Canadian-Trained Nurses in North Carolina

George H. Pink, Linda McGillis Hall and Peggy Leatt

Address correspondence to: George H. Pink, Department of Health Policy and Administration, University of North Carolina at Chapel Hill, 1101 McGavran – Greenberg Hall, Chapel Hill, NC 27599. Email George Pink at gpink@email.unc.edu.

ABSTRACT

Little is known about nurses who leave Canada to work in the US. The main purpose of this study is to gain some insight into the emigration component of nursing supply and demand by comparing characteristics of nurses who left Canada to nurses who stayed. Specifically, Canadian-trained RNs who work in the state of North Carolina are compared to RNs who work in Canada. Results show that there are 40% more Canadian-trained RNs in North Carolina than there are in Prince Edward Island. A higher percentage of Canadian-trained RNs in North Carolina are male, under 40 years of age, have baccalaureate training and graduated less than 10 years ago. Canadian-trained nurses in both countries have very low rates of unemployment. The loss of Canadian-trained RNs to the US is a significant problem, and there is an urgent need to obtain a better understanding of why nurses leave the country.

BACKGROUND

The issue of whether or not there is a sufficient supply of nurses to fulfill the demand for nursing services in Canada is a question that has puzzled healthcare planners and nursing leaders for a long time. Concerns related to a shortage and surplus of Canadian nurses have seesawed as planners have attempted to take into consideration provincial budgetary priorities for education and healthcare services.

More specifically, over the past several decades, the number of students accepted in Canadian nursing schools has alternately increased and decreased, usually as a response to changes in government funding of university and college education. These types of education funding changes often do not immediately affect the supply of nurses, but rather affect the supply three to four years hence – the duration of most nursing curricula. At the same time, the budgets of hospitals and other healthcare organizations have alternately increased and decreased, again usually as a response to changes in government funding of healthcare. These types of healthcare funding changes often immediately affect the demand for nurses, with hiring in times of funding increases and layoffs in times of funding decreases. Thus, the delayed effect on supply and the immediate effect on demand of government funding changes have resulted in periods of over and undersupply of nurses, which may have fuelled a perception of an unstable job market. Lack of job security is one of the major issues facing the nursing workforce in Canada (Baumann 2001) so one might ask, "Who can blame Canadian trained nurses for fleeing to other countries?"

A number of reports at the national and provincial levels have identified concern with the impending nursing shortage. For example, O'Brien-Pallas et al. (2003) has suggested that by 2008 the Ontario hospital sector will have a shortfall of 12,000 full-time registered nurses (RNs). There has been a great deal of preoccupation about the effect of current nurse shortages on the quality of working life of nurses. A recent report in the US, *The Effect of Healthcare Working Conditions on Patient Safety* (2003), has drawn direct relationships between nursing shortages and the quality of the nurses working environment as well as with the level of patient safety.

The report of the Canadian Nursing Advisory Committee (2002) suggests the nursing shortage in Canada is caused by a combination of complex factors such as a reduced number of seats in nursing education programs, an aging nursing workforce, outdated or inappropriate management practices (such as use of overtime and part-time workers), a high amount of non-nursing tasks assigned to nurses,

restriction of nurses' scope of practice for social and political reasons and insufficient funding for hiring nurses as needed (Advisory Committee on Health Human Resources 2002). Although the authors of the report mention the importance of developing and monitoring "a national plan to coordinate the number of nurses entering the profession (new graduates, immigrants, nurses returning to the professions) and the number exiting (through retirement, emigration or career changes)" (Advisory Committee on Health Human Resources 2002: 39), the focus of the committee's recommendations was on resolving workforce management issues, improving nurses' work environments and supporting workforce development. Little attention was directed towards examining the loss of Canadian nurses to other countries through work migration.

The emigration of Canadian RNs to the United States is not a new phenomenon. The geographic proximity and the availability of nursing positions make it relatively easy for Canadian-trained RNs to obtain employment in the US. In border communities, such as Windsor Ontario, some RNs commute daily to work in the US while living in Canada. The proximity and relatively open border also make it easy for Canadian-trained RNs who live in the US to return to Canada periodically to visit family and friends. In addition to the increase in labour mobility permitted by the North American Free Trade Agreement, the US government has recently made it easier for Canadian-trained RNs to work in the US. The Rural and Urban Healthcare Act of 2001 that was introduced and passed by the US Senate removed many barriers to Canadian-trained RNs moving to the US.

