The New Healthcare Worker:

Implications of Changing Employment Patterns in Rural and Community Hospitals
The New Healthcare Worker: Implications of Changing Employment Patterns in Rural and Community Hospitals, October 2006
Number 6

Andrea Baumann, Associate Vice President, (International Health), Director, Nursing
Health Services Research Unit (McMaster University Site)

Mabel Hunsberger, Research Associate,
Nursing Health Services Research Unit (McMaster University Site)

Jennifer Blythe, Senior Scientist,
Nursing Health Services Research Unit (McMaster University Site)

Mary Crea, Research Coordinator,
Nursing Health Services Research Unit (McMaster University Site)

Andrea Baumann
Phone (905) 525-9140, ext. 22581
E-mail baumanna@mcmaster.ca
Website www.nhsru.com

Parts of this material are based on data and information provided by the College of Nurses of Ontario. However, the analyses, conclusions, opinions and statements expressed herein are those of the authors and not necessarily those of the College of Nurses of Ontario.

Contact

This research has been generously funded by a grant from the Government of Ontario. The views expressed in this report do not necessarily reflect those of the Government of Ontario.
# Table Of Contents

Main Messages .................................................................................................................. 5
Executive Summary ........................................................................................................... 8
Recommendations ............................................................................................................ 10
Introduction ..................................................................................................................... 13
The Rural Context ........................................................................................................... 13
Definitions And Data ...................................................................................................... 14
  Defining Rural and Rural Hospitals: A Decade of Debate .............................................. 14
  Data Repositories ........................................................................................................ 15
The Rural Nursing Workforce: Demographics .............................................................. 15
  The Rural Nursing Workforce: Canada ....................................................................... 15
  The Rural Nursing Workforce: Ontario ...................................................................... 16
The Rural Nursing Workforce In LHIN 2 ....................................................................... 16
  Background ................................................................................................................ 16
  Study Purpose and Methods ....................................................................................... 17
  Rural Hospital Organization ....................................................................................... 17
  The Nursing Role in Rural Hospitals .......................................................................... 18
Workforce Profile In Study Hospitals ........................................................................... 20
  Full-Time: Part-Time Staffing Ratios ....................................................................... 20
  Table 1 Employment Status of Registered Nurses and Registered Practical Nurses ... 20
  Perceptions of Managers ......................................................................................... 20
  The Challenge of Scheduling ...................................................................................... 21
  Scheduling Dilemmas ............................................................................................... 22
  Strategies for Better Staffing ..................................................................................... 22
Workforce Planning ........................................................................................................ 24
  Table 2 New Hired Registered Nurses and Registered Practical Nurses, 2002-2004 ... 24
  Newly Hired Nurses .................................................................................................. 24
  Retention: Resignations and Retirements .................................................................. 24
  Figure 1. Nurses hired and retired/resigned in study hospitals, 2002-2004 ................ 25
  Figure 2. Ages of nurses in LHIN 2 and the study sample ....................................... 26
Education For Safe Nursing Practice ............................................................................ 26
  Orientation of New Staff ......................................................................................... 26
  Maintaining Competence ......................................................................................... 27
The Importance Of Security In Rural Areas .................................................................. 28
Government Policies: The Rural Fit .............................................................................. 28
  The 70:30 Full-Time: Part-Time Staffing Ratio ......................................................... 28
  Late Career Initiative ............................................................................................... 29
  New Graduate Policy ............................................................................................... 29
  Triage ....................................................................................................................... 30
Discussion And Conclusions ....................................................................................................................30
Data Issues ..............................................................................................................................................30
Organizational Issues .............................................................................................................................31
Nursing Roles and Clinical Practice in Sampled Rural Hospitals ..........................................................31
Workforce Profile ....................................................................................................................................31
Workforce Planning in Rural Hospitals ....................................................................................................32
Education for Safe Nursing Practice .......................................................................................................33
Base Budget Adjustment ..........................................................................................................................33
Security and Safety of Nurses ...................................................................................................................33
Recommendations ....................................................................................................................................34
References ................................................................................................................................................37
Appendix A. Classification of Hospitals ....................................................................................................40
Appendix B. Population Distribution in Local Health Integration Network 2 ........................................41
Appendix C. Ontario Population Distribution by Local Health Integration Network ............................42
Appendix D. Land Area by County and City in Local Health Integration Network 2 ..........................43
Appendix E. Hospital Description and Bed Composition in Local Health Integration Network 2 ..........44
Appendix F. Study Methods ....................................................................................................................46
Data Collection and Analysis ..................................................................................................................47
Interview Procedures ...............................................................................................................................48
Data Management and Analysis ...............................................................................................................48
Ethical Considerations .............................................................................................................................48
Main Messages

Rural Context

- Distance and shortages of health care personnel reduce accessibility to health care in rural areas.
- Lengths of stay have decreased since hospital restructuring in the 1990s, but community support upon hospital discharge remains limited.

Definitions and Data

- No standard definition of rural exists because of wide variations in geography, population density, settlement pattern and economic base.
- Data from the College of Nurses on registered nurses (RNs) and registered practical nurses (RPNs) does not provide rural data.
- Data on rural nursing is limited to one out of date report (Canadian Institute for Health Information [CIHI], 2002).

The Rural Nursing Workforce in Canada and Ontario

- In 2004, 11% of the RN workforce in Ontario lived in rural areas (i.e., communities with populations of less than 10,000), of which 3.3% remain in rural areas to work (CIHI, 2005).
- In Canada rural nurses were more likely than urban nurses to be employed part-time and have multiple employers (CIHI, 2002).
- In Ontario fewer rural nurses were employed full-time than urban nurses (CIHI, 2002).
- In Ontario more rural nurses had a diploma than urban nurses (CIHI, 2002).
- In rural and urban Canada, younger nurses were more likely to be employed part-time and have more than one employer (CIHI, 2002).

The Rural Nursing Workforce in Local Health Integration Network (LHIN) 2

Hospital Organization

- Most of the 19 study hospitals in Local Health Integration Network (LHIN) 2 in South West Ontario are members of amalgamations or alliances.
- Rural hospital managers have a wide span of control that encompasses many sites. As a result, there are difficulties due to distance and communication challenges.
- Nurses felt distanced from the hospital that acted as head office in the amalgamation, which they call “the mother ship.”
Job Design and Nursing Roles

- Rural nurses are autonomous in their role, work across specialties and multiple units and may accompany patients transferred off-site.
- Nurses are “called in” or “sent home” according to the changing patient census.
- A high proportion of part-time staff has not solved the scheduling problem. Many part-time nurses do not want extra hours or have second jobs. Because few part-time nurses are available, full-time staff must work overtime.

Workforce Profile in Study Hospitals

Full-Time: Part-Time Staffing Ratios

- The full-time to part-time ratio in the hospital sample was 46:54.
- Managers prefer a high proportion of part-time staff because of fluctuating patient census and the small size of the staff pool.
- There is a need to understand the part-time nurse profile, including employment preferences, multiple employment and attrition pattern in the first two years in LHIN 2 rural hospitals.
- Lack of full-time positions is a source of dissatisfaction for currently employed nurses and potential recruits.

Strategies for Better Staffing

- Cross-training is a requirement in rural hospitals.
- Managers are attempting to predict overtime needs and add extra shifts to reduce overtime costs.
- Overtime hours for one year for RNs and RPNs combined was 18,452.7 hours, which translates into approximately $750,000.00.
- Cross-site employment is adopted by some sites to offer full-time employment and a specialty focus.

Workforce Planning in Rural Hospitals

- During a three-year period (2002-2004), 28% of the nurses hired were new graduates.
- Nurses at greatest risk for leaving the organization were recent hires whether new graduates or nurses new to rural nursing.
- From 2002-2004, there were substantially more resignations than retirements.
- There were 43.2% of nurses 50 years of age or older in the rural sample.
Education for Safe Nursing Practice

- Managers and nurses in the sample agreed that longer orientation and mentoring programs are needed to coach nurses who are new to rural nursing.
- The high demand for clinical competence requires funding for continuous upgrading of skills.
- The cost of professional development is largely the responsibility of nurses.

Security Issues in Rural Hospital

- The sampled hospitals vary in the type of security measures in place.
- Nurses reported that since cutbacks of the 1990s, fewer nurses work at night and generally there are no maintenance and security personnel available to them.

Government Policies: The Rural Fit

- Conversion of part-time to full-time positions is difficult because of the need for flexible staffing.
- The late career initiative was less feasible in small rural hospitals than in urban hospitals because insufficient experienced staff was available to replace project participants.
- Small rural hospitals experienced only minimal benefits from the new graduate policy because few new graduates were available to participate.
- The triage policy is difficult to implement in small, rural hospitals due to limited staff on duty and the design of the emergency room.
- Government initiatives need to consider the rural workforce profile, particularly the limited number of staff and workplace barriers.
Executive Summary

Rural health care is changing. Following restructuring in the 1990s some small hospitals remained independent, while others reorganized as amalgamations and alliances. In 2004, Ontario was divided into 14 Local Health Integration Networks (LHINs) to create accessible, quality health care at a local level. This study was designed to gain an understanding of the impact on nursing work and the workforce. It focused on 19 rural hospitals in Local Health Integration Network (LHIN) 2 in South West Ontario, and examined how employment patterns have evolved. The study provides critical information to assist policy makers in understanding the rural context of nursing practice and the effect of government policies on workforce sustainability.

Lack of a standard definition of rural is a challenge, and data on rural human resources is limited. The only report that provides statistics on registered nurses (RNs) employed in rural Canada is for the years 1996-2000. This study, published in 2002 by the Canadian Institute for Health Information (CIHI), is now out of date. From 1994 to 2000, the number of RNs working in rural Ontario decreased by 2.32% and increased in urban areas by 0.22%. The rural nurse to population ratio declined from 73 to 70 nurses per 10,000 population, similar to the urban ratio of 69.9 (CIHI, 2002). Only 47% of rural nurses had full-time employment, compared to 54.8% of urban nurses (CIHI, 2002).

