Research. Using survey data collected from 76 nurses in six mental health units across five public hospitals in New South Wales, Roche, Duffield and White (2011) investigated a model that combined demographic characteristics and the work environment to determine the willingness of nurses to enter into a therapeutic relationship with patients. They found that experienced nurses who viewed themselves as being competent and supported by the institution were more willing to engage with patients. The

environmental considerations that were part of the support equation included "quality nursing care, opportunities to participate in hospital affairs and clinical supervision." Therefore, a positive work environment was seen as improving the motivation of nurses to participate in therapeutic relationships with patients. Both RNs and ENs (ENs fulfill a role similar to RPNs) were participants in the study, but experience level appeared to be a more significant factor in assessing the outcomes than nurse category. The small scope of the study in terms of sample size, nurse mental health specialization and number of units suggest additional research is necessary in this area.

Flynn et al (2012) undertook an eight-month research project to determine the links amongst nursing work environment, nurse staffing and rates of medication errors in acute care hospitals. A survey was the major environmental data collection device, along with medication error records, nursing hours per patient day and medication error interception practices. The sample consisted of 686 staff nurses (i.e., RNs) from 82 medical-surgical units at 14 acute care hospitals in the U.S. The results showed that a supportive working environment (as determined by the survey) was linked to medication error interceptions practices that, in turn, had a positive effect on medication error rates. The study design seems reasonable in assessing the environments of RNs and their connection to medication errors but may not be generalizable to the larger nursing community.

The connection between nurse scheduling and patient mortality was the focus of a study conducted by Trinkoff et al (2011). The research was cross-sectional in design, involving 633 RNs and LPNs from 71 acute care hospitals in North Carolina and Illinois. Mortality rates were derived from discharge databases, covering pneumonia, congestive heart failure, acute myocardial infarction, stroke and post-operative incidents. A standardized survey was employed, along with various schedule variables (i.e., hours worked per day, hours worked per week, weekends worked per month, number of breaks lasting 10 minutes or more including meals and shift rotation.) The findings indicated that work schedule was related significantly to mortality, in that mortality rates were higher in hospitals where nurses reported schedules with more work hours per day, a lack of time away from work, working while sick, and additional work hours per week. The research controlled for both staffing levels and hospital characteristics. The conclusion was that, in addition to the issue of staffing, work schedules of nurses could have a profound influence on patient mortality. This piece of research is important because it underscores the reality that a number of elements may contribute to patient mortality rates, beyond simple staffing levels or staffing mixes.

In an article that examined the connections between stress and staffing, Purcell, Kutash and Cobb (2011) used demographic information, work setting data, and two stress surveys for a sample of 197 RNs. The results indicated that nurse age, patient workload and the day of the week affected nurse stress levels. However, as with much of the work environment literature, the focus was on RNs, to the exclusion of other nurse types.

Summary. In the 2011 report, the observation was made that a positive work environment might be expected to result in better levels of performance and productivity. For the most part, the articles reviewed in this section seem to give additional support to the previous findings that this presumption is correct. Nevertheless, the limitations mentioned earlier regarding the inadequate number of studies examining relationships amongst environment, culture and performance remain. As more research emerges, a definitive answer regarding these connections can be expected to materialize.

Nurse Categorization

Introduction. The College of Nurses of Ontario (2011) recognizes two categories of registered professional nurses: RNs and RPNs. According to the College's standards, these groups study the same body of knowledge but function in different ways in their respective patient care duties. RNs have a longer educational period, which fosters greater clinical knowledge, decision-making, critical thinking and leadership practices. The shorter study time of RPNs results in a level of autonomous practice that differs between RNs and RPNs. In this section, the aim is to identify those published studies that addressed issues related to the categorization of nurses and the resulting work differences for each group.

Research. Parnell and Kring (2012) revealed that LPNs (who are similar to RPNs in Ontario) might often become involved in work which would be considered beyond their expected scope of practice. A random sample of all LPNs in the state of North Carolina was sent a survey that asked about the normal duties they carried out in their every-day work. From the 978 respondents, the researchers determined that "an unfavorable pattern [exists] regarding LPN scope of practice." In other words, LPNs reported doing tasks for which they were unqualified and which should have been done by RNs. They identified a variety factors contributing to this situation, ranging from organizational workload issues to a lack of appreciation for the contribution of LPNs. Unfortunately, by using the word "unfavorable", the researchers appeared to apply a judgmental assessment on the employment of LPNs to fill an obvious vacuum left by having too few RNs available to do the necessary work.