SIGNIFICANCE OF THE PROBLEM

The loss of Canadian RNs to the US is a significant problem for several reasons:

1. The cost of training each RN is tens of thousands of dollars. The emigration of nurses represents a substantial investment of Canadian taxpayer money with no return.
2. There is a shortage of nurses in most areas of Canada. The emigration of nurses worsens existing shortages and creates shortages where none would exist if the nurses remained.
3. The nurse shortage imposes real economic costs. When Canadian workers experience access problems and delays in treatment because of the unavailability of nursing staff, increased sick time, injuries, disability and other forms of productivity loss are a result.
4. The emigration of nurses is a Canadian subsidy of US nurse training costs; in other words, it is a subsidy provided by a less wealthy country to a more wealthy country.
5. Canadians have less access to young, well-educated nurses, which may ultimately affect quality of care and patient outcomes.

Despite the fact that there are thousands of Canadian RNs living and working in the US, this problem has received virtually no attention as a research or policy issue. This gap in the research and policy literature may be due to the difficulty in obtaining accurate information about the RNs who leave Canada. The lack of information was reinforced in a recent report on nursing workforce trends, where the Canadian Institute for Health Information (CIHI) stated, "No comprehensive data source exists, either in the U.S. or Canada, to track the number of Canadian RNs currently employed in the U.S." (CIHI 2003: 84).

The main purpose of this study is to gain some insight into the emigration component of nursing supply and demand by comparing characteristics of some nurses who left Canada to all nurses who stayed. Specifically, all Canadian-trained RNs who are licensed in the state of North Carolina are compared to all RNs who are registered in Canada. First, the sparse literature relating to international migration of nurses and Canadian-trained RNs, in specific, is reviewed. Next, the sources of data and limitations are described. In the results section, descriptive data are provided comparing Canadian-trained RNs who are licensed in North Carolina to Canadian RNs. The paper ends with a discussion of the results and a conclusion.

LITERATURE REVIEW

International Nurse Migration

The migration of nurses from one country to another has been evident for decades, often during times of nursing shortage. In recent years, international nurse recruitment of nurses has actively occurred with employers from one country targeting nurses from other countries (Buchan 2002). International recruitment has been cited as a solution for the shortage, maldistribution and misutilization of nurses identified by the majority of member states of the World Health Organization (Kingma 2001). The primary RN donor countries for these activities are Australia, Canada, the Philippines, South Africa and the United Kingdom (UK) while the primary receiving countries are Australia, Canada, Ireland, the UK and the US (Kline 2003). Other studies have focused on migration to the US by RNs from Sweden (Forslind 1992), Australia (Hawthorne 2001), the Philippines (Gamble 2002), the former Soviet Union (Burns 1991), Mexico

(Wieck 2002) and a mix of other countries (Esposito 1997; Xu et al. 1999). Several articles have also explained how US hospitals can actively recruit nurses from other countries (Jaklevic 1999; Neal 2002).

Several studies have investigated the reasons why nurses migrate from one country to another. Kline (2003) states that nurses migrate to seek better wages and working conditions than they have in their native countries. Nurse migration is also motivated by the search for professional development, better quality of life and personal safety. Pay and learning opportunities are the most frequently reported incentives for nurses from less-developed countries and career opportunities are key incentives for nurses emigrating from high-income countries (Kingma 2001). Finally, family reunion and adventure are identified as reasons for nurse migration (Hawthorne 2001). Interestingly, there appears to be no research that investigates whether migrating nurses actually found what they were seeking.

Like most other healthcare strategies and policies, there are costs and benefits of international recruitment of nurses. Weighing the positive global economic, social and professional development that results from international migration against a substantial "brain and skills drain" experienced by supplier countries is difficult but critical at times of crisis (Kingma 2001). International recruitment of nurses is thought to benefit a number of parties: first, patients in communities that have gaps in access to care; second, healthcare organizations that require an expedient and economical method of filling vacant positions; third, nurses who seek opportunities for a better quality of life than available in their homeland; fourth, colleagues on the rest of the clinical team who need qualified staff to share the workload; fifth, the home country benefits when the expatriate nurses regularly send money back into the general economy of the sending country (Gamble 2002). Although considerably more expensive to recruit than domestic nurses, foreign nursing graduates emigrating to the US have been shown to have higher retention rates than US-educated nurses and possess other characteristics that make them desirable recruits for hospitals experiencing a nursing shortage (Pizer et al. 1994).

On the negative side, the recruitment of foreign-educated nurses for entry-level jobs may perpetuate patterns of dependency on the sending country and delay creative long-term solutions to staffing problems in the host country. Thus, foreign nurse recruitment might solve short-term needs, but repetitive temporary nurse migration programs may create long-term consequences that are not in the best interests of the nursing profession (Glaessel-Brown 1998).