The study showed that nurses in rural practice are required to be generalists with a broad range of skills that equip them to stabilize critical patients. The transport of critically ill patients to tertiary care centres requires a high proportion of rural nurses to be proficient in emergency care. Nurses refer to themselves as “being it” because they have few resources on site.

Staffing and scheduling in rural hospitals presents unique challenges because of the changing census and small staff pool. A high proportion of part-time nurses are necessary for scheduling flexibility. The full-time to part-time ratio in this study was 46:54. Availability of nurses to meet contingent staffing needs is a problem because some part-time nurses have two or three employers. Nurses are called in when the patient census is high and sent home when it is low. This “just in time” approach to hospital staffing causes considerable stress to both nurses and managers.

Numerous strategies are being employed by managers to improve staffing and scheduling practices. Cross-training is commonly used, and nurses must have a broad range of skills to care for multiple types of patients. Some managers try to predict patterns of overtime and schedule extra shifts. The number of overtime hours worked in one year by RNs and registered practical nurses (RPNs) was 18,452.7 hours, which translates into approximately $750,000.00. Managers also introduced cross-site employment as a way to offer full-time employment and the opportunity for nurses to focus on one specialty area.

From 2002 to 2004, there were 243 nurses hired, but only 27% were new graduates. Of the nurses that left their organization during the same time period, 66 (30%) nurses retired and 153 (70%) resigned. Given the complexities of rural practice, nurses and managers in this study reported that more orientation for new hires was essential. Mentorship is difficult due to limited staff availability. Innovative strategies such as rehiring experienced post-career nurses to mentor and coach newly hired nurses are recommended.
Maintaining the competence of all rural nurses is essential owing to the isolation of their practice. Upgrading programs for nurses vary across hospitals. A uniform strategy across amalgamations, alliances and independent hospitals would help to coordinate access to educational resources. Educational requirements could be assessed at the LHIN level, and the use of available resources throughout the network optimized.

The context of rural work environments should be a consideration in establishing safe working conditions. Concerns about violence and security are foremost in the minds of nurses, patients and the public. Various approaches are currently in use to facilitate nurse protection and police access. However, these systems are not standardized, and some hospitals have more security measures than others. Minimum standards are required for all hospitals.

A continued challenge is the fit between rural needs and government initiatives/policies. The study hospitals reported it is difficult to access programs such as the new graduate and mentorship initiatives. Obstacles include small staff numbers and limited resources available to apply for and implement the programs. A rural advisory panel is needed to assist the government to address specific, customized policies that reflect rural context.
Recommendations

The following recommendations are intended to enhance workforce planning by responding to issues that have the potential to substantially reduce the supply of competent rural nurses.

Data Repositories

- Regulatory bodies should consider adding a rural/urban variable (based on postal codes) to the statistics they send to CIHI for collation.
- Local Health Integration Network data with a rural/urban variable is needed in Ontario.

Workforce Profiling

- Establish how many part-time nurses are currently seeking full-time work in rural hospitals as a basis for determining the feasibility of offering full-time positions to new graduates.
- Collect data on the number of nurses with multiple employers.
- Collect data on the turnover rate of nurses in their first year of employment in rural hospitals and the cost in terms of orientation and mentoring.
- Complete a workforce profile of LHIN 2 in order to expand existing data on employment status, demographics and clinical expertise.

Workforce Planning

Organizational Level

- Develop strategies to profile the expertise of clinical educators and clinical nurse specialists, and strengthen their utilization by front line workers in the small rural hospital sites.
- Evaluate the span of control for managers in amalgamations.
- Hire system analysts to assist in workforce assessment and planning.

Provincial Level

- Include rural representation on relevant government committees, including the Joint Provincial Nursing Committee, to advise government on data gaps and relevant policies.
Staffing and Scheduling

- Hire scheduling experts to provide executive coaching for hospital management.
- Provide incentives for nurses who are willing to work the “difficult to cover” times (e.g., weekend shifts).
- Analyze the cost benefit of predicting overtime and staffing up compared to paying overtime.
- Create an organizational policy to allow nurses to work on unit initiatives instead of being sent home when census is low.
- Develop policies that address the retention of mid-career nurses.

Nurse Supply

- Offer bursaries for students from rural areas that are committed to returning to their region for a designated number of years.
- Invest in co-op programs to recruit LHIN 2 high school students into nursing.
- Encourage collaboration between universities and hospitals to develop preceptorships for nurses interested in rural nursing.
- Collaborate with communities to offer local jobs to both partners in a family.

Education for Safe Nursing Practice

- Establish special funding to support the certification and recertification needs and other specialized continuing education of rural nurses.
- Increase the length of orientation and mentoring of newly hired nurses to a minimum of 3 months.
- Secure the expertise of post-career nurses by rehiring them to participate in the mentoring and coaching of new nurses.
- Increase the budgeted positions for nurse practitioners and clinical nurse specialists to provide more educational resources to all nurses in rural practice.
- Expand current RN educational programs in Owen Sound or establish a satellite program that offers the full four-year degree program on site.

Safety and Security

- Further evaluate the security concerns expressed by rural nurses.
- Address the safety of staff and patients by standardizing security measures across rural hospitals.
Targeted Government Policies

- Ensure rural representation on decision making bodies creating province-wide policies.
- Establish a panel to advise government on how rural context such as limited staff and multiple roles affect policies.
- Strengthen the educational infrastructure to support rural nurses.
- Customize policies to take into account the context in rural hospitals.
- Provide support for new initiatives (e.g., assist with grant writing to apply for new one time policy initiatives).
Introduction

This report focuses on the effects of changes in employment patterns on nurses working in rural hospitals in Ontario. It begins with a brief characterization of health care in rural Canada. Definitions of rural and rural hospitals are presented. A review of data repositories relevant to rural nursing follows and knowledge gaps are identified. Trends in rural employment and nursing supply are described. A study based on interviews with managers and staff nurses provides an analysis of how employment practices such as staffing and scheduling affect the rural nursing workforce. Relevance of the rural context to educational and professional issues, workforce sustainability and government policies are discussed. The study concentrates on a sample of small hospitals in Local Health Integration Network (LHIN) 2 in South West Ontario. However, the findings have province-wide implications as they provide a template for the analysis of other Local Health Integration Networks (LHINs). Recommendations are made to policy makers to aid the planning and maintenance of a sustainable nursing workforce in rural Ontario.

The Rural Context

In a recent report on the health of rural Canadians, rural areas generally showed “a health disadvantage for many health-related measures examined” (Canadian Institute for Health Information [CIHI], 2006). Rural residents are more likely “to be in poorer socio-economic conditions, to have lower educational attainment, to exhibit less healthy behaviours and have higher overall mortality rates than urban residents (CIHI, 2006). A lack of employment and educational opportunities leads to “out-migration of young adults (20-24) and in-migration of early retirees” (55-64) (Rothwell, Bollman, Tremblay, & Marshall, 2002). Many rural communities are based on single industries such as small businesses, which are usually natural resource-based (e.g., agriculture, fishing, mining and oil) (Mendelson, 1999) and susceptible to the boom and bust cycles characteristic of resource-extraction industries (Pong, 2002).

The Canada Health Act stipulates that all residents should have equitable and reasonable access to insured health care services without financial or other barriers ( Kirby & LeBreton, 2001). This mandate provides a challenge to the provision of health care in rural areas. Accessibility is a problem for rural residents who must travel long distances to obtain health services (Health Canada, 2002). Additionally, rural and remote regions consistently face shortages of health care personnel. This makes recruitment and retention a priority issue ( Kirby & Lebreton, 2001) because shortages decrease accessibility to health care services.

To further compound the issue, health care reform associated with restructuring in the 1990s decreased accessibility for Canada’s rural residents ( Pong et al., 2000). For example, shorter length of stay initiatives nationwide have led to greater reliance on community-based care. However, in many rural areas, lack of community services has meant that patients discharged from larger hospitals return home with little support for their extended care ( Bushy, 2002; Pong et al., 2000).
In Ontario, the goal of the Health Services Restructuring Commission (HSRC), established in 1997, was to improve accessibility in rural/northern communities. In June 1997, the Ministry of Health and Long-Term Care (MOHLTC) established the Rural and Northern Health Care Framework to facilitate reform (MOHLTC, 1997). The HSRC argued that rural hospitals were needed, but their primary care role should change. It recommended the formation of hospital networks linking larger and smaller hospitals to provide a comprehensive range of programs for rural residents.

On the advice of the Rural and Northern Health Care Framework, the HSRC designated 14 rural/northern hospital networks. Most hospitals avoided closure, but many experienced cutbacks to services and staff. Some hospitals remained independent, while others reorganized as amalgamations and alliances of varying sizes to better manage limited resources.

Amalgamation involves two or more separate hospital corporations joining together and operating as one. An alliance is two or more hospitals agreeing by contract to combine funding and management, clinical and/or support resources without creating a corporation (HSRC, 2000).

Currently, implementation of the new LHINs is changing health care delivery in Ontario. These networks do not provide health services directly but are responsible for planning, coordinating, integrating, managing and funding health services in Ontario (MOHLTC, 2005). On October 6, 2004, the Ontario government announced the transformation of the health services structure from 16 District Health Councils to 14 LHINs (MOHLTC, 2004). The goal of the LHINs is to engage communities in health system transformation, enhance their abilities to make changes at a local level and respond to the needs of unique patient populations across the province. With the recent changes in health care delivery, the time is ripe for a review of rural health care. An understanding of the nursing workforce is vital to planning and implementing these changes.

**Definitions And Data**

Difficulties in studying health care professionals in rural areas include problems with definitions and limited available statistical data.

**Defining Rural and Rural Hospitals: A Decade of Debate**

Lack of a standard definition of rural in research studies and policy documents makes comparisons among locations difficult. Defining criteria have included geographic size, population density and distance from an urban centre (CIHI, 2002). Rural postal codes have also been used as criteria (du Plessis, Beshiri, Bollman, & Clemenson, 2001). Statistics Canada defines rural and small town as the population living outside the commuting zones of larger urban centres, particularly Census Metropolitan Areas (with populations of 100,000 or more) and Census Agglomerations Areas (with populations of 10,000-99,999) (du Plessis et al., 2001). Other popular definitions include communities with less than 150 persons per square kilometre (du Plessis et al., 2001).
Rural and small hospitals have been variously defined and classified. The Rural and Northern Health Framework’s hospital classification system, used in establishing hospital networks in rural and remote regions of Ontario, identified four categories of hospitals: A, B, C and D (see Appendix A). The MOHLTC’s Public Hospitals Act (1990) identifies general hospitals with less than 100 beds (group C) as small.