Moving from one professional category to another can be a challenging personal event. Melrose et al (2012) delved into the socialization experiences of a group of LPNs who attended an online university course to earn a bachelor's degree in nursing. A series of cross-Canada, focus groups were held with 27 "post LPN to BN" program participants. The findings showed that the individuals needed hardly any further legitimation to affirm their identity as a "nurse". Likewise, interactions with practicum instructors and new clinical experiences were key socialization agents as the participants assumed greater professional breadth. The research confirms that educational enhancement does not necessarily change how a group of people views their status as members of a profession. Although the study was relatively confined in numbers and scope, it presents a potential area for other empirical research to test professional self-image.

Meadows and Prociuk. (2012) discussed a pilot study where LPNs were integrated into 11 home healthcare offices of a healthcare authority in British Columbia. Through focus groups, interviews, and a pre and post integration survey, it was determined that the pilot offered insights into collaborative nursing practices, building relationships, and differentiating the roles of RNs and LPNs in the practice of home care. Managers indicated that LPNs might provide up to 20% of the skill mix necessary in the home care environment, thereby resulting a more efficient (i.e., cost effective) nursing service. Moreover, the satisfaction of LPNs and RNs with the quality of care given to patients increased both during the pilot project and after its conclusion when LPNs were kept in the system. The study provides a reasonably good initial example of how RPNs and RNs might work in the same environment to the mutual benefit of both professional groups, the improvement in patient care, and an increase in organizational efficiency. However, the limited scope of the pilot project emphasized the need for additional research.

Summary. Unlike the 2011 report, some greater interest appears to have been devoted to the issue of nurse categorization, at least in terms of the larger number of articles that were produced. Indeed, the distinctions between the roles and duties of RNs and RPNs/LPNs seem to have gained heightened attention by nurse researchers, generally in a positive light but also, occasionally, somewhat pessimistically. Concern about the encroachment by RPNs/LPNs into RN professional territory was perceived as an implicit element in many pieces of categorization research and an explicit feature in others.

Models of Care

Introduction. The amount of literature available that examined different models of nursing care in terms of type of nurse, nursing performance and patient outcomes was very meagre. Nevertheless, the topic of nursing care models is an important one when considering how limited resources and funding are to be coped with.

Research. Wells et al (2011) employed a mixed method, longitudinal, descriptive design to investigate the levels of satisfaction, empowerment, and care effectiveness amongst RNs and LPNs at two acute-care hospital units in Newfoundland with a total sample of 78 nurses. The units moved from a team care model to a total patient care model. The survey results ascertained that the base level of satisfaction remained unchanged from before, 3 months after and 12 months after the model shift implementation. However, satisfaction was less than optimal during all three time-periods. Empowerment ratings remained at reasonably high levels throughout the study. Care effectiveness was deemed by nurses to

be better under a total patient care model. The results were not segmented by nurse type, so we do not know if RNs and LPNs differed in their opinions. The limited scope of the study in terms of the location and sample size was another disadvantage.

Summary. Models of care guide nursing staffs, both RNs and RPNs, in the use of best practices to ensure that the highest care possible is delivered to patients. However, as indicated in the 2011 review, the research related to the association between nursing delivery care models and actual patient outcomes is sparse. The present study verified this finding. Nevertheless, it is an area that deserves more attention.

Phase Two – EN Extension

Overview

The RPNAO asked that a section of the review be dedicated to the circumstances surrounding the status of State Enrolled Nurses (SEN) in the UK and Enrolled Nurses (ENs) in other British Commonwealth countries. In the 1970s and 1980s, the UK's National Health Service (NHS) underwent significant changes in the education of nurses and the delivery of nursing services. Essential questions remain, however, as to whether these changes have had the desired and lasting effects expected or if unintended consequences have undermined their success.

Research

Project 2000. In a descriptive review, Allen (2009) tracks the history of Project 2000 – the plan for implementing the changes to nursing education in the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC), which was subsequently replaced in 2002 by the Nursing and Midwifery Council (NMC). In 1986, the Project 2000 report was released, containing 25 key recommendations including an end to SEN training. The program was fully implemented in 1989, resulting in some profound cultural shifts. For example, in the associated academic environments, nurses under training assumed the characteristics of other kinds of students, rather than those of nurse apprentices. Student nurses complemented their theoretical learning with “practical placements” in different clinical settings (Corlett, 2000) but only in the role of students rather than as extra hands on the wards. Consequently, more staff nurses and nursing assistants had to be hired to perform the work routinely done by students in the past. After 20 years, Allen maintains that the Project 2000 had mixed outcomes. The UK intent of creating one category of nurse (RN) has resulted in higher entry to practice education but some critics have suggested that nurses are no longer able to meet the basic needs of patients (i.e., they are "too posh to wash"). Alas, with the exception of one small mention with respect to training, the effects of Project 2000 on SENs are not discussed to any great degree.