Most recently, the ethics of active international recruitment have been called into question especially when targeted toward developing countries (Kingma 2001). The vulnerable status and potential exploitation of foreign nurses (Glaessel-Brown 1998; Kingma 2001; Kline 2003) and the exacerbation of a severe shortage of healthcare services in some countries, especially in Africa and Southeast Asia, have raised serious moral issues (Dvorak and Waymack 1991; Reilly 2003), especially in view of the fact that international recruitment tends to be only a short-term solution to shortages (Buchan 2002; Kingma 2001; Tuazon 1992).

Canadian Nurse Migration

Herrmann (1992) was among the first to discuss Canadian nurses heading to the US, citing an example of a hospital in Texas operating with a 25% Canadian nursing staff. Greenaway (1994) also was an early observer of the migration of Canadian nurses and Elabdi (1996) discussed the US as a land of opportunity for Alberta RNs. More recently, Spurgeon (2000: 1030) stated that "Canada was in the grip of a serious shortage of registered nurses that by all accounts will grow in years to come."

In Ontario, the report of the Nursing Task Force (1999) identified concerns with nursing recruitment, suggesting that "nursing enrollments and graduations have decreased, and nurses report that they are leaving nursing in Ontario to go to other jurisdictions or to jobs outside of healthcare." As well, the Advisory Committee on Health Human Resources (2002) stated that "it has been established that a number of recent graduates left the country in search of jobs elsewhere or simply left nursing when they realized they could not get full-time nursing work in Canada."

In a survey of 3,272 Canadian nurses residing outside of Canada, 36.6% of the respondents were employed in the US, primarily in Texas, Florida, North Carolina, California, Michigan and New York (Registered Nurses Association of Ontario 2001). Over half of these nurses left Canada between 1996 and 2000, with the majority of these citing healthcare downsizing, lack of employment opportunities or lack of full-time employment as factors that influenced their departure from Canada. Media interviews with Canadian nurses employed in Texas provide similar evidence that, during the mid-1990s, newly graduated nurses were unable to obtain work in Ontario (Picard 2001).

Finally, a recent report on Ontario's nursing workforce indicates that approximately two-thirds of Ontario's

nurses are over age 40 and suggests urgent action is needed to avert a severe nursing shortage in the next five years (O'Brien-Pallas et al. 2003). The College of Nurses of Ontario (CNO) has estimated that 5,407 Ontario registered nurses live outside of Canada, of which 4,650 are thought to be living in the US (Registered Nurses Association of Ontario 2001). Further research is needed to determine why nurses leave Canada, or remain employed in nursing outside of Canada, and what circumstances might entice them to return to Canada.

METHODOLOGY

Comparison of RNs in different countries is difficult because of differences in data definitions, categorization, format, frequency of reporting and quality. In this study, North Carolina was selected because high-quality data about Canadian-trained RNs in the state were available from one of the most comprehensive health professions databases in the US. Further, data about Canadian-trained RNs in North Carolina are, for the most part, directly comparable to data about RNs in Canada.

Data About Canadian-Trained RNs in North Carolina

The most recent data about Canadian-trained RNs in North Carolina were obtained from the North Carolina Health Professions Data System (HPDS) maintained by the Cecil G. Sheps Center for Health Services Research at the University of North Carolina at Chapel Hill. The HPDS data are obtained from the North Carolina Board of Nursing, which requires biennial registration for the state's RNs and LPNs. Licensure renewal is a monthly process, with RNs and LPNs renewing their licences every two years on their birth month. After receipt of the data from the Board of Nursing, the Sheps Center audits, cleans and tabulates the data and reports them for health policy and research.

The HPDS is one of the most comprehensive health professions databases in the US, and one of the few that are continuously maintained. However, there are four potential data quality concerns of the HPDS:

1. *Self-reported data.* RNs report the data to the North Carolina Board of Nursing at the time of initial license or renewal. The licensure files undergo several audits, but each record is not individually verified with the RN.
2. *Definition of "active."* HPDS classifies RNs as either "active" or "inactive." RNs are defined as active if they indicated on their licensure renewal forms that they were working in North Carolina and were actively engaged in nursing. Active status not only includes individuals working in direct patient care but also administrators, researchers and educators who are active in nursing but not engaged in clinical work. In addition, active status is assigned to RNs who are newly licensed but who have not yet secured employment.
3. *Missing data.* The HPDS includes the state/country where basic nursing education was obtained. However, this datum is missing for 5.9% of the RNs in the HPDS. If some of these missing data are RNs who were trained in Canada, then the number of Canadian-trained nurses reported in this study may be less than the actual number.
4. *Place of training, not citizenship.* The data are for RNs who obtained basic professional education from a school in Canada. It is likely that the majority of these RNs are Canadian citizens, but it is possible that some of them are citizens of other countries who chose to obtain nursing education in Canada, but then migrated to North Carolina.