Non urban areas vary widely in geography, population density, settlement pattern and economic base thus making it difficult to define rural. Organizational structures and lifestyles also differ. For example, South West Ontario has many communities that are rural in terms of one or more common definitions, but access to urban centres may be easier in some places than others.

Data Repositories

The only report that provides statistics on registered nurses (RNs) working in rural Canada is Supply and Distribution of Registered Nurses in Rural and Small Town Canada (CIHI, 2002), published in collaboration with the Nature of Nursing Practice in Rural and Remote Canada project (MacLeod, Kulig, Stewart & Pitblado, 2004). It provides a comparative analysis of rural and urban RNs in 2000. Rural designations in the report were based on postal codes linked to census geographical units. Annual publications from CIHI do not include information specifically on rural nurses.

The Registered Nurses Database (RNDB) has collected data on Canadian RNs since 1980. The CIHI, which assumed management of the RNDB in 1996, disseminates statistical summaries containing information on the demography, employment, education and geographical distribution of the nursing workforce. Since 2002, CIHI has produced a parallel series on licensed practical nurses.

The College of Nurses of Ontario (CNO) keeps provincial statistics on RNs and registered practical nurses (RPNs) beyond those that it shares with CIHI. It provides summaries by Ontario Hospital Association region; in 2005, it did so by LHIN (CNO, 2006). The CNO does not provide comparative data on nurses working in urban and rural areas. Moreover, the use of postal codes does not reflect a true picture of who is working in rural areas. For example, some people work in rural areas and commute to urban centres.

The Rural Nursing Workforce: Demographics

The Rural Nursing Workforce: Canada

In 2004, 82.5 % of the RN workforce (excluding Quebec) lived in urban Canada, ranging from a high of 89.6% in British Columbia to a low of 59.5% in Northwest Territories/Nunavut (CIHI, 2005). The most recent detailed information available about nurses in rural Canada is based on a CIHI study of the rural workforce from 1994-2000 (CIHI, 2002). There was a minimal decline in the rural nursing workforce and a small increase in urban nurses during these years. At the same time, the population of Canada grew and the nurse to population ratio fell. The nursing workforce has grown (CIHI, 2005) since 2000, but the effect of this change in the nurse to population ratio in rural areas is unknown.
The age of the nursing workforce is increasing, with higher proportions of nurses in older age groups. In 2000, rural RNs were slightly younger than their urban counterparts, although this gap had been narrowing through the 1990s (CIHI, 2002). Rural nurses in Canada were more likely to be employed part-time than urban nurses, and their part-time employment rate increased slightly from 1994-2000 (CIHI, 2002). Rural nurses were also more likely than urban nurses to have multiple employers. Like their urban complement, younger nurses were the most likely to be employed part-time and have more than one employer (CIHI, 2002).

The Rural Nursing Workforce: Ontario

In 2004, 11% of the RN workforce lived in rural areas with populations of less than 10,000 persons. According to CIHI (2005), 3.7% commuted to work in the largest cities, 3.3% worked in mid-sized cities and 3.3% worked in rural areas.

Between 1994 and 2000, the number of RNs decreased in rural areas (2.32%) and increased in urban areas (0.22%). The rural nurse to population ratio declined from 73 to 70 nurses per 10,000 population but did not differ significantly from the urban nurse to population ratio (69.9) (CIHI, 2002). The average age of RNs was minimally higher in urban (44.3 years) versus rural (43.7 years) Ontario. Only 47% of rural nurses in Ontario had full-time positions, while 54.8% of urban nurses worked full-time (CIHI, 2002). Rural nurses (86.9%) were more likely to be diploma educated than urban nurses (79%) and were much more likely to have received their nursing education in Canada. Unfortunately, no recent comparative data is available.

The Rural Nursing Workforce In LHIN 2

Background

Local Health Integration Network 2 is situated in South West Ontario. A full report on LHIN 2 can be found in Integration Priority Assessment (2005). Geographically, LHIN 2 is one of the largest regions in Southern Ontario, comprising 9 counties with varying populations: Lambton 2%, Norfolk 6%, Huron 6%, Bruce 7%, Middlesex 7% (not counting the city of London), Perth 8%, Elgin 9%, Grey 9%, Oxford 10% and the city of London 35% (see Appendix B). Seven percent of the population of Ontario resides in the areas encompassed by LHIN 2 (see Appendix C).

The city of London comprises 2% of the land, while Grey County (a typical rural area) accounts for 18% of the land (see Appendix D). Relative to the province, LHIN 2 has a higher proportion of people in the 50 and over age range and a substantially lower proportion of people aged 25-44, reflecting its rural economy (MOHLTC, 2002a).
Local Health Integration Network 2 includes 32 hospital sites with over 2800 beds, 76 long-term care homes with over 6500 beds, 8 Community Care Access Centres, 8 ambulance services, 6 Public Health Units, and 25 Community Mental Health Centres (see Appendix E for a description of the 32 hospitals and bed composition). With the exception of the city of London, most of the hospitals in LHIN 2 are located in the counties of Bruce (6), Grey (5) and Huron (5). The small rural hospital beds in these three counties total less than one community sized hospital such as Owen Sound (136). In Bruce County, for example, the largest hospital site is in Walkerton (25 beds), followed by Kincardine and Wiarton with 23 beds each. While some small hospitals are independent, most are members of amalgamations or alliances including as many as 6 hospitals in one corporation.

**Study Purpose and Methods**

The purpose of this study was to provide information for policy makers about the rural context of nursing practice and the effect of government policies on rural workforce sustainability in Ontario. Local Health Integration Network 2 was selected for analysis because detailed, current information about this largely rural area is lacking. The findings have province-wide implications because they provide a framework for the analysis of other LHINs. The objectives were to:

1. Identify practice issues in rural acute care settings and the factors that influence them.
2. Provide baseline data against which changes in rural hospitals and nursing practices due to the implementation of LHINs can be assessed.
3. Assess the influence of government policies on the nursing workforce in these hospitals, including the functioning of nursing and multi-disciplinary teams.
4. Make recommendations for policy and decision makers at governmental, community and organizational levels.

The study methods included semi-structured interviews and a human resource survey. The interview sample included 21 nurse administrators and 44 staff nurses (30 RNs and 14 RPNs) working in 19 rural hospitals with fewer than 100 beds located in LHIN 2. The definition of rural communities (those with a population of 10,000 or less) provided by the Advisory Panel on the Provision of Medical Services in Underserviced Regions of the Canadian Medical Association (Pitblado & Pong, 1999) was used. Study methods are described in further detail in Appendix F.

**Rural Hospital Organization**

The majority of rural hospitals in LHIN 2 are in amalgamations and alliances. Nine were members of hospital amalginations, 7 were part of a hospital alliance and 3 were independent. Independent hospitals represent a traditional pattern of employment in which nurses and managers work within one organization. In amalgamated hospitals, one hospital is considered the head office.
Managers who work in an amalgamation or alliance have a wide range of control, often encompassing multiple sites. Managers from different sites meet regularly to plan and strategize. However, travel between sites is time consuming and particularly difficult during winter months. Mobility is a barrier to communication with front line workers, and it is difficult to keep nurses involved and informed about policies implemented across the organization. Both nurses and managers identified that communication difficulties are greatest when decision making occurs principally at a lead hospital. Nurses felt distanced from the hospital that serves as head office in the amalgamation, which they call “the mother ship.” One nurse commented, “You feel you don’t have control over [your] own destiny.” Another said: “We kind of feel here that we’re on the bottom though, we don’t get included in a lot of decisions that are made.”

Sharing human resources across sites is characteristic of reorganized hospitals and smaller sites benefit by having access to respiratory therapists and nurse specialists from the larger centres. These specialists deliver educational programs and are available for phone consultation about clinical problems. However, managers agree that more contact is needed between specialists and front line workers. They are seeking to make front line workers more aware of the expertise available to them and alert specialists to what is needed in the various sites.

**The Nursing Role in Rural Hospitals**

Participants in this study described rural nurses as generalists whose practice involves a broad range of clinical skills, multitasking, flexibility, a high level of responsibility and the ability to deal with contingency. Rural nurses work with diverse patient populations because few patients in any one disease category are hospitalized at one time. Nurses in many small hospitals rotate between medical-surgical nursing and emergency room (ER) nursing and may help out in the delivery room or intensive care unit (ICU). The skills required in these specialties are dissimilar, yet nurses must have the core knowledge that allows them to move between hospital departments as needed. One manager noted:

> You need to be able to go to ER and help out there. You need to go back and help deliver a baby, you need to do medical-surgical nursing, you need to do critical care, you know with a small ICU unit.

Job design in rural nursing practice is unique in that it includes the potential for immediate reassignment anywhere in the hospital. For example, when critically ill patients are transferred to other hospitals, an ER nurse is frequently required to accompany the patient in the ambulance. The nurse’s position in the ER is filled by a nurse from the medical-surgical area who, depending on the specific skills of the nurses, may be replaced by a call-in nurse. Since patient transfers cannot be predicted and rural hospitals frequently transfer patients, proportionately more nurses in rural hospitals must be able to work in the ER compared to urban hospitals.
“Multitasking” is doing whatever needs to be done to provide the best care for patients, whether it is direct patient care or a non nursing task that is expected. One manager explained:

You’ve got two nurses on the night shift. You have to be able to deal with any trauma that comes in the door. So you don’t have your respiratory techs or any other specialties to back you up. You have to call in the lab, you have to call in the diagnostic imaging department and you have to call in the doctor. On top of that you could have a coronary care patient, a fresh MI [and] you could have palliative care patients. You’ve got no maintenance in the building; you’ve got no housekeeping in the building.
You deal with everything.

