



# **CAPACITY, CASUALIZATION, AND CONTINUITY: THE IMPACT OF SARS**

---

---

ANDREA BAUMANN RN, PhD<sup>1</sup>

JENNIFER BLYTHE PhD<sup>2</sup>

JANE UNDERWOOD RN, MBA<sup>3</sup>

JENNY DZUIBA RN, PhD (CAND)

<sup>1</sup> Professor, Co-Director

<sup>2</sup> Associate Professor, Senior Scientist

<sup>3</sup> Associate Clinical Professor, Co-Investigator

**NURSING EFFECTIVENESS, UTILIZATION AND OUTCOMES  
RESEARCH UNIT, McMASTER UNIVERSITY SITE**

REPORT TO THE WALKER EXPERT PANEL

POSSIBLE IMPACT ON NURSE STAFFING POLICY ON DISEASE TRANSMISSION

FUNDED BY THE MINISTRY OF HEALTH AND LONG-TERM CARE

RESEARCH GRANT #06032

## Table of Contents

|  |           |
|--|-----------|
| <b>1. Main Messages</b> .....  | <b>4</b>  |
| <b>2. Executive Summary</b> .....  | <b>5</b>  |
| <b>3. Overview</b> .....   | <b>9</b>  |
| <b>4. Method</b> .....   | <b>10</b> |
| <b>5. Definitions</b> .....  | <b>10</b> |
| <b>6. Etiology of Casualization</b> .....  | <b>10</b> |
| <b>7. Current Nurse Staffing Patterns: An Environmental Scan</b> .....   | <b>13</b> |
| Figure 1: Employment Trends 1998 - 2002.....   | 13        |
| Table 1: Number and Percentage Distribution of the RN Workforce by Community<br>of Employment Status and Full-time/Part-time Status, Ontario, 2002 ..... | 14        |
| Variation Among Sectors .....  | 15        |
| Work Preferences .....   | 15        |
| Multiple Employers.....  | 15        |
| Table 2: Number and Percentage Distribution of the RN Workforce by Community<br>of Employment and Multiple Employment Status .....                       | 16        |
| Table 3: Employment Status of Ontario Nurses (RNs) with Multiple Employers ....  | 16        |
| International Comparisons .....  | 17        |
| Other Health Care Professions .....  | 17        |
| <b>8. Staffing Issues in the Contemporary Nursing Workplace</b> .....  | <b>18</b> |
| Table 4: Major Staffing Issues Contributing to the Lack of Capacity in Health Care<br>Organizations .....  | 19        |
| <b>9. Casualization and the Management of Labour During the SARS Outbreak</b> .....  | <b>20</b> |
| Table 5: Examples of Changes in Workload Associate with SARS .....   | 21        |
| Public Health .....  | 21        |

|  |           |
|--|-----------|
| Acute Care Hospitals .....   | 22        |
| Long-Term Care .....   | 23        |
| Home Care .....  | 24        |
| <b>10. Current Staffing Practices and Infection Control. ....</b>            | <b>24</b> |
| <b>11. Scenarios for SARS .....</b>  | <b>26</b> |
| <b>12. Best Staffing Practices for Infection Control .....</b>               | <b>26</b> |
| <b>13. What More Needs to be Done? .....</b>                                 | <b>28</b> |
| Understanding the Workforce.....   | 28        |
| Increase Intersectoral Collaboration .....                                   | 29        |
| Prepare to Manage Crises .....   | 30        |
| <b>14. Recommendations .....</b>   | <b>32</b> |
| References .....   | 34        |
| Appendix A: List of Interviewees .....                                       | 39        |
| Appendix B: Template for Assessing Public Health Response to Disasters ..... | 41        |

## 1. Main Messages

- **To deal with crisis situations, such as SARS, employers require a resilient healthy workforce.**
- **Organizations should create full-time resource teams to focus on emergency responses and rapid decision-making.** Casual workers have no place in these integrated teams.
- **All facilities require an emergency preparedness plan** to be included in accreditation criteria. Full-time and regular part-time nurses should be supported by cross-training to increase staff flexibility. Algorithms for the deployment of human resources under infectious conditions should be created.
- Facilities have **insufficient base-line staff**, especially full-time workers and are too reliant on overtime, casual, and agency workers. They have **too few staff** for business as usual and **minimal surge capacity**.
- **Health care organizations need to increase capacity by educating more nurses in intensive care, emergency departments, and other specialist areas with severe shortages.** This would avoid the reliance on nursing agencies apparent during the SARS crisis.
- Ideas on staffing in health care facilities have not moved on from the lean, mean strategies of the 1990s. In Toronto, ratios of full-time to part-time and casual staff have improved in the acute care sector and are high in public health. However, **managers throughout Ontario have to create optimum staff numbers and effective staffing ratios.**
- **Human resource planning should be reviewed based on sound evidence provided by the organization's own databases and by research.** For example, facilities should evaluate the financial costs and clinical use of agency staff compared to using their own permanent staff.
- **Nurses in home care and long-term care are heavily reliant on casual staff**, many of whom also work in the acute care sector. During the SARS outbreak, **home care agencies lost 20-30% of their staff** due to the directive for nurses to work in only one agency. **The managed competition system should be reviewed and new funding models created for the community sector so more staff are offered full-time work.**
- **One third of casual workers, a fifth of part-time workers and over ten percent of Registered Nurses in Toronto have more than one employer.** Health care agencies have to integrate cross-facility utilization of staff in their emergency preparedness plans.
- In rapid decision-making situations, **teams require capacity, continuity, and practice to deal with uncertain events.**