Data About RNs in Canada

The most recent data about RNs in Canada were obtained from the document *Workforce Trends of Registered Nurses in Canada 2002,* published by the Canadian Institute for Health Information. This document provides summary information from the Registered Nurses Data Base (RNDB), which is a national repository of demographic, education and employment information on RNs in Canada. Every year, the regulating authorities in each province/territory submit to CIHI a portion of the data collected from each RN during the annual registration period. CIHI processes and edits the standardized data and then returns it to the regulating authorities for their review, amendment and approval. Interested readers are referred to CIHI (2003) for an extensive description of the general methodology, including the target population, registration periods, data sources and collection, file processing, flagging and removal of RNs living abroad and interprovincial duplicates, computations and data suppression.

CIHI also provides a lengthy description of the framework for assessing and reporting the quality of data contained in the RNDB. The RNDB is the most comprehensive nursing database in Canada. However, CIHI identifies three potential data quality concerns of the RNDB:

1. *Self-reported data.* RNs report the data to the provincial/territorial regulating authority at the time of registration. An audit of data entry has not been completed so data entry accuracy is unknown.

2. *Definition of nurse practitioner.* The RNDB defines *nurse practitioner* as a job position, not as a regulated role, and thus the reported number may be an undercount.
3. *Undercoverage, overcoverage and non-response.* CIHI identifies several data quality concerns about the undercount, overcount and non-response of RNs. Interested readers are referred to CIHI (2003) for a full discussion.

Data Verification

The analysis required the creation of comparable data points from the two large databases that had been obtained from different sources. In some cases, the data from both databases are directly comparable because of minimal measurement error – for example, data about the age groups and gender of RNs. However, in other cases, judgment was used to match data variables about job classification or position descriptions. Table 1 shows how the data elements in both databases were matched.

For the data in Tables 5–8, a second methodological challenge was how to deal with differences in missing data: in these tables, "Not stated" was reported for 24% of Canadian-trained RNs in North Carolina, versus 1–3% among RNs in Canada. The substantial difference in missing data makes it difficult to compare the two groups. Rather than discard these results, discussion of these tables is based on results excluding the missing data. This assumes that there are no systematic differences between the missing and non-missing data. Unfortunately, there is no way of assessing the reasonableness of this assumption, and this must be considered a limitation of the study.

RESULTS

Employment Status

The employment status of all Canadian-trained RNs in North Carolina and all RNs in Canada is shown in Table 2. There were 1,768 active Canadian-trained RNs in North Carolina, 1,667 of who were employed in nursing. There are 40% more Canadian-trained RNs in North

Table 1: Summary of Data Definitions

	Canadian-Trained RNs in North Carolina[1]	RNs in Canada[2]
Employment status	Employed in nursing fulltime, employed in nursing parttime	Employed in nursing
	Employed in other field fulltime, employed in other field parttime	Employed in other than nursing
	Unemployed	Not employed
	Unknown, retired	Not stated
Gender	Male	Male
	Female, unknown	Female, not stated
Age groups	2002 – birth year	2002 – year of birth
Initial education	Diploma, associate, other, unknown	Diploma, not in nursing stated
	Baccalaureate in nursing (BSN), baccalaureate or higher	Degree, masters in nursing
Years since RN graduation	2002 – basic professional education (year)	2002 – year of RN graduation
Place of work	Hospital inpatient, hospital outpatient, mental health facility	Hospital, mental health centre, rehabilitation/ convalescent centre
	Home care/hospice, public clinic/health department	Nursing stations, home care agency, community health / health agency
	Long-term care	Nursing home/ long-term care
	Solo/group medical practice, HMO/insurance company, student health site, industry/ manufacturing site, private duty, school of nursing/medicine, other	Business/industry/ occupation,health office, private nursing agency/ private duty, Self-employed,physician's office family practice unit, educational institution, association/government, other
	Unknown	Not stated
Type of position	Administrator or assistant	Chief nursing officer/chief executive officer
	Supervisor or assistant	Director/assistant director
	Head nurse or assistant	Manager/assistant manager
	Staff/general duty	Staff nurse/community health nurse
	Clinical specialist	Clinical specialist
	Nurse midwife	Nurse midwife
	Nurse practitioner	Nurse practitioner
	Instructor	Instructor/professor/ educator
	Research	Researcher
	Consultant	Consultant
	Other, CRNA	Other
	Unknown	Not stated