Rural nurses do multiple non nursing tasks in addition to nursing care particularly on weekends at night. One nurse commented:

You have no pharmacy on weekends, no ward clerk. We are lab in the evening too, we have to draw it, spin it and separate it. So if you are on midnights, you’re answering the phone, you’re letting them in because the door is locked. If anyone comes in you have to page x-ray and lab. It keeps one person busy. Have to be a multitasker in rural, you improvise.

Decision making in rural hospitals is complex. Nurses work in isolation where they have a more autonomous role than nurses in urban centres. Nurses function as first level of triage. If no physician is on site for consultation then nurses must make the first judgment about the severity of a patient’s condition. When there are no physicians in the hospital, nurses call for phone orders until the physician arrives. At night nurses must decide whether to call the physician or discharge a patient with counsel to return in the morning.

Nurses in rural practice refer to their “being it” when a crisis arises because they work with few professional resources. In the absence of a more experienced person in the unit to turn to, nurses must support each other. One nurse described the experience as follows:

If you are having a difficult time bagging someone you can’t call respiratory. If you can’t get an IV in you can’t call the IV team. You read your own ECGs. We are [the] respiratory tech, we’re the ECG tech and we’re the IV nurse. You do everything yourself.

Rural nurses have to be able to deal with contingency. One manager reported:

There can be a whole bunch of routine and then there are the outliers, the real sick patients that come that they’re not that familiar with. That causes huge challenges. . . . We don’t have the kind of resources that tertiary centres [have].

Study participants provided several examples of nurses with urban experience who found the demands of rural practice overwhelming, having come from centres with specialists on site at all times.
Workforce Profile In Study Hospitals

Full-Time: Part-Time Staffing Ratios

Based on the demographic questionnaire about the nurses, the 19 study hospitals employed 1059 nurses, including part-time and casual employees (see Table 1). Some 424 nurses were employed full-time, 500 part-time and 135 casual. There was a wide range of part-time/full-time ratios. The overall full-time to part-time ratio in the study sample was 46:54, indicating a high proportion of part-time positions.

Table 1 Employment Status of Registered Nurses and Registered Practical Nurses

<table>
<thead>
<tr>
<th></th>
<th>Full-Time</th>
<th>Part-Time</th>
<th>Total Employed</th>
<th>Full-Time to Part-Time Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurses</td>
<td>298</td>
<td>317</td>
<td>615</td>
<td>48:52</td>
</tr>
<tr>
<td>Registered Practical</td>
<td>126</td>
<td>183</td>
<td>309</td>
<td>41:59</td>
</tr>
<tr>
<td>Nurses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>424</td>
<td>500</td>
<td>924</td>
<td>46:54</td>
</tr>
<tr>
<td>and Registered</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practical Nurses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The general trend in rural hospitals is to have relatively fewer full-time staff and more part-time staff than in large urban hospitals. Managers in the study sample preferred to have high proportions of part-time nurses to ensure staffing flexibility. They reported two major reasons: fluctuations in patient census and the small size of the staff pool. Patient census changes more rapidly in rural than urban hospitals because small rural hospital bed occupancy does not experience the levelling effect of scheduled in-patient surgeries. Out-patient surgery is performed by most rural hospitals, but patients return home after procedures are completed. Across the rural hospitals in the LHIN 2 area, there is considerable fluctuation in ER activity owing to the presence of vacationers in the Bruce Peninsula and towns on Lake Huron.

To ensure 24/7 coverage, rural hospitals require sufficient part-time employees who are willing to work extra hours and are available even at undesirable times. Serious problems arise when nurses do not wish to work extra hours or are not available to do so. However, some nurses, particularly senior part-time nurses, prefer not to work beyond their committed hours. As noted by one manager, “They are easing back in their career, so they’re happy with what they’ve got.”

Perceptions of Managers

Some managers reported trying to create full-time positions by combining part-time positions. In general, however, managers expressed ambivalence about hiring more full-time nurses. They agreed that it is “very, very difficult” to offer full-time positions. They thought that a high proportion of part-time nurses were needed for coverage, and they did not want to take hours away from them by creating full-time jobs. One manager remarked:
So they [part-time nurses] would love full-time work, but there are only so many positions in a small hospital to get full-time, so you don’t want to hire more people. It comes to the point that sometimes you need more people, you think, ‘I should hire,’ but then you look and you think, ‘Well, these people [part-time nurses] have to live too, right?’

The absence of full-time jobs was a source of dissatisfaction for some nurses who had waited a long time for a full-time position. One manager reported, “I have one nurse that’s 56 years old. She just got full-time a year ago, she’s ecstatic.” Existing contracts further prevent full-time being given to new nurses. According to union policy, part-time employees who are waiting for full-time have the first option to accept any full-time position offered.

Recent job applicants have been increasingly adamant about wanting full-time work. If full-time jobs are not forthcoming, new graduates and younger nurses will get part-time jobs at 2-3 different hospitals to guarantee full-time hours. As a result, these nurses are not available to work extra hours and the hospitals lose their flexible workers, which is the major reason for their part-time hiring strategy. Managers have tended to respond to the non availability of part-time staff by hiring even more part-time staff. These nurses have even fewer hours and more reason to work for multiple employers. As one manager explained:

Depleting the work that is left for the part-times, there are not many hours—many of them have found second jobs. So that leaves us in another crunch. They’re not available to us so . . . we have to hire again, depleting the part-time hours further and . . . creating unhappiness again.

Young nurses with part-time jobs are eventually lost when larger hospitals offer full-time work. The part-time conundrum is at the heart of scheduling difficulties and retention of new nurses in rural hospitals.

The Challenge of Scheduling

Small staff complements make it difficult to maintain unit coverage due to sick time, vacations and leaves. When just one nurse leaves a small rural hospital, short-staffing may result. Absenteeism has a much greater impact on small rural hospitals than large urban centres. The number of sick time hours reported by the study hospitals for RNs and RPNs combined was 37,805 hours for the year 2004-2005. When overtime staff is used to cover nurses who are sick, both the replacement nurse’s time and the sick nurse’s time compound costs; however, covering sick time is difficult in small hospitals. One manager remarked:

When somebody is sick . . . say you have 2 full-time RNs off and have 8 full-time nurses—that’s 25% of your workforce—if you would take 25% of your workforce away from a large urban organization—that’s a big hole.

In general, the number of hours offered to part-time nurses varies from month to month and peaks during the summer vacation period. Scheduling is especially difficult during the summer when part-time nurses who usually work extra hours pick up a full-time schedule to cover vacation periods and are not available to be called in. Part-time nurses usually work only their minimum contracted hours during the winter, unless the census warrants extra nurses.
**Scheduling Dilemmas**

The call-in system is used when there is an unexpected change in census, a need to transfer a patient, an unexpected event in the emergency room or someone calls in sick. Nurses are called in to work on short notice at a time not originally scheduled. The call-in system dictates that those with seniority have first option for extra work hours. If part-time nurses are not available, full-time staff are called in and paid overtime.

Managers and nurses consider the call-in system stressful to nurses. Despite the hardship to their families, nurses come in out of a sense of commitment to their colleagues, community, hospital and patients. Moreover, they do not wish to be considered disloyal. One nurse noted:

> We have all lived with ordering in . . . you answer the phone, you have to report to work. They are going to pay you a premium, but that is a nasty thing that doesn’t take into account that you have a life.

Patient census fluctuates unpredictably. When the number of regularly scheduled nurses on a shift is greater than the census requires, one or more must be sent home. Full-time nurses must be given 48 hours notice of a cancelled shift, while part-time nurses are given only 24 hours notice. If a shift is not cancelled ahead of time, nurses can be sent home after 4 hours according to least seniority. One manager illustrated the problem of census fluctuation as follows:

> When we go from 19, say, down to 4 on the weekend, what do you do with full-time people that you’ve put in and you need 48 hours to cancel them? Part-time nurses we can cancel with 24 hours notice and they understand, you work in a rural place and I can’t guarantee you. If I have people for you to look after [then] you have a job. If I don’t have people for you to look after, I don’t. But just because I cancel you tomorrow doesn’t mean I may not call you for the next four days.

Managers and nurses find this procedure particularly stressful because they know the staff both socially and professionally. Nurses report that “it’s hard to say, ‘Sorry, you are going to lose your pay today, we don’t have enough patients.’”

In many hospitals, “certain young nurses are relied on” to pick up extra shifts. These nurses “take as much as they can get.” Because they have part-time status with low committed hours, they may fluctuate between having too little work and working full-time hours without the benefits of full-time employment. The extra shifts they are assigned are usually the least desirable ones (i.e., weekends or nights). These junior nurses are the first to be sent home when the patient census is low. The unpredictability of their work affects their quality of life and may lead to multiple employers or resignations.

**Strategies for Better Staffing**

Managers reported numerous staffing strategies, including cross-training, development of predictable models that forecast overtime and cross-site employment. Cross-training involves nurses being given in-service education to upgrade their skills to work with multiple types of patients representing different disease categories. Cross-trained nurses resemble float nurses, except that their rotations are usually restricted to two or three areas. While some nurses like the patient variety and the unexpected, most ER nurses prefer not to work on medical-surgical units. Nurses who are trying to maintain specialties such as obstetrical nursing and those who prefer ER nursing to medical-surgical nursing are the most dissatisfied group.
Predicting patterns of overtime has been adopted by some managers to ameliorate the need to call-in nurses for extra shifts. The number of overtime hours for RNs and RPNs in the study sample for one year (2004-2005) was 18,452.7 hours, which translates into approximately $750,000.00. The cost of overtime warrants new strategies. Managers report that it is difficult to predict overtime accurately, but have identified some overtime trends and are able to schedule extra shifts according to the predicted need. This is considered a planned cost, a more efficient approach to scheduling and a way to reduce overtime hours.

Cross-site employment is being used in some organizations. Managers indicate that offering more full-time positions would not be possible within their global budgets. However, attempts are being made to introduce creative ways to offer full-time employment. New applicants are being encouraged to apply at the amalgamation or alliance level, rather than to individual hospitals, and to agree to work at more than one site. One manager suggested that “a lot of new employees are happy to be hired as an alliance employee . . . but primarily you’re located at one site . . . if the program gets moved then . . . staff would go with that program.”