Conversion. As part of the Project 2000 planning, SENs in the UK were encouraged to embark on conversion training to obtain their nursing baccalaureate degree. However, the results seem to have been somewhat contradictory. Webb (2000) undertook an extensive review of the literature for the preceding 50 years of SENs converting to RNs. After their training ceased in the 1980s, it was found that the assurances given to SENs that anyone who wanted to convert to an RN would be allowed to take the necessary educational enhancement to do so was not supported because insufficient training places were funded and employers did not release them to attend training. The conclusions stressed the responsibility of the NHS to support the professional development of SENs and the need to create meaningful roles where these nurses can maintain their status and have equal access to career opportunities. From interviews with 16 SENs, Dowsell, Hewison, and Millar (1998) determined that they felt under pressure to take the courses and that participation generally had a positive effect on their work lives but negatively impacted their personal lives. By conducting a secondary analysis on an already existent, large (2,968 participants) database, Iley (2004) tracked SENs who converted to RNs and found they were more likely "to be male, be younger, have been nursing longer, not be working on elderly care wards, have a high career orientation, not have taken a career break, and work full-time." However, although the SENs who converted anticipated career progression, they were also less likely to be

satisfied with their work, raising the question of whether retaining hands-on nursing skills must be considered important when defining the meaning of rewarding work.

In the Australian context, Kenny and Duckett (2005) indicated that the conversion of ENs to RNs was driven by critical staffing shortages. Thirty-eight ENs in conversion training participated in an online focus group. The results showed that the decision to convert was driven by role disillusionment and ambiguity, but also by the opportunities presented by working in a rural nursing practice. Cubit and Lopez (2012) interviewed eight RNs who had completed a conversion course from ENs. Three themes arose from their experience: stepping out of their comfort zones, fear of being taken advantage of as experienced nurses, and the need for the same support given to any new RN.

International Employment. Although having a healthcare system similar to the UK, Australia has not made the same decision to cease EN training and employment. Jacob, Sellick and McKenna (2012) completed a functional comparison of Australian RNs and ENs. While the roles of each were deemed hypothetically different and critically important, changes to education, training and supervisory requirements appeared to bring the two categories of nurses pragmatically closer together. A literature review, however, confirmed that real differences exist between RNs and ENs in such areas as registration requirements, educational preparation, supervisory practices, and role expectations. Both fulfill distinct functions in the delivery of nursing care to patients.

Using a structured observation approach in four medical wards in two Australian hospitals, Chaboyer et al (2008) also compared the work of ENs with RNs. The results showed that the five most frequent direct patient-related activities carried out by nurses were the same for ENs and RNs, including admission and assessment, hygiene and patient/family interaction, medication, and IV administration and procedures. Similarly, three out of four indirect activities, which were patient rounds and team meetings, verbal report/handover and care planning, and clinical pathways, applied to both groups as well. The conclusion was that the role boundaries between RNs and ENs were becoming less delineated.

In an earlier paper, Francis and Humphreys (1999) considered the differences between the Australian and UK nursing systems, especially regarding the end of SEN training in the UK While nursing in the UK aimed to enhance the professional standing of nurses by instituting a baccalaureate degree as a standard entry-level requirement and ending EN training, Australia also introduced the need for a degree for RNs but retained the EN role. The researchers maintained that the EN retention occurred for the following reasons:

- A greater differentiation between the roles of the Australian EN and RN than in the UK
- Strong union defence of EN training in Australia.
- Differing nurse professionalization strategies between the UK and Australian. .

Ultimately, Francis and Humphreys suggest that "the Australian model may have an advantage, as concerns are being raised that English nurses may `price themselves out of the market', with the nursing role being encroached upon by non-nurse Health Care Assistants."