1. Source: North Carolina Health Professions Data System (HPDS), all active and inactive licensed RNs.
2. Source: Canadian Institute for Health Information, *Workforce Trends of Registered Nurses in Canada 2002.*

Carolina than there are in Prince Edward Island (2002 population: 137,256). Comparison of Canadian-trained RNs in North Carolina to RNs in Canada shows that the majority of nurses in both groups are employed in nursing work. A slightly higher percentage of the Canadian-trained RNs in North Carolina are employed in nursing (94.3% versus 90.7%), which suggests they moved outside of the country for nursing employment rather than personal reasons. There is little difference between the groups in the percentage of nurses employed outside of nursing, or the percentage of nurses that aren't employed. The unemployment rate of both groups is very low, so low that many labour economists would probably consider it to be effectively zero.

Gender and Age Groups

Table 3 shows the gender of Canadian-trained RNs in North Carolina and RNs in Canada who are employed in nursing. A much higher percentage of Canadian-trained RNs in North Carolina are males (14.2% versus 5.1%). The reasons for this are unknown, but it could be hypothesized that this reflects a higher propensity to travel among men or the dominance of male career decisions in male-female relationships. Table 3 also shows the age groups of Canadian-trained RNs in North Carolina and RNs in Canada who are employed in nursing. A much higher percentage of Canadian-trained RNs in North Carolina are in age groups under 40 years of age (62.0% versus 33.2%). The literature suggests that many of these young RNs left Canada because of lack of job opportunities here during the mid- to late 1990s (Picard 2001; RNAO 2001).

Table 2: Employment Status, 2002
All Canadian-Trained RNs in North Carolina and All RNs in Canada

	Canadian-Trained RNs in North Carolina[1]		RNs in Canada[2]	
	Number	**Percent**	**Number**	**Percent**
Employed in nursing	1,667	94.3	230,957	90.7
Employed in other than nursing	33	1.9	5,392	2.1
Not employed	46	2.6	7,803	3.1
Not stated	22	1.2	10,600	4.2
Total	1,768	100.0	254,752	100.0

1. Source: North Carolina Health Professions Data System (HPDS), all active and inactive licensed RNs.
2. Source: Canadian Institute for Health Information, *Workforce Trends of Registered Nurses in Canada 2002,* Tables 1.0 and 1.0a.

Table 3: Gender and Age Groups, 2002
Canadian-Trained RNs in North Carolina and RNs in Canada Employed in Nursing

	Canadian-Trained RNs in North Carolina[1]		RNs in Canada[2]	
	Number	**Percent**	**Number**	**Percent**
Gender				
Male	237	14.2	11,796	5.1
Female	1,430	85.8	219,161	94.9
Total	1,667	100.0	230,957	100.0
Age Groups				
<25 years	43	2.6	3,731	1.6
25–29 years	345	20.7	17,071	7.4
30–34 years	367	22.0	23,697	10.3
35–39 years	279	16.7	32,151	13.9
40–44 years	203	12.2	35,882	15.5
45–49 years	215	12.9	42,335	18.3
50–54 years	118	7.1	38,636	16.7
55–59 years	68	4.1	25,138	10.9
60–64 years	16	1.0	9,903	4.3
65–69 years	8	0.5	1,899	0.8
70+ years	5	0.3	405	0.2
Not stated	0	0	109	0.0
Total	1,667	100.0	230,957	100.0

1. Source: North Carolina Health Professions Data System (HPDS), all active and inactive licensed RNs
2. Source: Canadian Institute for Health Information, *Workforce Trends of Registered Nurses in Canada 2002*, Tables 1.0 and 1.0a

Initial Education in Nursing and Years Since RN Graduation

Table 4 shows the initial education in nursing of Canadian-trained RNs in North Carolina and RNs in Canada who are employed in nursing. Overall, the majority of RNs in both countries hold a diploma in nursing. However, a higher percentage of the Canadian-trained RNs in North Carolina have baccalaureate training when compared to RNs in Canada. Table 4 also shows the years since RN graduation of Canadian-trained RNs in North Carolina and RNs in Canada who are employed in nursing. A much higher percentage of Canadian-trained RNs in North Carolina graduated less than 10 years ago, again suggesting that new entrants to the nursing workforce during the 1990s were recruited to the US with some success. The two results in this table are related because baccalaureate training is more common among younger RNs. CIHI data indicate that for those RNs graduating since 1998, more than 40% entered practice with a baccalaureate degree (CIHI 2003: 59).