This strategy has advantages and disadvantages. Internal job postings are affected by hiring into an amalgamation or alliance. Because any employee in the corporation can apply, competition for positions increases. Nurses with appropriate skills may be passed over in favour of applicants with greater seniority but less local knowledge. While employees have more opportunities to apply for positions in other sites, the need to commute and the additional time spent in orientation can be deterrents. Working across sites does give nurses the opportunity to focus their work on particular patient populations. For example, the work schedule for a nurse with skills in obstetrics or in operating room, recovery room and day surgery might be made up of shifts at two to three sites. However, some nurses find working in multiple sites difficult because each site has its own way of doing things and traveling between sites is demanding. Managers are willing to offer the option, but consider such work patterns to be a “scheduling nightmare.” Cross-site employment solves the problem of insufficient full-time positions and specialty type practice for only a few nurses.
Workforce Planning

The total number of RNs and RPNs hired from 2002-2004 was 243, of which 176 (72%) were experienced and 67 (28%) were new graduates (see Table 2).

Table 2 New Hired Registered Nurses and Registered Practical Nurses, 2002-2004

<table>
<thead>
<tr>
<th>Year</th>
<th>Experienced RNs</th>
<th>New Grad RNs</th>
<th>Experienced RPNs</th>
<th>New Grad RPNs</th>
<th>Total Registered Nurses</th>
<th>Total Registered Practical Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>115 (52%)</td>
<td>47 (24%)</td>
<td>15 (38%)</td>
<td>9 (22%)</td>
<td>60</td>
<td>25</td>
</tr>
<tr>
<td>2003</td>
<td>110 (55%)</td>
<td>40 (19%)</td>
<td>13 (30%)</td>
<td>7 (18%)</td>
<td>53</td>
<td>22</td>
</tr>
<tr>
<td>2002</td>
<td>112 (53%)</td>
<td>41 (19%)</td>
<td>16 (28%)</td>
<td>2 (4%)</td>
<td>64</td>
<td>18</td>
</tr>
<tr>
<td>Totals</td>
<td>337 (72%)</td>
<td>128 (28%)</td>
<td>44 (73%)</td>
<td>18 (27%)</td>
<td>176 (72%)</td>
<td>67 (28%)</td>
</tr>
</tbody>
</table>

Total Registered Nurses = 176 Total Registered Practical Nurses = 67 Total Registered Nurses and Registered Practical Nurses = 243

Newly Hired Nurses

As shown in Table 2, there was little variation in the number of new graduate RNs hired from 2002-2004. Some rural hospitals had no recent graduates on staff. The 49 new RN graduates hired by the study hospitals comprised only 28% of the total number of RNs hired. The remainder were experienced nurses. Registered practical nurse recruitment followed a similar pattern. Of the 67 RPNs, 49 (73%) were experienced and 18 (27%) were new graduates. The proportion of new RPNs hired increased over the three year period. However, because the total number is small, the significance of this trend is not clear.

Retention: Resignations and Retirements

Rural hospitals usually have high nurse retention rates, and this was supported in the interviews with nurses and managers in the study hospitals. Study participants said they remained in their jobs because of strong connections to the community and because they preferred rural living. A few nurses lived locally because of their spouses’ employment and were not free to move. Nurses also remained in their positions because of the limited number of jobs available in the community. Nurses at greatest risk to leave were recent hires entering as new graduates or nurses new to the rural nursing environment. New nurses leave because they cannot adapt to rural practice and because they are unable to obtain full-time work. However, regardless of the reason for their departure, the hospital loses its investment in their orientation and training.
From 2002-2004, 219 nurses in the study hospitals resigned or retired, with higher numbers in each successive year: 36 in 2002, 71 in 2003 and 112 in 2004. A total of 243 nurses were hired. The yearly changes were a net gain (+46) in 2002, a net gain (+5) in 2003, and a net loss (-27) in 2004. The yearly change in staff numbers is shown in Figure 1.

Figure 1. Nurses hired and retired/resigned in study hospitals, 2002-2004.

Experienced nurses mentor younger nurses and a transfer of skills occurs. The expected retirements in the next 5-10 years will decrease the supply of nurses and make it more difficult to find mentors. There is a general concern that many nurses are leaving the system due to retirement; however, the high percentage of resignations in the study sample (70%, 153/219) raises additional concerns for sustainability of the nursing workforce. Data was not collected to determine how long nurses had worked prior to resignation. Therefore, it is not known whether the resignations were newly hired nurses or long-term employees. Regardless, it is important to look at the context and the effect of small numbers. While this may or may not be a beginning trend, it warrants further study.

Another concern in rural areas is the aging nursing population. The CNO has made data available on the demographic characteristics of LHIN 2 (CNO, 2006) but does not differentiate urban and rural areas. However, information on the LHIN as a whole can be compared with data obtained from the LHIN 2 rural sample.

In the South West LHIN region, 41.91% of all types of nurses are 50 years of age and older. In the study hospitals, 43.2% of RNs and RPNs are 50 years of age and over (see Figure 2).
Although older nurses have excellent retention rates, many are approaching retirement age. The imminent loss of these experienced nurses is a major worry. One manager remarked: “I guess our concern is how we maintain that [competency]. How do we keep that as this generation leaves and the next one comes . . . and I don’t know.”

In response to concerns about the sustainability of the rural workforce, hospitals are actively recruiting for the first time in several years and are reporting serious shortages. Nurses tend not to seek rural nursing employment unless they were born and raised in the area or are accompanying a partner who is a farmer or employed locally. Consequently, the recruitment pool is small and may shrink further due to increased employment opportunities for high school graduates. Some students switch from nursing to other careers as a result of co-op programs. Competition from community nursing organizations and urban centres are also threats to recruitment. One participant explained that younger nurses “want to work in a tertiary centre . . . it’s not a high life here. This is a retirement community predominantly.”

Education For Safe Nursing Practice

Orientation of New Staff

The orientation of new staff is essential to ensuring clinical competence. The number of orientation shifts in the sample hospitals ranged from 10-30 shifts for new graduates and 4-21 shifts for experienced nurses. These shifts were predominantly 8-hours and included orientation to the organization and the clinical site. Nurses and managers agreed that more comprehensive orientation and mentoring programs are required for experienced nurses as well as new graduates so that they do not become overwhelmed and leave. One nurse commented that “it takes six months full-time for you to feel really good about working . . . I only know ER, but it takes a long time to learn it and if you’re working part-time . . . I don’t know how you could do it.”
Adapting to rural nursing practice is demanding. It can be particularly challenging for new graduates with limited clinical work experience and few practical skills. However, experienced nurses who come from specialty areas in urban centres also have difficulty because the parameters of their practice are confined to in-depth, complex care of one type of patient rather than a broad range of often unfamiliar patient types.

It takes considerable time to develop the competence to make the kinds of decisions required of rural nurses. Through years of exposure and practice, rural nurses develop an aptitude for responding to unfamiliar situations. The current cadre of experienced nurses expressed concern about new nurses coming into the system. When required to work with inexperienced nurses, they feel overworked and worry about patient safety. Nurses believe that with the influx of new staff replacing retirees, it will be difficult “to get them comfortable with all the different things they have to do.” They suggested that new and more comprehensive orientation programs are required.

Maintaining Competence

Rural hospitals are apprehensive about their inability to provide consistent financial support for all aspects of education. There is variation across hospitals in general, but nurses do not get paid for their time when they take courses to advance their career. Participation in professional development through workshops and advanced degree education is primarily the responsibility of the nurse, and most undertake these activities on their days off or take educational leave. Nurses pay for workshops and courses themselves, although hospitals do assist them to obtain the Registered Nurses’ Association of Ontario (RNAO) grants that reimburse the nurses for some of their educational expenses.

The need for continued education is a major concern of managers. The clinical demands in rural hospitals require nurses to constantly update their knowledge and be certified and re-certified in life-saving technical skills. All study hospitals are attempting to improve their educational services. Nevertheless, managers and nurses are worried about accessibility of certification and re-certification sessions, and report a serious need for continuing education funding.

Opportunities for certification and re-certification are provided in various ways. In-services may be held by in-house experts or educators from another site. Nurses may attend a session at an allied hospital or travel to an urban centre. However, nurses indicated that work schedules sometimes make it difficult to attend required upgrading sessions. Whether a nurse is paid time when attending a required certification or re-certification session varies across hospitals in LHIN 2. Some hospitals have recently begun to pay tuition for required re-certification courses. In a few instances specialty nurses have been able to spend time at larger acute care centres to practice skills and gain exposure to new and updated methods of practice. While costly, it is a creative way of ensuring that nurses retain skills and continue to develop in their field.
The Importance Of Security In Rural Areas

The cutbacks of the 1990s reduced beds in small rural hospitals. The accompanying reduction in staff has had a significant impact on the number of nurses and support staff working at night. Previously, maintenance and security personnel were present as well as a receptionist at the admissions desk in the ER. Now, however, there is considerable variation in how hospitals function at night. Some have additional staff, but in the majority of cases nurses are alone in the building after 9:30 pm.

Nurses varied in their attitudes towards working at night, but most were concerned about their safety. Some hospitals have a buzzer for nurses to press for assistance. Others do not have a system but are planning to get one. The doors are locked when nurses are alone in the building at night, and the majority of hospitals have a camera system so that nurses can screen people approaching the door. Two nurses go to the door, especially if they have concerns about the person or persons outside.

For the most part, night staff in rural hospitals tends to be female. Security systems alert centres such as London, which then call the police nearest the hospital location. However, despite the use of an emergency security system, nurses reported feeling insecure because the police may be 10 minutes or more from the hospital. One nurse commented, “So there are four of you in the whole hospital and we don’t like people to know that because we are very much at risk. Security is an enormous issue.” Another remarked that “the monitor doesn’t show into the emergency department, so once you get into the department with them [patients] you’re kind of isolated.” Nurses gave numerous accounts of feeling threatened and discussed how scary it can be to work at night. In general, managers are sympathetic to the nurses’ concerns.

