



The Importance of Nurse Employment Categories in Determining Exit Rates from Nursing

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Study Rationale

- Global Shortage of Nurses:
 - Canada reported a shortage of 16,000 registered nurses in 2002 (Canadian Nursing Advisory Committee, 2002)
- Increased use of a contingent nurse workforce (part time and casual) in Ontario:
 - During the 1990's economic recession and public health care restructuring, the casual RN workforce in Ontario increases to as much as 14% of the RN workforce (Statistics Canada, 2004)
- Is there a relationship between a nurse's employment status, particularly working as a casual nurse, and a nurse's decision to remain active in the profession?



Purpose of the Study

- To determine whether Ontario's employed full time, part time and casual nurses have a different propensity to leave Ontario's nurse profession



Study Population: Ontario nurses

- College of Nurses of Ontario (CNO) administrative databases 1993 – 2004
 - merged using nurses' unique registration
 - Contained information pertaining to nurse demographics (age, gender), nurse training characteristics (education) and nurse workplace characteristics (employment status, workplace sub-sector)
 - 148,830 Registered Nurses(RN)
 - and 49,932 Registered Practical Nurses (RPN)



Description of Study Variables

- **Outcome Variable:**
 - Time to exit Ontario's nurse profession in years
 - Where 'Exit' occurs when a nurse moves from working in nursing to:
 - » Working in non-nursing profession
 - » Working outside of Ontario
 - » Not employed, or
 - » Retired
 - Study design allowed for multiple exit and re-entry into Ontario's nurse profession within the study's time frame



Description of Study Variables

- **Primary Explanatory Variable:**
 - Employment Status (full time, part time and casual)
- **Confounders:**
 - Age (Sub-Groups)
 - Gender (M/F)
 - Additional Education (Y/N)
 - Workplace sub-sector (Hospital, Community, LTC, Other)
 - Multiple Employers (Y/N)



Method: Cox Proportional Hazard Regression Model

- Tells us how much more/less likely one category of nurse is to leave
- Where the 'baseline' is defined as 1.0
- Those more likely to leave have values > 1
- And those less likely to leave have values < 1
- We did separate analyses for Registered Nurses and Registered Practical Nurses



Cox Proportional Hazard Regression Model

- Baseline Reference:
 - nurse who is:
 - Casual worker
 - Working in the Hospital Workplace Sub-Sector
 - Employed by one employer
 - Has no additional education beyond a nurse diploma
 - 40-44 years of Age
 - Female



Adjusted Hazard Ratios Employment Status

	RN	RPN
Variable	Hazard Ratio	Hazard Ratio
Full Time	0.577*	0.645*
Part Time	0.560*	0.693*

What does this mean? Those working as casual nurses are about twice as likely to leave, whereas those working part-time have about the same likelihood of leaving as those working full-time



*Significant at the 0.05 level

Adjusted Hazard Ratios Workplace Sub-Sector

	RN	RPN
Variable	Hazard Ratio	Hazard Ratio
Long Term Care Sector (i.e. Nursing Homes)	1.132*	1.160*
Community Sector (i.e. Home Care)	1.171*	1.507*
Other Sector (i.e. Doc. Office)	1.529*	1.814*

What does this mean? Nurses working in hospitals are least likely to leave!

*Significant at the 0.05 level



**Adjusted Hazard Ratios
Interaction Terms
Employment Status and Workplace Sector**

	Hazard Ratio	Hazard Ratio
Variable	RN	RPN
FT & LTC	0.598*	0.545*
PT & LTC	0.677*	0.706*
FT & Comm.	0.555*	0.542*
PT & Comm.	0.711*	0.767*

In each setting, FT and PT nurses are less likely to leave than those working in a casual position.

*Significant at the 0.05 level



Conclusion

- Casual nurses have a higher propensity to leave Ontario's nurse profession
- Part time and casual nurses should be considered distinct and separate in future empirical studies of market level nurse turnover
- A nurse's workplace sub-sector also influences the nurse's propensity to leave Ontario's nurse profession



Conclusion

- But, the interaction terms demonstrated that employment status had a greater influence than workplace sub-sector on a nurse's propensity to leave Ontario's nurse profession
- Health care decision makers should consider using retention strategies that specifically target casual nurses