New Zealand represents a unique situation. As detailed by Rolls (2011), EN education ceased in New Zealand in 1993. However, beginning in 2000, the New Zealand Nursing Organization (NZNO) lobbied to have EN programs reinstated, which happened in 2002. Between 2007 and 2010, the scope, title, competencies and education were developed so that an entirely new EN diploma could be introduced in 2011. Indeed an article in the NZNO (2011) newsletter, *Kai Tiaki Nursing New Zealand*, reported that a fact-finding visit of representatives from the United Kingdom's Nursing and Midwifery Council was coming to New Zealand to learn about the EN experience in preparation for the reintroduction of enrolled nursing in the UK

Assistant Practitioners. In recent years, another, informal level of care providers has evolved in the UK nursing structure to fit between the licensed RN and unlicensed support staff. Hand (2010) of the Royal College of Nursing (RCN) described the development of the Assistant Practitioner (AP) role as meeting the need to fill particular skills gaps and provide suitable patient care beyond the normal professional

boundaries of RNs. The AP education requirements tend to be specialized to a given function, which is higher than an NA but different from an RN. For example, a foundation baccalaureate degree "may be generic (for example Health and Social Care), or highly specific (for example Mental Health or Learning Disabilities)." However, there is a dearth of regulation applicable to APs and the training tends to be non-standard. At the time that the report was written, APs were not licensed through the RCN. Similarly, AP job descriptions were inconsistent and varied from region to region. And, even the title may change since "assistant" is used in some places and "associate" in others. Still, two themes are common for APs:

- They support the work of a registered professional.
- They always work under the supervision of a registered professional but exercising a good deal of autonomy.

In a policy paper, King's College (2009) assessed the need for new levels of nursing categorization in the NHS, specifically the implications of having an enrolled level of licensed nurses as part of the nursing mix. From a limited review of the international literature, the paper concluded that:

- No simple relationship exists between either numbers or skill mix of nursing staff, and either outcomes and cost.
- Where studies explored the impact of having a enrolled category of nursing (i.e., ENs), the evidence did not support the enrolled nurse role.
- Better clinical and cost outcomes were achieved by having a workforce primarily composed of RNs .
- Little benefit is to be gained from replacing unlicensed NAs with ENs or LPNs.
- The benefits of formalizing the AP role are unclear.

While they emphasized that the reintroduction of a practical level nurse did not offer a simple solution to workforce challenges, they recognized that the AP has a place in the system but will require well-defined boundaries and RN leadership.

In a commentary article, Prof. James Buchan (2009) of the School of Health at Queen Margaret University elaborated on the reintroduction of the enrolled level of nursing in the UK. Although the SENs were eliminated in the 1980's, he made the point that the role is being reinvented by the training and employment of APs. It is stressed that the necessary function of the enrolled trained nurse has not changed and mentioned the restoration of ENs in New Zealand's nursing care system. He ends by saying, "Make no mistake about it, APs will be a major growth area for employment in the health sector over the next ten years."

Nursing Assistants. A third component in the nursing mix is the unlicensed NAs who usually perform the basic needs care of patient cleaning and maintenance found in healthcare settings. In the UK case, with the lessening of the SEN role, many supporting activities of daily living'were assumed by Health Care Assistants (HCAs) or NAs. Bach, Kessler and Heron (2008) drew upon data available from two acute care hospitals to assess the variations in the employment of HCAs. Unlike government plans, they found an uneven expansion of the HCA role, since modernization initiatives curtailed the involvement of registered nursing staff in direct patient care. Indeed, HCAs were expected to undertake "relief", "substitute" or "apprentice" roles, highlighting the assumptions that abound regarding the respective roles of registered and non-registered staffs.

In 2010, the union for HCAs in the UK, Unison, conducted a satisfaction survey of its members. Overall, 1,002 responses were received. Some of the major conclusions included:

- A general belief that their units were understaffed.
- A clear need for stronger regulation of the occupation.

- Good levels of satisfaction but a perception they are undervalued and unappreciated by their employers.
- Even though their duties are often perceived as being the most mundane, such as bathing, feeding and monitoring patients, theirs is a "bedrock" role in the healthcare system.

Vail et al (2011) examined the place of HCAs in general practice (GP) situation in the NHS, using a qualitative method of interviewing 14 individuals employed at two primary care trusts in the West Midlands. The results indicated that the HCAs enjoyed their work, especially when directly dealing with patients. Other members of the GP team generally accepted them. Role boundaries were usually well defined with little ambiguity being reported, even though most saw their work as having low status and mainly concerned with easing the staff nurses' workloads.

Summary

Although originally touted as a means for improving the professionalization and employability of nurses overall, the UK experience with eliminating the EN role seems to have produced very mixed results. While the education standards and professional standing of RNs improved, the practical knowledge that was gained from working in shifts on the wards seemed to have been neglected. Hence, with the elimination of ENs, gaps in basic patient care and monitoring appear to have arisen, which the fewer number of RNs could not realistically fill. Consequently, APs have been introduced to perform specialized and hands-on nursing functions for less cost, and unlicensed NAs are being used to carry more of the basic patient care tasks, sometimes at levels beyond their employment scope or training.