Government Policies: The Rural Fit

Managers and nurses were asked to describe the impact of MOHLTC policies on nursing work and roles in rural hospitals. The most frequently mentioned policies were the 70:30 full-time: part-time job ratio for nurse staffing, the late career initiative, the new graduate policy and the triage policy.

The 70:30 Full-Time: Part-Time Staffing Ratio

This was the most frequently discussed policy. Although the rural hospitals tried to raise their full-time ratios, managers found it difficult to do so. The reported average ratio of full-time to part-time nurses (RNs and RPNs) employed in the sample hospitals was 46:54.

If the 70:30 policy was implemented, more nurses would know their schedules in advance. However, there would be fewer nurses available for call-in. The policy would help younger nurses and those waiting for full-time jobs by offering them more stability, but increasing full-time positions would create scheduling difficulties. As previously argued, staffing ratios translate into unit coverage differently depending on staff size. Managers maintain a high proportion of part-time nurses to ensure unit coverage given a fluctuating patient census. If more full-time staff were employed, part-time workers would receive fewer hours. Their response might be to leave nursing or take multiple positions. In either case they would not
be available as relief staff. The feasibility of staffing rural hospitals using a 70:30 requires careful investigation. Different ratios may or may not be appropriate for small rural hospitals.

**Late Career Initiative**

The late career initiative was introduced as a retention program aimed at keeping older nurses in the profession by giving them lighter duties and utilizing their skills and experience to benefit patients and junior nurses. Although managers in the study hospitals were aware of the initiative, staff nurses had only minimal knowledge. Some knew that their hospital had applied, but they did not know if anyone was participating. Some managers reported that few nurses were interested in taking part and that late career nurses preferred to keep doing what they were doing. One manager said that of four nurses who met the criteria, “none of them wanted lighter duties.” However, another manager reported that she was able to offer two positions and had no difficulty filling them.

Implementing the policy was difficult for some rural hospitals. A strain was put on management to write up the proposal and free up skilled nurses to cover the hours being used by the late career nurses for their special projects. In addition, educators may not be available to help participants adapt to their new role. Managers felt the initiative could work well if numbers were larger, but that it was less feasible in small rural hospitals with limited staff.

**New Graduate Policy**

Data collected for this study occurred prior to the announcement of the full-time employment for new nursing graduates in 2007. However, managers and nurses discussed the funding announced in December 2004 for temporary full-time positions for nurses who had graduated within the previous 12 months. Some hospitals participated, but managers did not see the initiative as contributing markedly to the recruitment of nurses.

Most hospitals felt there were barriers to taking part such as the limited number of nurses meeting the criteria. One full-time position represents a high proportion of nursing hours in rural hospitals, and some had no full-time positions to offer participants once the supernumerary period was over. Some managers referred to the supernumerary period as an “extended orientation” and indicated that with a small staff “it’s pretty hard to absorb a whole person and hope that we have a position.”

Only a few staff nurses were aware of the new graduate policy or knew of a nurse hired in this capacity. There was support in one hospital for a new graduate who was offered special training in the OR, and was being oriented to take the position of a senior OR nurse by working with her for a year. However, part-time nurses waiting for full-time are likely to view the policy negatively. Criticism of the initiative was voiced by one mid-career nurse who was waiting for full-time status:

"It's a government initiative and I just don't know if they realize what they're doing to the people who are slaving away . . . they're going to jump over and give full-time to these new people. . . I guess I'm not worthy. That's the feeling that you get . . . we're not worth hiring full-time."
It was apparent that the interests of mid-career nurses are not being addressed. Mid-career nurses are not meeting the criteria to benefit from the new graduate initiative or the late career initiative. Mid-career nurses are more numerous than either novices or late career nurses, and it is important that they do not resign early.

**Triage**

Nurses thought the triage policy did not take into account the limitation of their workspace or number of staff in ER. The policy specifies that a nurse should perform triage before the patient goes to the registration desk. In most of the sample hospitals, nurses in ER are able to see patients within the required first 15 minutes, but receptionists usually see patients first. If the situation appears urgent (e.g., if the patient has chest pains), the receptionist immediately calls the nurse.

Nurses were aware that patients should be seen by them first but pointed out that the physical set-up of the ER made it difficult. One nurse remarked: “Our facility is not designed for us to see them right away and we could be busy with an emergency and tied up.” Another difficulty is that there are too few nurses in small rural sites to conduct triage in the recommended manner. Only a skeleton staff is on duty at night. Following the triage policy would require employing more nurses and/or redesigning the ER. Reaching the required level of patient safety envisaged by the policy requires either a different approach or additional support for rural hospitals to help them implement the policy effectively.

**Discussion And Conclusions**

The sustainability of the nursing workforce and the delivery of quality patient care are threatened in rural areas. Work related issues and geography present various challenges. Multiple sites and multiple roles, for example, make delivery of nursing care difficult. While the lack of appropriate statistical data makes it hard to assess the magnitude of the problem, the study identifies a number of concerns that must be addressed if rural residents are to receive the care to which they are entitled under the Canada Health Act. Although government initiatives have been implemented in recent years to improve the supply of nurses, rural hospitals do not have the capacity or resources to fully participate.

**Data Issues**

It is difficult to create an accurate profile of nurses in rural hospitals because the available data are limited and out of date. To improve nationwide information about rural nurses, regulatory bodies should consider adding a rural/urban variable (based on postal codes) to the statistics they send to CIHI for collation. Even though this method would not take commuting into account, it would provide an approximate description of the rural nursing workforce. In Ontario, LHIN level data are also needed. Rural areas vary in their geography, population density, economic base and prosperity, and nursing workforces may also differ.
Organizational Issues

No ideal organizational structure exists for small hospitals. However, in LHIN 2, there were reports of communication problems related to the span of control held by managers who must travel between sites and communicate at multiple levels. Independent hospitals avoided this problem but had less flexibility with respect to staffing strategies and educational interventions. Larger organizations based on clusters of hospitals have found it easier to maximize efficiencies by outsourcing supplies and services, and they can take advantage of centralization by developing centralized data repositories.

Nursing Roles and Clinical Practice in Sampled Rural Hospitals

Nurses refer to rural nursing practice as a specialty. The role requires a broad skill set, the application of knowledge from a variety of specializations and sometimes movement across sites. New graduates and experienced nurses from urban settings find the transition to rural nursing practice problematic.

Rural nurses express satisfaction with rural practice because of job variety, the use of a wide range of skills and the quality of their collaboration with medical staff (Chaboyer, Williams, Corkill, & Creamer, 1999; Litchfield & Ross, 2000). Responses of nurses and managers in this study are consistent with these attitudes. Nurses described themselves as generalists who work across different patient disease entities and have specific skills to respond to critical events. The need for broad knowledge and an array of clinical skills has implications for accessibility to upgrading and continuing education.

Workforce Profile

Because conditions in rural hospitals are qualitatively different from urban hospitals, the feasibility of attaining the recommended 70:30 staffing ratio was questioned. Due to small numbers of staff and an unpredictable census, managers prefer a high proportion of part-time staff to ensure unit coverage. However, hiring part-time nurses has not created the flexibility needed to cover units on short notice. While there was consensus that the proportion of part-time nurses was too high, ideal ratios for rural hospital settings have not been investigated. A study to discover appropriate ratios in small hospitals would have relevance for recruitment strategies and influencing scheduling practices.

Having enough staff to meet contingent demands is problematic in rural hospitals. Unpredictable work schedules have led to call-in systems to maintain unit coverage. This practice causes stress and interferes with family life. Some managers try to predict overtime requirements and add extra shifts at those times. Less disruptive options for call-in are required to give nurses more control over their personal time. The “just in time” approach which results in sending nurses home should be replaced by assigning nurses to unit projects during periods of low census.

The option of being hired full-time into the corporation and working across two or more sites of similar patient populations is being introduced in some organizations. Some nurses prefer it because of the opportunity to work full-time in their area of interest. Managers are offering this strategy, but report it is a “scheduling nightmare.” Evaluation is required to determine whether this option can be implemented for larger numbers of staff and what effect the strategy has on recruitment, retention and patient care outcomes.
Workforce Planning in Rural Hospitals

The rural workforce needs to be renewed, but there is concern about where the new staff will come from and how they will be integrated. Hospitals in rural areas have a smaller pool of staff to draw from than those in urban centres. In particular, rural hospitals recruit few young graduates. To enlarge the pool of rural nurses, scholarships to study rural nursing should be made available. Collaborating with the community to offer jobs for both partners in a family may also draw recruits.

The most important variable in attracting nurses to rural and remote settings is previous exposure to rural or remote life (Hegney, McCarthy, Rogers-Clark, & Gorman, 2002). Strategies to consider are investing in nursing co-op programs and providing bursaries and incentives to rural high school students who wish to enter nursing. Another strategy is to offer rural experiences during nursing educational programs. However, some evidence suggests that exposure to rural practice settings during undergraduate training does not necessarily encourage nurses or physicians to practice in them (Easterbrook et al., 1999; Hegney et al., 2002). No evidence exists on how or if urban nurses can be attracted to rural settings.

The RNAO (2000) outlined 5 strategies to assist with recruitment and retention: additional funding for utilization of nurse practitioners in rural and remote communities, free tuition for those willing to relocate and practice upon graduation, the establishment of a distance education program in the north, locating a master’s program in a northern university and creating telehealth capacity to support nurses practicing in rural and northern regions. While some of these strategies are intended for remote communities, they are also relevant to rural hospitals. For example, there is a distance education program for nurse practitioners in Sudbury. Similar programs could be established in other areas.

Some incentives to attract nurses to rural areas require cooperation with local communities and universities. One solution to the physician shortage in the north has been a northern college of medicine. It may be useful to establish more local campuses for nurse education. Only a few cooperative initiatives currently exist. For example, the post-diploma program from Ryerson is offered at Stratford. Current educational programs in Owen Sound should be expanded or a satellite campus established that offers the four-year basic program on site to increase the number of local high school students that would select nursing as a career. Registered practical nurse education is more available locally than RN education. Local programs are needed to offer specialty courses to upgrade skills for practicing nurses, undergraduate BScN programs and continuing education for RPNs. As educational opportunities increase, new possibilities for full-time employment emerge for nurses who could work in joint positions between clinical practice and teaching roles within the satellite program.