Place of Work and Type of Position

Table 5 shows the place of work of Canadian-trained RNs in North Carolina and RNs in Canada who are employed in nursing. The data are difficult to interpret because of the missing data for the Canadian-trained nurses in North Carolina. However, if the missing data are removed, a much higher percentage of Canadian-trained nurses in North Carolina work in hospitals. This is not surprising because many US hospitals have large recruiting needs and budgets for marketing, whereas most community and long-term care agencies would not be able to afford the costs of recruiting small numbers of RNs from a foreign country. Table 5 also shows the type of position of Canadian-trained RNs in North Carolina and RNs in Canada who are employed in nursing. Again, the data are difficult to interpret because of the missing data for the Canadian-trained nurses in North Carolina. If the missing data are removed, a slightly higher percentage of Canadian-trained nurses in North Carolina work as staff nurses.

Highest Level of Education and Years Since RN Licensure in NC

Table 6 shows the highest level of education of Canadian-trained RNs in North Carolina who are employed in nursing. Again, if the missing data are removed, the percentage of Canadian-trained RNs in North Carolina who have masters or doctorate degrees is 3.4%. It is interesting to compare the number of Canadian-trained RNs in North Carolina who reported a diploma as their initial education in nursing (from Table 4, N = 1357) to the number who reported a diploma as their highest level of education in 2002 (from Table 6, N = 815). Even if all of the missing data in Table 6 (N = 402) are diploma-educated RNs, it appears that at least some RNs have obtained baccalaureate training since moving to North Carolina.

Table 6 also shows the years since RN licensure in North Carolina of Canadian-trained RNs in North Carolina who are employed in nursing. And Table 6 indicates that 87.9% of Canadian-trained nurses in North Carolina have been licensed in the state for less than 10 years.

Table 4: Initial Education in Nursing and Years Since RN Graduation, 2002
Canadian-Trained RNs in North Carolina and RNs in Canada Employed in Nursing

	Canadian-Trained RNs in North Carolina[1]		RNs in Canada[2]	
	Number	**Percent**	**Number**	**Percent**
Initial Education in Nursing				
Diploma	1,357	81.4	200,394	86.8
Baccalaureate	310	18.6	30,563	13.2
Total	1,667	100.0	230,957	100.0
Years Since RN Graduation				
0–5 years	512	30.71	22,776	9.9
6–10 years	469	28.13	27,940	12.1
11–15 years	245	14.70	33,364	14.4
16–20 years	149	8.94	29,942	13.0
21–25 years	97	5.82	31,355	13.6
26–30 years	99	5.94	36,959	16.0
31–35 years	59	3.54	27,213	11.8
36+ years	35	2.10	18,647	8.1
Not stated	2	0.12	2,761	1.2
Total	1,667	100.0	230,957	100.0

1. Source: North Carolina Health Professions Data System (HPDS), all active, licensed RNs.
2. Source: Canadian Institute for Health Information, *Workforce Trends of Registered Nurses in Canada 2002*, Tables 4.0, 4.0a, 6.0 and 6.0a.

Table 5: Place of Work and Type of Position, 2002
Canadian-Trained RNs in North Carolina and RNs in Canada Employed in Nursing

	Canadian-Trained RNs in North Carolina[1]		RNs in Canada[2]	
	Number	**Percent**	**Number**	**Percent**
Place of Work				
Hospital	1,073	64.4	144,292	62.5
Community	42	2.5	30,544	13.2
Nursing home/long-term care	45	2.7	24,372	10.6
Other	104	6.2	28,728	12.4
Not stated	403	24.2	3,021	1.3
Total	1,667	100.0	230,957	100.0
Type of Position				
Chief nursing officer/ chief executive officer	15	0.9	1,754	0.8
Director/assistant director	58	3.5	2,452	1.1
Manager/assistant manager	45	2.7	12,475	5.4
Staff nurse/community health nurse	1,030	61.8	175,173	75.8
Clinical specialist	16	1.0	2,064	0.9
Nurse midwife	1	0.1	24	0.0
Nurse practitioner	4	0.2	912	0.4
Instructor/professor/educator	10	0.6	6,489	2.8
Researcher	3	0.2	1,435	0.6
Consultant	10	0.6	6,080	2.6
Other	72	4.3	15,143	6.6
Not stated	403	24.2	6,956	3.0
Total	1,667	100.0	230,957	100.0

1. Source: North Carolina Health Professions Data System (HPDS), all active, licensed RNs.
2. Source: Canadian Institute for Health Information, *Workforce Trends of Registered Nurses in Canada 2002,* Tables 8.0, 8.0a, 10, and 10.0a.