## **2. Executive Summary**

This paper presents insights into human resource capacity and emergency response situations. The paper also discusses the etiology of casualization and provides an environmental scan of nurses' employment and major staffing issues. It examines staffing in the context of the SARS (Severe Acute Respiratory Syndrome) epidemic, and discusses the problem of surge capacity. Recommendations are made for the management of human resources in the future.

Vulnerabilities in the contemporary workforce stem from an ideology of staffing that has not moved on from restructuring in the 1990s, when employers used such strategies as redeployment, lay-offs and casualization in an attempt to create a cost effective health care system. Paradoxically, these strategies contributed to a dysfunctional workforce with an excessive reliance on casual workers. Today, casual work and multiple jobs persist in the health care workforce. Decision-makers continue to use a "lean, mean" staffing strategy based on the assumption that workload fluctuates from relatively low to high rather than being consistently heavy. The result is a system characterized by routine understaffing, high rates of absenteeism and overtime. There is no surge capacity to meet peaks in the need for patient care. There is an urgent need for more realistic models to describe and forecast optimum staffing requirements to create a system with the elasticity to deal with "business as usual" and emergency situations.

Full-time rates of employment in acute care have improved; however, there is still an over dependency on agency staff and casual workers. The long-term care and home care sectors have high proportions of part-time and casual staff. Two thirds of nurses in not-for-profit agencies and up to 90% in for-profit home care agencies are part-time. In the Greater Toronto Area (GTA), 22.4% of nurses hold multiple jobs, including 24.7% of part-time RNs (Registered Nurses) and 41.9% of casual RNs (Registered Nurses Association of Ontario [RNAO], 2003). Slightly more than 11% of nurses in Ontario (Canadian Institute for Health Information [CIHI], 2003) and 16.8% of nurses in Toronto who have full-time jobs also work a second job.

Public health departments in the GTA did not have the capacity to carry on business as usual. Staff were redeployed from suspended programs and nurses, physicians, public health inspectors and epidemiologists transferred from within and

beyond Ontario. Working arrangements for public health employees were transformed from a five-day working week and an autonomous work pattern to a seven-day week with a structured two-shift system.

Hospitals where surgery was cancelled or emergency departments closed were able to redeploy staff to support other departments. Temporary transfers of nurses, physicians and other staff from other regions provided relief. Med-Emerg, a health care staff recruitment agency, provided critical care and other nurses, physicians, and other staff to meet the SARS workload requirements. However, specialist staff, including critical care nurses, remained in short supply and infection control departments were understaffed despite extra staff being assigned. Some workers were lost when restrictions were placed on the movement of personnel, and some nurses were unavailable because they had contracted with Med-Emerg. Quarantine put an additional burden on the staffing situation, for example, 180 staff were quarantined for 10 days.

Work became more intense due to staff shortages and because health care workers had more duties. Restrictions on visitors were difficult for staff because family members are usually involved in the social, psychological and, to some extent, physical care of patients. Long-term care facilities lost staff to their second, better-paying jobs in acute care hospitals. Some casual staff chose not to work at level 3 facilities that had SARS patients during the epidemic.

In the home care sector, as many as 20-30% of nurses moved to acute care hospitals offering higher wages. Nurses experienced increased workload due to the need to collect and utilize protective equipment. Because managed competition precludes overtime, adequate coverage was compromised; some workers experienced personal financial stress from restrictions on movement (Community Health Nurses Initiatives Group, 2003).

There are certain prerequisites necessary to deal with situations of high risk, for example: algorithms that provide guidance for utilization and deployment of staff; resilient health care workers that can respond over an extended period of time in an orchestrated, collaborative way; and human resource planning that includes the maximum use of full-time and regular part-time workers. To ensure that the system responds in a consistent fashion, staff used in emergency situations must be full-time or regular part-

time and work consistently with known colleagues in multi disciplinary teams. A flexible system with sufficient elasticity to adapt to contingencies is required.