The case of Australia and, especially, New Zealand further emphasizes the value to have an enrolled level of licensed nursing as part of the nursing care mix. Both jurisdictions have successfully synchronized the skills and knowledge of the professional RN, the vocational EN and the occupational NA to meet the ever-shifting needs of patient care delivery. Even though the responsibility boundaries amongst these groups may blur occasionally, particularly in rural and remote areas, together they seem to provide the best balance of nursing services possible

WRAP UP

Synopsis

Replication

With a commitment to the Ontario government to maintain its currency with the latest nursing literature that may impact the role of RPNs, the RPNAO undertook to replicate the literature review conducted in 2011. To that end, an independent researcher scrutinized the publications, articles, reports and documents produced since the previous report in the areas related to nursing care delivery. The study concentrated on material that fit with the themes already identified, for the sake of continuity and comparison.

More articles dealing with the issues in question were unearthed than had been expected. In most instances, the findings revealed in this year's review corroborated those of 2011. Education was not strongly linked to patient care. Nurse staffing mix showed that a higher proportion of RNs positively affected patient outcomes but was not definitively demonstrated, although the various articles tended to focus solely on RNs and did not differentiate between RNs and RPNs. Not unexpectedly, positive working environments for nurses yielded better care delivery. A larger number of papers were found that dealt with nursing categorization, revealing that friction often exists between RNs and LPNs/RPNs owing to concerns over the crossing of professional boundaries. Finally, as a research subject, models of care require greater attention.

The research materials reviewed in the past two years overwhelmingly concentrate on the role of RNs in the delivery of nursing care. Primarily in the areas of staffing and staffing mix, some efforts to compare the contributions of RNs and RPNs/LPNs have been made, but a broader research perspective covering the main nursing functions is needed. Likewise, should significant changes be contemplated in the roles and relationships amongst the licensed nurse categories, significantly more research should be undertaken to better understand the current situation and determine what potential benefits and costs could exist. Then again, rather than attempting to curtail or alter the work of any one group, a better strategy might be that of cooperation and collaboration to establish how the skills, knowledge and experience of both types of nurses can be leveraged to complement each other's everyday working environment.

EN Extension

Given the concerns expressed in some quarters regarding the future of the RPN role in the Ontario healthcare system, a separate review of the SEN situation in the UK, along with other Commonwealth countries, appeared necessary. Three decades ago, the British healthcare system underwent a number of dramatic changes, not least of which was the cancelling of SEN training and the curtailing of SEN employment. The intention was to promote a higher level of professionalism amongst RNs through improved education, increased employment opportunities and broader managerial experience.

Nevertheless, the UK SEN plan only achieved partial success. Problems ensued with the conversion training, whereby the promised programs did not materialize and the number of SENs who actually undertook the training was far below expectations. Because employing highly educated and skilled RNs in the more tedious nursing tasks was viewed as a waste of resources, HCAs/NAs frequently assumed roles for which they were not trained or prepared in the absence of practical level nurses. Consequently, the AP role has evolved with specialist education and training being given to a new category of care provider to fill particular roles. Likewise, while New Zealand also eliminated ENs, the decision was reversed in less than ten years with the introduction of an updated and upgraded version of the EN being reintroduced. Conversely, when presented with a similar situation, Australia opted to retain its ENs because of their perceived value in the delivery of nursing care.

The moral of the SEN tale is "be careful what you wish for." Although very good reasons existed for wanting to propel nurses to new professional heights, the implementation did not seem to consider certain nursing realities and proclivities. Nursing involves not only leadership and clinical elements but also performing the routine, unglamorous, but essential, basic patient care tasks. . Hence, today's staffing mixes must reflects a division of labour that recognizes the range of patient care needs found in diverse healthcare settings, and matches care provider skills and knowledge to those needs.

Limitations and Gaps

Many of the same limitations indicated in the 2011 report remain. The methods employed in a number of the studies are constrained by the small sample sizes, inadequate research scope and problematic settings. Hence, generalizability is often a challenge. The research links between different kinds of nurses and patient medical outcomes are still relatively few, especially in terms of assessing the various roles and responsibilities.

The principal dilemma with the EN research is a scarcity of research studies that explicitly examines the reasons for having an RN and EN balance. Even though a number of association reports, academic commentaries, newsletter articles, and government documents were located, finding any related empirical work is challenging. Furthermore, any longitudinal research on the patient care impacts of removing ENs from healthcare systems is definitely lacking.

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