

PERSPECTIVES:

New Nursing Graduates: A Key Factor In Nursing Supply

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Abstract

The Canadian nursing education system is the most significant contributor to the country's supply of registered nurses. This article provides current data on the numbers of nursing graduates produced in each province in 1994. The authors highlight some of the differences in the numbers produced and use the national average of new graduates as the percentage of the population of Canada as one method to arrive at the numbers of new graduates per year which each province could attempt to produce. This article provides a national perspective on current and future nursing human resources and will assist nursing administrators in their staffing plans related to registered nurses.

Introduction

During the past five years, there has been considerable activity within Canadian provinces as governments, professional associations, and faculties of nursing have begun to grapple with the challenge of developing a rational, systematic approach to human resource planning within the field of nursing. Although there is increasing attention being paid to the need to approach health human resource planning with an

interdisciplinary focus, nursing personnel represent the largest category of health personnel within the Canadian health care system and consequently experience a large impact from service delivery reforms. Imbalances between the supply of, and demand for, nursing personnel also cause significant impacts on the health care system. It is worthwhile, therefore, to examine recent trends related to the supply of new nursing graduates across the country.

Supply Of Registered Nurses

According to the "Report on Nursing Human Resources"(1988) submitted to the Conference of Deputy Ministers of Health by the Federal/ Provincial Advisory Committee on Health Human Resources, " additions to nurse supply have basically come from new graduates and from reentrants to the profession. Immigration from other countries has played a very limited role, at least during recent years."(p.9) This report states that "no reliable figure is available on the number of nurses reentering the profession" but that "Output of new graduates from the Canadian nursing education system represents the key mechanism to shape future supply". (p.10)

Demand For Registered Nurses

Are we supplying enough new graduates to meet the current and future demands for nursing services across the country? A second question might be whether or not each province is shouldering its share of the load in supplying an adequate number of nurses to meet its own demands?

The question of predicting future demands for nursing services is a difficult one to answer. New Brunswick, Nova

Scotia, Manitoba, Alberta, and British Columbia have all done recent studies on the topic of nursing resource planning and all reports refer to the elusiveness of arriving at a reliable method to predict demand. Linda O'Brien-Pallas (1992) clearly enunciates the need for models which are sufficiently complex to capture all the factors which have an impact on the demand for health care providers. Changes in delivery systems and the shift from hospital to community are having a tremendous impact on demand for nursing personnel. Models need to capture substitution within and across occupational groups such as the current replacement of RNs by HCAs. Technological advances, demographic changes, the numbers and types of other health professionals, and political-economic governmental philosophies all have their effects on the demands for registered nurses.

Demand for nurses has been linked to numbers of acute care hospital beds and numbers of physicians in the province. (Kazenjian & Chan, 1984). It is not known if these correlations are still valid within a restructured health system which is focussed on the delivery of as much care as possible within the community rather than in institutions.

When attempting to balance the supply and demand sides of the nursing personnel equation, it is also necessary to reflect on the differences between equivalent fulltime positions (EFTs) and numbers of nursing personnel. EFTs reflect the demand side of the equation while numbers of nursing personnel reflect the supply side of the equation. For example, in 1995 there were 11, 099 RNs in Manitoba (MARN, 1995) and 6072 EFTs (Manitoba Health, 1995).

1994 Supply Of New Registered Nurse Graduates

A review of Table 1 indicates that, in 1994, the national average of new nursing graduates as a percentage of the population was .025 and that there were wide variations from that average within individual provinces. The question to be answered is whether or not the variations reflect differences in demand or in philosophical approaches to education.

If one assumes that the national percentage of .025 new nursing graduates per total population per year is appropriate to maintain the existing pools of nurses:

- The Maritime provinces could decrease the annual numbers of graduates in their provinces by 328 and continue to replenish the total pool. (Nfld: -130; PEI + 34; NS -90; NB -142).
- Quebec and Ontario could continue to maintain the same number of graduates.
- Manitoba and Saskatchewan could decrease their numbers of graduates by -150 and -66 per year respectively.
- Alberta and British Columbia would need to increase their numbers by +136 and + 239 annually.