### *Best Practices*

Lessons learned during the SARS outbreak that will be invaluable during the next health care emergency include:

- The importance of emergency preparedness planning;
- The inclusion of sufficient core staff and surge capacity in planning;
- General education in infection control for all staff; “an infection control culture”; and
- Excellent communication both internally with staff and externally with governments and intra and intersectoral partners.

### *Recommendations*

#### A. Decision making and emergency preparedness for real world crises:

1. Ensure that the system includes surge capacity.
2. Create a full-time centralized resource team consisting of full-time employees, well oriented, with strong team cohesion and available for continual practice.
3. Cross-train to provide adequate back-up for contingencies; create specialized resource teams.
4. Expand and invest in infection control teams in all health care facilities and public health.
5. Enhance staff education and ongoing training in infection control in undergraduate programs and in health care staff development programs.
6. Ensure emergency response protocols are in place and staff are ready to implement them.
7. Rebuild health care support (e.g., housekeeping, staff counseling) lost during restructuring.

#### B. Optimize return on investment in human resources:

8. Reduce overtime and sick time costs by increasing base staff allocation.
9. Maintain a high ratio of full-time to part-time staff by offering full-time positions to all who want them.
10. Develop sustainable infrastructure for home care.

11. Increase the complement of full-time jobs in long-term care and home care.
12. Hire sufficient Public Health staff to carry out public health programs while addressing infectious disease control.
13. Create healthy workplaces to ensure that health care personnel enjoy good health and have optimal physical defense against illness and injury.
14. Create workforce databases that can be used for planning and projection.

C. Nurture excellence, continuity, and employee loyalty:

15. Address the problem of unequal wages for nurses in different health care sectors.
16. Harmonize the financial reward systems of agency and hospital workers.
17. Eliminate casual staff in critical situations wherever possible.

D. Increase intersectoral collaboration:

18. Open more communication channels among health care sectors for mutual planning and outbreak and/or emergency response.
19. Encourage the establishment of collegial relations at various levels, including personnel dealing with infection control.
20. Recognize that people work across sectors and strategize how to capitalize on their cross-training.

## CAPACITY, CASUALIZATION, AND CONTINUITY: THE IMPACT OF SARS

### **3. Overview**

The outbreak of SARS (Severe Acute Respiratory Syndrome) in Ontario in the spring of 2003 alerted governments, employers, and the public to deficiencies in the health care system that place the public and health care professionals at risk. SARS was a wake-up call; it reminded us “that we currently have no redundancy or safety cushion in our health care system and left us gravely concerned about its capacity to deal with another crisis” (Registered Nurses Association of Ontario [RNAO], 2003). Disease, terrorism, industrial accidents, and environmental disaster pose threats that, if realized, will place unprecedented strains on the Canadian health care system. Effective management of health human resources is essential, particularly for emergency situations.

After the Ontario government infused \$177 million into the Nursing Enhancement Fund in 1998, the ratio of full-time to part-time and casual registered nurses improved (Joint Provincial Nursing Committee [JPNC], 2001, 2003); however, casual work and multiple jobs persist in the health care workforce and the proportion of registered practical nurses working full-time decreased slightly (JPNC, 2003). Decision-makers continue to staff using the “lean, mean” strategy that emphasizes “doing more with less”. They base staffing on the assumption that workload fluctuates when it is actually constantly heavy. The result is that the system is stretched even when dealing with business as usual, with high rates of absenteeism and overtime; such a system is extremely vulnerable to additional pressures.

To prepare for future crises, it is vital to examine how human resources were managed during the SARS outbreak, identify and remedy weaknesses, and learn from best practices. This paper provides insight into human resource issues in the contemporary health care workforce, particularly casualization and the growing proportion of health care workers holding multiple jobs. The paper focuses on nurses because statistical and other data are better for this group than for many other health care professions. It also discusses the etiology of casualization and provides an environmental scan of nurses’ employment and major staffing issues. Furthermore, the paper examines staffing in the context of the SARS epidemic, and discusses the problem of surge

capacity. Recommendations are made for the management of human resources in the future.

#### **4. Method**

To prepare this report, published literature on nurse staffing strategies was searched using Medline, CINAHL and HealthStar. Information on the SARS epidemic was searched in published literature and grey literature available on the Internet. Special attention was paid to the World Health Organization (WHO), Health Canada, Ontario Ministry of Health and Long-Term Care, and the United States Center for Disease Control web sites. In addition, interviews were held with a number of nurse leaders and others who were involved in decision-making during the epidemic (see Appendix A).

#### **5. Definitions**

For the purpose of this report standard employment, casualization, and surge capacity are defined as follows:

*Standard Employment:* “Full-time permanent, continuous work with an indefinite-term employment contract” (Zeytinoglu & Muteshi, 1999, p. 4). This is the common definition against which other types of employment status are compared. “*Regular part-time work* usually involves a relatively fixed schedule and an agreed number of hours” (Zeytinoglu, 1999, p. 44).