Loss of experienced nurses through retirement and resignation is a hazard to workforce sustainability. Since the late career initiative was not widely used by the sampled hospitals, alternative options for secession planning are needed. The preferences of mid-career nurses who mentor new nurses should be assessed to find out what will keep them in the workforce until new nurses are in place and proficient. Post-career nurses could be rehired to participate in mentoring and coaching newly hired nurses. Ensuring the continuity of competent staff in emergency rooms is of paramount importance.
Education for Safe Nursing Practice

Continuing education of nurses is vital to safe nursing practice in rural hospitals. It is important for government and hospital administrators to understand that the multi skilled nature of rural nursing means that more must be invested in orienting new staff, cross-training nurses for multiple units and continuing education with accessibility to certification and recertification.

A greater investment in the orientation of new staff is necessary to reduce the loss of new nurses. The transition to rural nursing should begin during the educational program with summer clinical placements in rural areas. Orientation to rural nursing, whether for new graduates or experienced nurses from urban areas, should be extended to a minimum of three months. Additional options are to develop opportunities for staff exchanges between rural and urban sites so that novices and experts can work together. As hospitals depend on the ability of nurses to float among different units, cross-training education commensurate with needs is required.

Base Budget Adjustment

Job dissatisfaction among rural nurses is thought to be related to a lack of educational opportunities, unsupportive management and poor working relationships with other health care professionals (Hegney & McCarthy, 2000). Lack of funding to support required upgrading of skills is a serious concern to rural hospital managers. Nurses and managers reported that accessing educational opportunities is a challenge due to small numbers of staff available to keep units covered while others attend sessions. To attract and retain rural nurses it will become increasingly important for rural hospitals to have budgets to maintain the general skill level of nurses and to increase accessibility by offering multiple certification sessions. Furthermore, time should be built into work schedules to allow for teleconferencing. Many rural hospitals already have the equipment, but its use should be expanded.

Security and Safety of Nurses

Although rural communities are considered safer than urban areas, nurses on night shifts in rural hospitals are vulnerable. Nurses in the sampled hospitals do not feel safe at night, even though there is a security system in use. The study provided evidence that small hospitals require more security, especially at night. However, more specific data from larger numbers of nurses is required to determine the extent of the issue. A security guard is one option to consider in small rural hospitals where the predominantly female nursing staff is alone in the building after approximately 9:30 pm.
Recommendations

The following recommendations are intended to enhance workforce planning by responding to issues that have the potential to substantially reduce the supply of competent rural nurses.

Data Repositories

- Regulatory bodies should consider adding a rural/urban variable (based on postal codes) to the statistics they send to CIHI for collation.
- Local Health Integration Network data with a rural/urban variable is needed in Ontario.

Workforce Profiling

- Establish how many part-time nurses are currently seeking full-time work in rural hospitals as a basis for determining the feasibility of offering full-time positions to new graduates.
- Collect data on the number of nurses with multiple employers.
- Collect data on the turnover rate of nurses in their first year of employment in rural hospitals and the cost in terms of orientation and mentoring.
- Complete a workforce profile of LHIN 2 in order to expand existing data on employment status, demographics and clinical expertise.

Workforce Planning

Organizational Level

- Develop strategies to profile the expertise of clinical educators and clinical nurse specialists, and strengthen their utilization by front line workers in the small rural hospital sites.
- Evaluate the span of control for managers in amalgamations.
- Hire system analysts to assist in workforce assessment and planning.

Provincial Level

- Include rural representation on relevant government committees, including the Joint Provincial Nursing Committee, to advise government on data gaps and relevant policies.
Staffing and Scheduling

- Hire scheduling experts to provide executive coaching for hospital management.
- Provide incentives for nurses who are willing to work the “difficult to cover” times (e.g., weekend shifts).
- Analyze the cost benefit of predicting overtime and staffing up compared to paying overtime.
- Create an organizational policy to allow nurses to work on unit initiatives instead of being sent home when census is low.
- Develop policies that address the retention of mid-career nurses.

Nurse Supply

- Offer bursaries for students from rural areas that are committed to returning to their region for a designated number of years.
- Invest in co-op programs to recruit LHIN 2 high school students into nursing.
- Encourage collaboration between universities and hospitals to develop preceptorships for nurses interested in rural nursing.
- Collaborate with communities to offer local jobs to both partners in a family.

Education for Safe Nursing Practice

- Establish special funding to support the certification and recertification needs and other specialized continuing education of rural nurses.
- Increase the length of orientation and mentoring of newly hired nurses to a minimum of 3 months.
- Secure the expertise of post-career nurses by rehiring them to participate in the mentoring and coaching of new nurses.
- Increase the budgeted positions for nurse practitioners and clinical nurse specialists to provide more educational resources to all nurses in rural practice.
- Expand current RN educational programs in Owen Sound or establish a satellite program that offers the full four-year degree program on site.

Safety and Security

- Further evaluate the security concerns expressed by rural nurses.
- Address the safety of staff and patients by standardizing security measures across rural hospitals.
Targeted Government Policies

- Ensure rural representation on decision making bodies creating province-wide policies.
- Establish a panel to advise government on how rural context such as limited staff and multiple roles affect policies.
- Strengthen the educational infrastructure to support rural nurses.
- Customize policies to take into account the context in rural hospitals.
- Provide support for new initiatives (e.g., assist with grant writing to apply for new one time policy initiatives).
References


Appendix A. Classification of Hospitals

Four levels of hospitals were identified: A, B, C and D (see Table 1). Most rural hospitals were classified as either level A or level B. Level A hospitals provide access to 24-hour emergency triage from an on-duty RN who has access to a physician and medical transportation services. Level B hospitals provide secondary services (e.g., general surgery and internal medicine) and use on-call physicians who are no more than 15 minutes away to provide 24-hour care.

Level C and D hospitals include full service community hospitals and larger specialized hospitals such as the Hospital for Sick Children in Toronto. According to the framework, there are approximately 80 hospital sites in Ontario that are classified as rural or isolated. The Ontario Hospital Association (OHA) defines a small hospital as one that provides less than 3,500 weighted cases, has a referral population of less than 20,000 people and is the only hospital in the community (OHA, 2002).

Table 1 Hospital Categories and Definitions

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Hospitals that provide access to 24-hour emergency triage from an on-duty RN who has access to a physician and medical transportation services. General hospitals providing facilities for giving instruction to medical students of any university, as evidenced by a written agreement between the hospital and the university with which it is affiliated, and hospitals approved in writing by the Royal College of Physicians and Surgeons for providing post-graduate education leading to certification or a fellowship in one or more of the specialties recognized by the Royal College of Physicians and Surgeons.</td>
</tr>
<tr>
<td>B</td>
<td>Hospitals that provide secondary services such as general surgery and internal medicine. Have 24-hour access to on-call physicians who are no more than 15 minutes away. General hospitals having not fewer than 100 beds.</td>
</tr>
<tr>
<td>C</td>
<td>Full service community hospitals. General hospitals having not fewer than 100 beds.</td>
</tr>
<tr>
<td>D</td>
<td>Larger specialized hospitals. Hospitals that treat patients suffering from cancer, that undertake research with respect to the causes and treatment of cancer and that provide facilities for the instruction of medical students.</td>
</tr>
</tbody>
</table>

Source: Ministry of Health and Long-Term Care, 1990.
Appendix B. Population Distribution in Local Health Integration Network (LHIN) 2

Local Health Integration Network 2 is located in South West Ontario and covers all of Elgin County, Middlesex County, Oxford County, Perth County, the County of Huron, Bruce County and the cities of London and Stratford. The city of London is shown as a separate population percentage; Stratford is included in the County of Perth. Figure 1 shows the geographic areas in LHIN 2 and the population distribution in each.

Figure 1. Population distribution in Local Health Integration Network 2.

Source: Ministry of Health and Long-Term Care, 2002b.
Appendix C. Ontario Population Distribution by Local Health Integration Network (LHIN)

A portion of Grey County is under LHIN 2 boundaries with the remainder being split between LHIN 3 and LHIN 12. A section of the census subdivision of Norfolk and 5 census subdivisions in Lambton County are also included as part of LHIN 2. Figure 1 shows the various Local Health Integration Networks in Ontario and the population distribution in each.

Figure 1. Population distribution in Ontario Local Health Integration Networks.

Source: Ministry of Health and Long-Term Care, 2002b.
Appendix D. Land Area by County and City in Local Health Integration Network (LHIN) 2

Grey, Bruce and Huron counties comprise approximately half of the land area in LHIN 2. The city of London comprises only 2% of the land area. Figure 1 shows the land area by county and city in LHIN 2.

Figure 1. Land area by county and city in Local Health Integration Network 2.