Table 6: Highest Level of Education and Years since RN Licensure in North Carolina, 2002 Canadian-Trained RNs in North Carolina Employed in Nursing

	Canadian-Trained RNs in North Carolina[1]	
	Number	**Percent**
Highest Level of Education		
Diploma	815	48.9
Associate	100	6.0
Baccalaureate in nursing	256	15.4
Baccalaureate in other field	51	3.1
Masters in nursing	23	1.4
Masters in other field	16	1.0
Doctorate in nursing	2	0.1
Doctorate in other field	2	0.1
Not stated	402	24.1
Total	1,667	100.00
Years Since RN Licensure in North Carolina		
0–5 years	1,105	62.5
6–10 years	449	25.4
11–15 years	138	7.81
16–20 years	17	.96
21–25 years	5	.28
26–30 years	2	.11
31–35 years	5	.28
36+ years	0	0
Not stated	47	2.66
Total	1,667	100.0

1.Source: North Carolina Health Professions Data System (HPDS), all active, licensed RNs.

Table 7: Major Clinical Practice or Training Area, 2002
Canadian-Trained RNs in North Carolina Employed in Nursing

	Canadian-Trained RNs in North Carolina[1]	
	Number	**Percent**
Public/community health	25	1.5
General practice	23	1.4
Geriatrics	43	2.6
Obstetrics/gynecology	76	4.6
Medical – surgical	165	9.9
Pediatrics	61	3.7
Psychiatric/mental health	38	2.3
AIDS	1	0.1
Cardiology	89	5.3
Critical care	222	13.3
Dermatology	2	0.1
Dialysis	15	0.9
Drug/alcohol	3	0.2
EENT	121	7.3
Emergency care	3	0.2
Family health	48	2.9
Neonatal	15	0.9
Neurology	5	0.3
Occupational health	43	2.6
Oncology	19	1.1
Orthopedics	87	5.2
Peri-operative	20	1.2
Rehabilitation	5	0.3
Transplant	2	0.1
Urology	126	7.6
Not stated	410	24.6
Total	1,667	100.0

1. Source: North Carolina Health Professions Data System (HPDS), all active, licensed RNs.

Table 8: Average Hours Worked per Week, 2002
Canadian-Trained RNs in North Carolina Employed in Nursing

	Canadian-Trained RNs in North Carolina[1]	
	Number	**Percent**
Public/community health	25	1.5
0–10	14	0.8
11–20	41	2.5
21–30	97	5.8
31–40	961	57.6
41–50	116	7.0
51-–60	14	0.8
More than 60	20	1.2
Not stated	404	24.2
Total	1,667	100.0

1. Source: North Carolina Health Professions Data System (HPDS), all active, licensed RNs.

Table 9: Top 10 Colleges and Universities Where RNs Obtained Basic Professional Education, 2002
Canadian-Trained RNs in North Carolina Employed in Nursing

	Canadian-Trained RNs in North Carolina[1]	
	Province	**Number**
Colleges		
St. Lawrence College	Ontario	127
Georgian College	Ontario	84
Fanshawe College	Ontario	78
Conestoga College	Ontario	72
Mohawk College	Ontario	72
George Brown College	Ontario	61
St. Clair College	Ontario	51
Humber College	Ontario	46
Algonquin College	Ontario	43
Centennial College	Ontario	26
Universities		
University of Western Ontario	Ontario	27
University of Alberta	Alberta	26
Queen's University	Ontario	22
University of Ottawa	Ontario	21
McMaster University	Ontario	21
Dalhousie University	Nova Scotia	20
University of Windsor	Ontario	20
Ryerson University	Ontario	19
University of Manitoba	Manitoba	14
Memorial University	Newfoundland	12

1. Source: North Carolina Health Professions Data System (HPDS), all active, licensed RNs.

Major Clinical Practice or Training Area

Table 7 shows the major clinical practice or training area of Canadian-trained RNs in North Carolina who are employed in nursing. Again, if the missing data are removed, critical care and medical/surgical are the most common major clinical practice or training areas.

Average Hours Worked per Week

Table 8 shows the average hours worked per week by Canadian-trained RNs in North Carolina who are employed in nursing. Again, if the missing data are removed, approximately three-fourths work 31–40 hours per week, but almost 12% work more than 41 hours per week. The high percentage working 31–40 hours per week suggests that the RNs are working fulltime, but the data do not reveal whether they actually hold full-time positions or are working in casual or part-time positions that add up to 31–40 hours per week.