*Casualization:* The systematic replacement of full-time and part-time staff with staff employed on an ad hoc basis. Regular work is not provided but the casual worker is expected to be available when required. Theoretically, casualization leads to the reduction of an organization’s operational costs by increasing the ease with which workers can be included and excluded from the workforce (Richardson & Allen, 2001).

*Surge capacity:* the capacity of a system to deal with increased activity without succumbing to overload. A system has sufficient surge capacity when it has the elasticity to combine “business as usual” with the effective reallocation of resources (Glaser et al., 2002, National Advisory Committee on SARS and Public Health, 2003, p.102).

#### **6. Etiology of Casualization**

Throughout the 20<sup>th</sup> century, the health care workforce experienced cycles of surplus and shortage, and the proportions of full-time, part-time, and casual employees fluctuated. In good economic times, more money was spent on health care. Services

expanded and more health care workers were needed. Wages rose, attracting more people into health professions, and eventually a surplus of workers developed. As a result of this surplus, cutbacks occurred, wages fell, and fewer people entered health care.

Rates of part-time and casual employment also varied over time (Zeytinoglu & Muteshi, 1999). Casualization enabled employers to modify their workforces in response to changing conditions in an unstable market (Tilly, 1991). Typically, employers hired a core of full-time workers and a peripheral group of non-standard workers with fewer benefits and less job security. Both cycles of surplus and shortage and periods of casualization are typical of nursing (Friss, 1994).

In Canada and abroad unprecedented health care expansion in the 1980s was followed by cutbacks in the early 1990s (Baumann et al., 1996). The development of new, less invasive technologies prompted acute care institutions to increase day surgery, reduce bed capacity, and discharge patients earlier. Decision-makers in hospitals downsized clinical staff and middle management, and limited recruitment of new staff (Blythe, Baumann & Giovannetti, 2001). These policies placed a heavy burden on health care workers. In the community, nurses and other caregivers cared for sicker patients who were discharged earlier from hospital, but policy makers failed to transfer sufficient funds to the community to hire additional staff. The rate of admission increased in hospitals and bed capacity expanded again. There was insufficient staff to provide the level of care required for a more acute patient population. Additional nursing resources were needed to support the technological innovations required to reduce hospital length of stay (O'Brien-Pallas, 2003). The assumption that earlier discharge would reduce hospital workload did not materialize; in fact, work intensity increased.

Like other industries that serve their clientele around the clock, the nursing workforce has always included a proportion of part-time and casual workers. Traditionally, part-time nurses were employed to ensure continuous coverage while casual workers provided a reserve that could be tapped during periods of heavy demand. Similar to workers in other service industries, most health care workers, including nurses, are women. Because women typically shoulder the majority of domestic responsibility and childcare, some prefer part-time or even casual work during specific phases of their careers (Baumann & Blythe, 2003).

Policies made during restructuring in the 1990s caused the proportion of part-time and casual workers to increase. A common strategy was to terminate full-time nursing jobs and rehire the dismissed nurses on a part-time or casual basis. New nursing graduates were routinely recruited as part-time or casual workers. In the unpredictable climate of hospital funding, casualization was intended to save money by avoiding the payment of benefits and using casual nurses as a 'just-in-time' strategy to match nursing hours with patient needs (Baumann & Blythe, 2003; Grinspun, 2002). Due to high bed occupancy, it is doubtful that this strategy reduced costs because casual nursing payment rates were higher and regular full- and part-time staff often had to be paid overtime wages.

Before 1992, the Registered Nurses Data Base (RNDB) does not make a distinction between part-time and casual nurses (Canadian Nurses Association [CNA], 2002). In Ontario during 1965 and 1966, the combined percentages of nurses working part-time and casually were 30% and 31% respectively (Murray, 1970). Subsequently, the percentage rose steadily, and by 1985 about 46% of all employed RNs in Canada worked part-time or casually (CNA, 2002). Despite the growth of casual work, Zeytinoglu (1993) argued that most nurses worked in their preferred status until the mid-1980s. Restructuring strategies during the 1990s changed this situation. By 1998, only 49.1% of nurses worked full-time (CNA, 2002). Some 50.8% of nurses worked part-time (32.2 %) or casually (18.6%) (Canadian Institute for Health Information [CIHI], 2003). It is assumed that many of these nurses were involuntary part-time workers.