Table 1

**NEW RN GRADUATES ACROSS CANADA
1994**

Province	New Grads	Population*	Grads as% of Pop	# of Grads to = National average of .025
Canada	7387	29,248,100	.025	
NFLD	276	582,400	.047	146
PEI	0	134,500		34
NS	324	936,700	.034	234
NB	332	759,300	.044	190
QUE	1747	7,281,100	.024	1820
ONT	2734	10,927,800	.025	2734
MAN	433	1,131,100	.038	282
SASK	320	1,016,200	.031	254
ALTA	543	2,716,200	.020	679
BC	678	3,668,400	.018	917
NWT		66,000		16

* Stats Canada as of July. 1, 1994

TABLE 1

A review of Table 2 presents the data in a different way and exhibits the following :

-- Two provinces had much higher ratios of active practising RNs/per 1000 population than the national average of 9.0: Nova Scotia at 10.2 and New Brunswick at 11.0.

-- One province had a much lower average of active practising RNs/per 1000 population than the national average of 9.0: British Columbia at 8.4.

There are wide variations in the ratios of new graduates per 1000 active practising RNs across the country.

-- Two provinces are below the national average of 27.89: Alberta and British Columbia.

-- The ratios in Ontario and Quebec, the two largest provinces, obviously strongly influence the national average of 27.89: Ontario at 27.09 and Quebec at 27.26.

-- Two provinces had many more grads/ 1000 active practising RNs than the national average: Newfoundland at 46.69 and Manitoba at 41.90

Table 2**RATIO OF ACTIVE PRACTISING RNS COMPARED TO POPULATION
1994**

Prov.	Population	# Act. Prac. RNs	RNs/ 1,000 pop.	New Grads	New Grads/ 1000Active pract. RNs
Canada	29,241,000	264,932	9.0	7387	27.89
Nfld	582,400	5,554	9.5	276	49.69
PEI	134,500	1,191	8.9	0	
NS	936,700	9,542	10.2	324	33.96
NB	759,300	8,424	11.0	332	39.41
QUE	7,281,100	64,093	8.8	1747	27.26
Ont	10,927,800	100,937	9.2	2734	27.09
Man	1,131,100	10,334	9.1	433	41.90
Sask	1,016,200	9,047	8.9	320	35.37
Alta	2,716,200	24,268	8.9	543	22.37
BC	3,668,400	30,746	8.4	678	22.05
NWT	64,300	588	9.1		

TABLE 2

Sources: Population statistics - Annual Demographic Stats, 1994, Statistics Canada
 RN numbers - Registered Nurses Management Data, 1994, Health Statistics Division,
 Statistics Canada
 Nursing student numbers- CNA, 1995

Calculations: Active practising RNs per 1000 Population: $1000 \times \frac{\text{\# of Active practising RNs}}{\text{Population}}$
 New RN Grads per 1000 Active Practising RNs: $1000 \times \frac{\text{\# New grads}}{\text{\# of Active Practising RNs}}$

Table 3**Comparison with New Grads as a % of Total population**

Province	# of Grads to = National Average of .025 % of pop. (actual in bracket)	Effect on New grads/1000 Active practising RNs (actual in bracket)	Difference between actual and figure which would reflect national average
Canada	7387	27.89	
Nfld	146 (276)	26.29 (49.69)	-130
PEI	34 (0)	28.55 (0)	+34
NS	234 (324)	24.52 (33.96)	-90
NB	190 (332)	22.56 (39.41)	-142
Que	1820 (1747)	28.34 (27.26)	+73
Ont	2734 (2734)	27.09 (27.09)	0
Man	282 (433)	27.29 (41.90)	-151
Sask	254 (320)	28.07 (35.37)	-66
Alta	679 (543)	27.98 (22.37)	+136
BC	917 (678)	29.82 (22.05)	+239
NWT	16 (0)	0.25 (0)	+16

TABLE 3

Summary

Using the national average of 0.025 new graduates as the percentage of the total population of Canada and adjusting the numbers of new graduates in each province to meet this average creates a scenario wherein the numbers of new graduates per 1000 active practising RNs in each province are more closely equated.

These calculations would indicate, for example, that a decrease in the numbers of new graduates in Manitoba to a level around 282 would more closely approximate the national average. This recommendation does not take into account any possible provincial differences in quantity of nursing requirements or provincial initiatives to provide educational opportunities in the field of nursing for those who desire it regardless of the provincial requirements.

Conclusion

We present these statistics, which are a one year snapshot of RN graduates, to demonstrate the variations from province to province and to stimulate discussion about current practice related to the supply of new RN graduates. We also intend to highlight the need for additional research on nursing human resource issues.

Authors

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