Colleges and Universities Where Basic Professional Education Was Obtained

Table 9 shows the top 10 colleges and universities where basic professional education was obtained by Canadian-trained RNs in North Carolina who are employed in nursing. All of the colleges are in Ontario and most of the universities are in Ontario, with no more than one university from another province.

DISCUSSION

The findings from this initial study suggest that decision- and policymakers in Canada should be concerned about the emigration of Canadian trained nurses. There have been suspicions that emigration is a threat to ensuring Canada has a sufficient future supply of nurses, but our study describes the characteristics of the types of nurses Canada is losing to the US, and the results are troubling. Although this analysis is for Canadian-trained nurses in one state only, it clearly demonstrates that Canada is losing good people to the US.

Young nurses from Ontario form a large percentage of the Canadian-trained nursing workforce in North Carolina. The majority of these nurses are under 40 years of age, with up to 10 years of experience. Most are employed as staff nurses in hospitals, primarily in critical care, medical-surgical or surgical specialty units. These areas are ones that have been identified as having critical shortages in Canada. Canadian-trained nurses in both countries have very low rates of unemployment. Most Canadian-trained nurses in North Carolina work between 31-40 hours per week, suggesting they hold full-time employment.

The reasons why Canadian-trained nurses left for North Carolina during the 1990s are unknown, but at least some Ontario new graduates left because they were unable to find employment in Canada (Advisory Committee on Health Human Resources 2002; Nursing Task Force 1999; Picard 2001; RNAO 2001). A recent study examining trends in Ontario's nursing workforce indicated that "a disproportionate number of younger nurses are either looking for full-time employment, or leaving the province to take full-time jobs elsewhere" as full-time employment opportunities for younger nurses appear limited (O'Brien-Pallas et al. 2003: 3). Further, North Carolina is one of approximately 12–15 US states that do not require Canadian-trained RNs to write the US national exam (NCLEX-RN) before licensure (CIHI 2003: 84), which may explain why the state was such a large recipient of Ontario nurses in the past 10 years.

The high proportion of Canadian-trained RNs in North Carolina who are under 40 years of age is particularly worrisome given the findings of the the O'Brien-Pallas et al. (2003) analysis of Ontario's nursing workforce indicating that approximately two-thirds of Ontario's nurses are over age 40. The replacement of retiring RNs in Canada is an urgent problem that will only be made worse by continuing emigration of Canadian-trained RNs to the US.

The higher percentage of males among Canadian-trained nurses in North Carolina suggests a different level of career mobility between male RNs that stay in Canada and those who leave. This may reflect the findings from a recent US survey of nearly 30,000 nurses that revealed that male nurses were more often self-employed or in administrative positions (Kalist 2002).

Although the majority of Canadian-trained nurses are educated at the level of diploma RN from a community college, the percentage of baccalaureate trained Canadian nurses in North Carolina is higher than nurses in Canada. This suggests that baccalaureate-trained nurses were either more likely to be recruiting targets or perceived opportunities differently than nurses with diplomas. A small percentage of Canadian-trained nurses have graduate degrees, some of which may have been attained since moving to the US.

CONCLUSION

Although this study does not help us understand why Canadian-trained nurses left Canada, it opens the door for future research. There is an urgent need to obtain a better understanding of why Canadian-trained nurses leave the country, what they like and dislike about working in US healthcare, their intention to remain in the short and long terms and what factors and incentives might persuade them to return to Canada. For the foreseeable future, US healthcare organizations will likely continue to recruit Canadian nurses to fill critical shortages. This migration will continue until the US addresses the underlying causes of nurse shortages and until Canada addresses conditions that cause nurses to leave.

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About the Authors

George H. Pink, PhD, Associate Professor, Department of Health Policy and Administration, University of North Carolina at Chapel Hill; Co-Investigator, Nursing Effectiveness, Utilization & Outcomes Research Unit, Faculty of Nursing, University of Toronto; Southeast Regional Center for Health Workforce Studies, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.

Linda McGillis Hall, RN, PhD, Assistant Professor & New Investigator, Canadian Institutes of Health Research; Co-Investigator, Nursing Effectiveness, Utilization & Outcomes Research Unit, Faculty of Nursing, University of Toronto.

Peggy Leatt, PhD, Professor and Chair, Department of Health Policy and Administration, University of North Carolina at Chapel Hill.

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