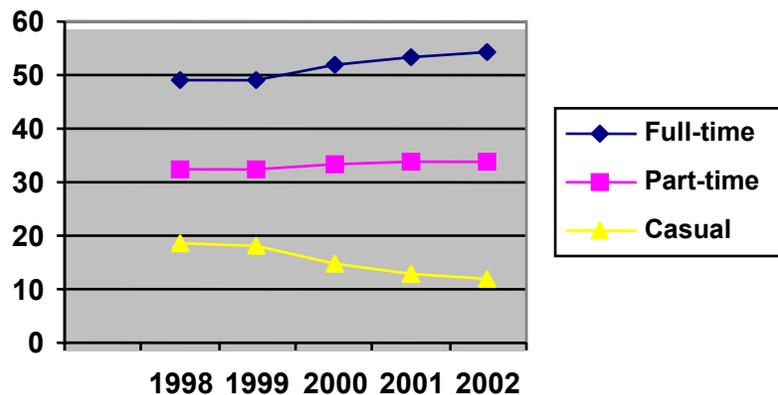
The increased casualization of nursing staff in the 1990s contributed to an over-worked, and increasingly dissatisfied and dysfunctional nursing workforce (Armstrong-Stassen, Cameron & Horsburgh, 1996). Deteriorating working conditions, the difficulty of finding full-time employment, increased workloads precipitated by sicker patients, and unstable nursing teams encouraged nurses to quit the profession or migrate to the United States (US). The proportion of nurses fell relative to the population (CNA, 2002). By the end of the 1990s, a nursing shortage had developed. The high proportion of part-time and casual workers in the labour force raised concerns about competence and continuity of care. Organizations were now using part-time and casual workers to cover regular staffing needs rather than for ensuring surge capacity. Researchers and practitioners

questioned the assumption that employing casual nurses in workplaces characterized by chronic under-staffing saved money or provided effective nursing care (Baumann & Underwood, 2002).

### 7. Current Nurse Staffing Patterns: An Environmental Scan

After 1998, indications that a shortage was imminent encouraged employers to recruit more full-time and permanent nurses. Between 1998 and 2002, the number of full-time RNs in Ontario increased from 39,478 (49.1%) to 44,803 (56.1%). Conversely, the number of part-time nurses fell from 27,000 to 26,186 (33.3%), and the number of casual nurses fell from 11,348 to 7,749 (9.8%) (CIHI, 2003) (Table 1). In summary, the trend to casualization evident in the 1990s had reversed. Although the proportion of full-time workers was not as high as prior to restructuring, it had risen considerably (see Figure 1.)

Figure 1. Employment Trends 1998-2002 (Based on data from CNA, 2002)



The ratios of full-time, part-time and casual nurses in Ontario in 2002 have changed substantially since 1998 (see Table 1). However, despite the overall growth in full-time employment, the improvement has occurred unevenly among regions and across health care sectors.

Table 1

*Number and Percentage Distribution of the RN Workforce by Community of Employment and Full-time/Part-time Status, Ontario, 2002*

| Jurisdiction           | Full-time      | Part-time      | Casual       | Unknown  | Total         |
|------------------------|----------------|----------------|--------------|----------|---------------|
| Toronto                | 11,892(64.0)%  | 4542 (24.5%)   | 2128 (11.5%) | 0 (0.0%) | 18,562 (100%) |
| Ontario except Toronto | 30,335 (55.0%) | 20,014 (36.3%) | 4,776 (8.7%) | 0 (0.0%) | 55,125 (100%) |
| Not stated             | 2,576 (51.0%)  | 1,629 (32.3%)  | 845 (16.7%)  | 0 (0.0%) | 5,050 (100%)  |
| Total Ontario          | 44,803 (56.9%) | 26,185 (33.3%) | 7,749 (9.8%) | 0 (0.0%) | 78,737 (100%) |

*Note.* Data include RNs registering with active-practicing membership within the first six months of the Ontario registration year.

Data exclude RNs out of the workforce and RNs failing to state their employment status.

Data include RNs employed in direct care, administration, education and/or research.

CIHI data will differ from statistics published by the provincial college due to the CIHI collection, processing and reporting methodology.

From the Registered Nurses Database, Canadian Institute for Health Information (CIHI), 2003.

Please see attached methodological notes for definitions of "Toronto" and "Outside Toronto".

Overall, full-time rates are higher than the provincial average in the Greater Toronto Area (GTA). However, rates of full-time employment are higher in metropolitan Toronto than the GTA (64%), so is the rate of casual employment (11.5%); conversely, the rate of full-time employment is lower (24.5%) (CIHI, 2003). The opportunities for casual employment in Metropolitan Toronto are high because of the density of health care facilities and commercial health care agencies. Interviewees indicated that Toronto hospitals have high rates of turnover and that there are both full-time and part-time vacancies. Full-time jobs are available to novice nurses, except in specialist areas such as emergency and intensive care where additional education, experience, and maturity are preferred. In other parts of Ontario it is more difficult to find a full-time position (Paul Sajan, CIHI personal communication, December, 2003). In fact, anecdotal evidence suggests that often students graduating from schools of nursing elsewhere in Ontario commute or move to Toronto to find full-time jobs.