Source: Ministry of Health and Long-Term Care, 2002b.
### Appendix E. Hospital Description and Bed Composition in Local Health Integration Network 2

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Med</th>
<th>Surg</th>
<th>CMS*</th>
<th>ICU</th>
<th>OB</th>
<th>Paed</th>
<th>Psych</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elgin County</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St Thomas-Elgin Gen</td>
<td>56</td>
<td>28</td>
<td>0</td>
<td>11</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>107</td>
</tr>
<tr>
<td>St Joseph’s Health Care, MH</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>173</td>
</tr>
<tr>
<td><strong>City of London</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>London Health Sciences:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>83</td>
<td>126</td>
<td>21</td>
<td>36</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>266</td>
</tr>
<tr>
<td>Victoria South St</td>
<td>77</td>
<td>97</td>
<td>-</td>
<td>38</td>
<td>-</td>
<td>-</td>
<td>68</td>
<td>280</td>
</tr>
<tr>
<td>Victoria Westminster</td>
<td>69</td>
<td>48</td>
<td>-</td>
<td>-</td>
<td>22</td>
<td>70</td>
<td>11</td>
<td>220</td>
</tr>
<tr>
<td><strong>St Joseph’s Health Care:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>51</td>
<td>94</td>
<td>0</td>
<td>12</td>
<td>49</td>
<td>3</td>
<td>0</td>
<td>209</td>
</tr>
<tr>
<td>London-Parkwood</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>355</td>
</tr>
<tr>
<td>London-MH</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>397</td>
</tr>
<tr>
<td><strong>Middlesex County</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four Counties Health Services</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Strathroy Middlesex General Hosp</td>
<td>30</td>
<td>15</td>
<td>-</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>-</td>
<td>55</td>
</tr>
<tr>
<td><strong>Oxford County</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woodstock General Hosp</td>
<td>-</td>
<td>-</td>
<td>61</td>
<td>6</td>
<td>8</td>
<td>3</td>
<td>17</td>
<td>95</td>
</tr>
<tr>
<td>Tillsonburg District Memorial</td>
<td>-</td>
<td>-</td>
<td>34</td>
<td>5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>39</td>
</tr>
<tr>
<td>Alexandra Hosp</td>
<td>-</td>
<td>-</td>
<td>16</td>
<td>3</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>21</td>
</tr>
<tr>
<td><strong>Grey County</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hanover and District Hosp</td>
<td>-</td>
<td>-</td>
<td>23</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>35</td>
</tr>
<tr>
<td>SBGHC-Durham</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>GBHS-Owen Sound</td>
<td>36</td>
<td>42</td>
<td>-</td>
<td>12</td>
<td>8</td>
<td>8</td>
<td>30</td>
<td>136</td>
</tr>
<tr>
<td>GBHS-Markdale</td>
<td>-</td>
<td>-</td>
<td>19</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>20</td>
</tr>
<tr>
<td>GBHS-Meaford</td>
<td>-</td>
<td>-</td>
<td>27</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>27</td>
</tr>
</tbody>
</table>
## Bruce County

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBGHHC-Chesley</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBGHHC-Walkerton</td>
<td>-</td>
<td>-</td>
<td>25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SBGHHC-Kincardine</td>
<td>-</td>
<td>-</td>
<td>21</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>23</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>23</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GBHS-Lion's Head</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GBHS-Bruce Peninsula</td>
<td>-</td>
<td>-</td>
<td>22</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>23</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>23</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GBHS-Saugeen Memorial</td>
<td>-</td>
<td>-</td>
<td>16</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>16</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Huron County

| Hospital                          | Medical | Surgical | Total | Medical | Surgical | Total | Medical | Surgical | Total | Medical | Surgical | Total | Medical | Surgical | Total | Medical | Surgical | Total | Medical | Surgical | Total | Medical | Surgical | Total | Medical | Surgical | Total |
|----------------------------------|---------|----------|--------|---------|----------|--------|---------|----------|--------|---------|----------|--------|---------|----------|--------|---------|----------|--------|---------|----------|--------|---------|----------|--------|
| Clinton Public Hosp              | -       | -        | 14     | -       | -        | -     | 14      | -        | -      | -       | -        | -     | 14      | -        | -      | -       | -        | -     | -       | -        | -      | -       | -        | -     |
| South Huron Hosp                 | -       | -        | 11     | -       | -        | -     | 11      | -        | -      | -       | -        | -     | 11      | -        | -      | -       | -        | -     | -       | -        | -      | -       | -        | -     |
| Alexandra Marine & General Hosp  | 18      | 8        | 25     | -       | 4        | 28     | 20      | 52       | 72     | 3       | 30       | 33     | -       | 56       | 8      | 7       | 18       | 101    | 3       | 30       | 33     | -       | 56       | 8      |
| Wingham & District Hosp          | -       | -        | 27     | -       | 17       | 24     | 27      | 52       | 49     | -       | -        | -      | 24      | -        | 17     | 2        | 27       | 37     | -       | -        | -      | 24      | -        | 17     |
| Seaforth Community Hosp          | 18      | -        | 21     | -       | 3        | 23     | 18      | 41       | 56     | -       | -        | -      | 21      | -        | 3      | 2        | 23       | 24     | -       | -        | -      | 21      | -        | 3      |

## Perth County

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
<th>Medical</th>
<th>Surgical</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listowel Memorial Hosp</td>
<td>-</td>
<td>-</td>
<td>20</td>
<td>1</td>
<td>4</td>
<td>26</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>St Mary's Memorial Hosp</td>
<td>-</td>
<td>-</td>
<td>13</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stratford General Hosp</td>
<td>30</td>
<td>33</td>
<td>63</td>
<td>56</td>
<td>8</td>
<td>64</td>
<td>18</td>
<td>101</td>
<td>126</td>
<td>109</td>
<td>337</td>
<td>2823</td>
<td>337</td>
<td>2823</td>
<td>126</td>
<td>109</td>
<td>337</td>
<td>2823</td>
<td>337</td>
<td>2823</td>
<td>126</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>480</td>
<td>491</td>
<td>971</td>
<td>380</td>
<td>148</td>
<td>528</td>
<td>109</td>
<td>337</td>
<td>2823</td>
<td>337</td>
<td>2823</td>
<td>126</td>
<td>109</td>
<td>337</td>
<td>2823</td>
<td>337</td>
<td>2823</td>
<td>126</td>
<td>109</td>
<td>337</td>
<td>2823</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Combined medical-surgical units.

Source: Ministry of Health and Long-Term Care, 2005b.
Appendix F. Study Methods

Study Sample

Hospital Sites

Purposive sampling techniques (Kemper, Stringfield, & Teddlie, 2003) were used to recruit hospital sites for participation in the project. In June 2005, hospital administrators at 21 small hospital sites across Local Health Integration Network (LHIN) 2 in South West Ontario were contacted by telephone. They were asked if their hospital would be a study site for the project. An information letter was emailed to each administrator outlining the purpose of the study and requirements for participation. Nineteen hospitals agreed to participate.

Nurse Administrators

Nurse administrators were recruited from each of the 19 sites. In most cases, the initial point of contact was made through the Chief Nursing Officer (CNO) of the organization who then recommended other nurse managers. A total of 21 nurse administrators were interviewed: 5 were Chief Nursing Officers, 10 were Program Directors, 2 were Vice Presidents of Clinical Services, 2 were Clinical Site Leaders, 1 was a Patient Care Manager and 1 was a Chief Operating Officer. All managers were interviewed at their place of employment during regular working hours.

Staff Nurses

Nurse administrators in 14 sites chose staff nurses to be interviewed. They also organized interview times and allowed the interviews to be conducted during work hours. For one of the hospital alliances, which included 4 hospital sites, flyers were posted in the hospital cafeteria to initiate recruitment. A snowball sampling technique (Kemper et al., 2003) was used to recruit the remaining nurses. Interviews at these hospitals were conducted during the nurses’ work break or following their shift. Overall, 44 staff nurses were interviewed, including 30 registered nurses (RNs) and 14 registered practical nurses (RPNs).
Data Collection and Analysis

The study was exploratory in nature and involved semi structured interviews with nursing administrators and staff nurses working in rural hospitals in LHIN 2.

Interview Procedures

Semi structured, face-to-face interviews were conducted with nurse administrators and at least two staff nurses from each of the 19 sites. Prior to the interview process, each participant received an information letter outlining the purposes of the study, the procedures to be used, risks and benefits to participating and an assurance of confidentiality. Written consent was obtained from each of the participants prior to any data collection procedures. Two members of the research team conducted interviews. One was a nurse and both were experienced in health research methodology. One member of the team was primarily responsible for asking questions, while the other audio taped the interviews and took notes during the session. The researchers alternated between these roles in no specific order. Following each interview, the two team members discussed their perceptions and wrote memos based on their interpretations of the interaction. Interviews lasted between 30 and 90 minutes.

Separate interview guides were created for nurse administrators and staff nurses. Initially, key themes identified from the literature, including policy documents found in the grey literature, directed the development of the interview guide. However, as the interviews progressed and unexpected issues emerged from the responses received, new questions were formed, others modified and others removed entirely.

Nurse administrator interviews began in late June 2005 with a preliminary interview with the CNO of one of the 4 hospital alliance corporations. Findings from this interview helped refine the nurse administrator interview guide and test the effectiveness of the questions. Administrators were asked broad questions about their role in the organization, staffing issues, recruitment and retention in rural areas, rural nursing practice issues and the impact of policy on small hospitals.

Staff nurse interviews began with a short demographic questionnaire to obtain information such as employment status, length of employment, occupation, education level and place of residence. They were asked a series of open-ended questions about their experiences working in a rural hospital, including issues surrounding practice concerns, organizational support, working and living in a small community and challenges facing rural nurses today.
Data Management and Analysis
The constant comparative method of analysis was used as the primary method of data analysis (Glaser & Strauss, 1967). During data collection, the research team followed a sequence of interview, transcription, analysis, reflection and modification. Interviews were transcribed and coded into QSR NVivo version 1.3.146. Texts were then interpreted through thematic analysis (Boyatzis, 1998). Interview transcripts were separated into three categories: nurse administrators, RN staff nurses and RPN staff nurses. This distinction was useful in interpreting and understanding responses received. In particular, the research team was interested in the differences between RN respondents and RPN respondents on questions regarding practice issues in rural nursing.

The research coordinator and research team carried out preliminary coding. Each member of the research team coded several texts independently using detailed codes, and the results were compared to ensure consistency. The resulting coding scheme was used to code the remaining texts. This process was followed until two separate coding schemes were created: nurse administrator and staff nurse (RNs and RPNs combined). Two of the team members continued coding texts using the coding schemes created. However, with each successive coding phase, new categories emerged from the data. As a result, additional codes were assigned until all texts were coded. The last phase of coding involved selective coding as the main categories, which reflected the major themes identified, were abstracted from the completed coding scheme. These themes were then organized to provide one level of understanding of the experience of nursing in rural Ontario.

Ethical Considerations
The Ethics Review Board at McMaster University approved the project before research began. In addition, the Ethics Committees at each of the participating hospitals reviewed the research proposal and approved the study. Prior to the interviews, participants were informed that they could withdraw from the study at any time without adverse consequences. They were given an information letter and consent form to keep for their records. Audiotapes and transcripts of interviews were kept in a locked filing cabinet and destroyed at the end of the project.