### *Variation Among Sectors*

In public health departments perhaps 90% of the staff are full-time. Limits are placed on part-time staff in some departments. Interviewees suggested that human resource managers must work hard to locate part-time positions to suit women returning from maternity leave and older nurses who prefer reduced workloads. In acute care hospitals in Toronto, interviewees reported that the proportion of full-time to part-time and casual nurses in their organizations equals or exceeds the 70/30 ratio recommended by nursing associations (Grinspun, 2002). In contrast to public health and acute care, the long-term care and home care sectors have high proportions of part-time and casual staff. Interviewees suggested that two thirds of nurses in not-for-profit agencies and up to 90% in for-profit home care agencies are part-time. The prevalence of casualization in these sectors is less evident because fewer nurses work in them. Furthermore, statistics for public health and home care are combined as community in statistics published by CIHI, thus staffing imbalances are obscured in the larger sample (2003).

### *Work Preferences*

Despite the nursing shortage, evidence of a mismatch between actual and desired job status persists. Two recent studies in acute care hospitals suggest that about 10% of part-time nurses in acute care hospitals would like full-time work (Baumann, Blythe, Denton, O'Brien-Pallas & Zeytinoglu, 2002; RNAO, 2003). Although more young nurses are employed full-time than older nurses, younger part-time nurses are more likely to want full-time work than the other age groups (RNAO, 2003). Conversely, some RNs in full-time positions in hospitals would like to work part-time but are prevented by concerns about pensions and benefits (Baumann et al., 2002).

### *Multiple Employers*

As reflected in Table 2, 15.9% of all RNs in Ontario work for multiple employers.

Table 2

*Number and Percentage Distribution of the RN Workforce by Community of Employment and Multiple Employment Status*

| Place of Employment | Single Employer | Multiple Employers | Total           |
|---------------------|-----------------|--------------------|-----------------|
| Toronto             | 14,625 (78.8%)  | 3937 (21.2%)       | 18,562 (100.0%) |
| Outside Toronto     | 47,591 (86.3%)  | 7534 (13.7%)       | 55,125 (100.0%) |
| Not stated          | 3,974 (78.7%)   | 1,076 (21.3%)      | 5,050 (100.0%)  |
| Total Ontario       | 66,190 (84.1%)  | 12,547 (15.9%)     | 78,737 (100.0%) |

*Note.* Data include RNs registering with active-practicing membership within the first six months of the Ontario registration year.  
 Data exclude RNs out of the workforce and RNs failing to state their employment status.  
 Data include RNs employed in direct care, administration, education and/or research.  
 CIHI data will differ from statistics published by the provincial college due to the CIHI collection, processing and reporting methodology.  
 From the Registered Nurses Database, Canadian Institute for Health Information (CIHI), 2003.  
 Please see attached methodological notes for definitions of "Toronto" and "Outside Toronto".

Rates of multiple employment vary with employment status. Thirty-three per cent of casual RNs in Ontario have more than one job, as do 19% of part-time RNs and 11% of full-time RNs (CIHI, 2003). Table 3 illustrates the numbers of nurses with multiple employers as percentages of the total RN workforce; in terms of absolute numbers, more full-time than part-time nurses have second jobs (CIHI, 2003; RNAO, 2003).

Table 3

*Employment Status of Ontario Nurses (RNs) with Multiple Employers (CIHI, 2003)*

| Employment Status  | Total Employed RNs (n=78,737) |              |              | Total          |
|--|-------------------------------|--------------|--------------|----------------|
|  | F/T                           | P/T          | Casual       |                |
| Nurses with multiple employers<br>(% of total employed nurses) | 5,045 (6.4%)                  | 4,940 (6.3%) | 2,562 (3.3%) | 12,547 (15.9%) |

Overall, the percentage of nurses who have multiple employers is higher in Toronto than the rest of Ontario, with 41.9% of casual RNs, 24.7% of part-time RNs and 16.8% of full-time RNs having more than one employer (RNAO, 2003).

Given the numbers of full-time nurses with second jobs, the conventional view of nurses cobbling together a number of jobs to reach full-time hours may not be accurate.

The difficulty in obtaining a full-time job is only one of the many reasons why nurses work multiple jobs. Some nurses work in several jobs voluntarily. Some nurses make private arrangements to work in multiple jobs; others work for nursing agencies. According to a RNAO (2003) study, agency use is low, fluctuating between 844-1004 during 1995-2001. However, in 2002, the numbers jumped to 1443, including 934 RNs and 499 Registered Practical Nurses (RPNs).

Because nurses working in home care and long-term care include the highest proportion of part-time and casual nurses, they are most likely to have more than one employer. The proportion is highest in the long-term care sector (32.4%) and lowest in the acute care sector. The community sector (23.1%) and other sectors (27%) are intermediate. The way the statistics are collected probably masks a high proportion of home care nurses with multiple employments (RNAO, 2003).

#### *International Comparisons*

Many countries have experienced a casualization trend for nurses similar to that in Canada. In Australia, there has also been an increase in part-time work (Australian Institute of Health and Welfare, 2000), a greater use of casual and agency nurses, and a declining nurse to population ratio (American Federation of State, County and Municipal Employees of Medicine, 2002; Cary, 2002; Commonwealth Department of Education, Science, Training and Youth Affairs [DETYA], 2001; Davis, 2002; Esser, 2002; Nursing and Midwifery Staffs Negotiating Council, 2002). In Europe, the Belgium Nurses Association noted high rates in part-time positions in Belgium (De Pape, 2002). In contrast, the US has a relatively high rate of full-time nursing staff (71.6%). In Asia, most nurses work full-time, with rates ranging from 70% in Hong Kong, 90% in the Philippines, 95% in Korea to 100% percent in Macau (International Council of Nurses [ICN], 2002).

#### *Other Health Care Professions*

In *Health Personnel in Canada, 1991-2000*, CIHI (2001) provided data on 20 health care professions. However, there were limitations in accuracy “given the variety of data sources, the differences in the level of detail available, and the fact that much of this information was collected for administrative rather than statistical purposes” (CIHI, 2001 p. 4). Membership of some professions (chiropractors, dentists, pharmacists,

physiotherapists, psychologists, respiratory therapists, and social workers) increased during the decade, while membership of other professions fell (e.g., health record professionals, licensed practical nurses, medical laboratory technologists, and registered psychiatric nurses). Information was not available on full-time, part-time and casual rates.

The ratio of physicians to population decreased between 1993 and 1997, and then rose from 1997 to 2000. An apparent surplus of physicians existed and strategies were implemented to reduce the supply; however, by the end of the 1990s, there was a perception of shortage. Physicians who practice independently cannot be categorized as full-time, part-time or casual workers. The increasing number of women entering the physician workforce has resulted in decreased physician hours worked (Chan, 2002).

### **8. Staffing Issues in the Contemporary Nursing Workplace**

The ideal of the efficient workforce “doing more with less”, typical of the 1990s, has resulted in a below-capacity system. In 2001, 87% of Ontario Hospitals reported a nursing shortage (Hospital Report Research Collective, 2002). Currently the staff capacity is too low for efficient operation under normal conditions (see Table 4). Hospitals struggle to recruit new nurses, retain their staff, and provide coverage on a daily basis. While factors such as the “conspicuous seasonality in hospitalization” (Crighton, Moindeddin, Upsur & Mamdani, 2003, p. 453) may be taken into account, workforce planning appears to relate to the lowest seasonal requirements. Decision-makers do not factor in such considerations as lag-time and staffing gaps associated with staff turnover, education, maternity, and voluntary leaves of absence or workload factors such as unanticipated delays and events, simultaneous demands, multiple or protracted procedures or the composition and characteristics of the nursing team (Baumann & Underwood, 2002).

The major challenge in contemporary nursing workplaces is the nursing shortage. Currently the Ontario health care system has little or no surge capacity. The Ontario situation resembles that of Los Angeles, where "the capacity of the system to handle patient visits during influenza season is diminishing" (Glaser et al., 2002, p. 569). Orr (2003) describes a new normal where hospitals should meet certain operational criteria during emergency situations. Staffing changes would be integral in meeting such criteria.

Table 4

*Major Staffing Issues Contributing to the Lack of Capacity in Health Care Organizations*

|   |
|---|
| <ul style="list-style-type: none"><li>• <i>Funding issues</i><br/>Current funding practices make human resource planning difficult in all health care sectors. The problem is most profound in home care where managed competition makes for-profit and not-for-profit home care agencies rivals for time-limited contracts administered by Community Care Access Centres. Home care agencies cannot build capacity or offer full-time jobs because if their contracts are discontinued employees must move on. Bidding means that nurses in not-for-profit agencies earn less than their colleagues in acute care. Because they are paid per client seen, nurses in for-profit agencies can earn more, but only at the expense of spending less time with clients. Nurses work for multiple employers to increase their hours and to counter job insecurity. They cannot consolidate practice, build experiential knowledge, plan careers, or accumulate seniority or pensions (Leiterman, 2003).</li><li>• <i>Recruitment and retention</i><br/>There are high vacancy rates and turnover in many health care organizations in Ontario. The difficulty in obtaining full-time jobs, particularly in desired specialties, discourages potential recruits. In Toronto, the high cost of living and the disadvantage of commuting offset the greater tendency of hospitals to offer full-time positions.</li><li>• <i>Work intensity</i><br/>Work intensity in nursing workplaces is too high to be efficient. A vicious cycle connects work intensity, overtime and absenteeism. Heavy workloads and long hours lead to increased absenteeism. Nurses have the second highest rate of absenteeism in Canada (RNAO, 2003). More absenteeism leads to more overtime. Hospitals paid \$117 million in overtime in 2001 (O'Brien-Pallas, Thomson, Alksnis, &amp; Bruce, 2001). This is not indicative of a resilient healthy workforce.</li><li>• <i>Casual nurses, multiple employment role of nursing agencies and redeployment</i><br/>The number of casual workers in the nursing workforce has fallen by a third since 1998 (CIHI, 2003; CNA 2002). As a result, many health care organizations have limited pools of casual nursing staff (Bauman et al., unpublished data). Further, because many casual, part-time, and full-time nurses have multiple employers, they have little flexibility to work beyond agreed hours for any employer (Grinspun, 2002). Consequently, health care organizations find it increasingly difficult to cover absenteeism or surges in need for care. Health care agencies expanded in the 1990s as a result of casualization; today they act as clearinghouses for spare capacity in urban health care systems. High use of agencies has been associated with problems of continuity of care, team stability, and issues of competence (Baumann et al., 2002; RNAO, 2003). Health care organizations prefer to limit their dependence on agencies, but many are too short-staffed to do without them. Fluctuations in staff availability caused by vacations or influenza epidemics lead to increased use of agency staff. Agencies also provide a source of nurses with specialization in high demand areas such as emergency and intensive care nursing.<br/>"For PHNs lack of "surge capacity"...means ... redeployment at a moment's notice from their usual programs and priorities to respond to the need for widespread immunization programs or outbreak management. While acknowledging the importance of such health protective strategies, this deployment introduces uncertainty into the viability of and administrative commitment to their current program initiatives and priorities" (Community Health Nurses Association of Canada [CHNAC], 2003).</li></ul> |
|---|

## **9. Casualization and the Management of Labour During SARS**

SARS was the first severe and readily transmissible disease to emerge in the 21<sup>st</sup> century. In the spring epidemic it spread along the routes of international air-travel. Outbreaks occurred in transportation hubs, giving it the potential to spread in densely-populated areas (WHO, 2003). The disease is spread from one person to another through close contact. This means having cared for, lived with, or had direct contact with respiratory secretions or body fluids of a person with the SARS virus. The onset of the virus or incubation period is believed to be within 10 days. There is no evidence to date that the disease spreads through casual contact or through the air. SARS screening questionnaires in hospital and walk-in clinics proved important in tracking the path of epidemiological links to help contain the spread of infection (Ontario Ministry of Health and Long-Term Care, 2003).

The management of labour during SARS must be evaluated in the context of these disease characteristics. Important considerations in the allocation of labour, especially in the early days of the epidemic, were the lack of knowledge of the virility of the disease or how it was transmitted. All sectors of the health care system were involved in efforts to contain and eliminate SARS. Disruptions depended on the weaknesses and strengths of systems, including surge capacity, and the extent to which organizations were directly involved with SARS patients and to which they attempted to pursue business as usual.

Examples of changes of workload associated with SARS are summarized in Table 5, which illustrates issues that increased or decreased the demand for labour. The table outlines important changes that occurred during the outbreak and impacted on workload, as well as how work changed due to the outbreak. Additional stressors (i.e., the continuous use of masks and complex infection control procedures) increased both the level of stress experienced by staff and their workload. In the early days of the outbreak an automatic increase in the number of staff did not occur. In addition, few had experience with such a wide spread threat of infectious disease. The table outlines where there was a concomitant reduction in patient numbers; however, this did not fully accommodate the increase in activity caused by the outbreak.

Table 5

*Examples of Changes in Workload Associated with SARS*

| Increase in Workload   | Decrease in Workload   |
|--|--|
| <ul style="list-style-type: none"> <li>• Human resource management - e.g., redeploying, reassigning, and finding additional staff; orienting and scheduling staff</li> <li>• Clarification of staff roles</li> <li>• Internal and external communication</li> <li>• Greater volume and diversity of data managed</li> <li>• Procurement and implementation of the use of SARS related supplies and protective equipment</li> <li>• Stress, physical discomfort, inconvenience, and delays associated with use of protective equipment</li> <li>• Increased information needs and anxiety of patient and family</li> <li>• Screening procedures undertaken at hospitals, long-term care, rehabilitation facilities, and home care throughout the outbreak</li> <li>• Case management, contact tracing, quarantine monitoring, and telephone information to the public by Public Health</li> <li>• Decreased support available to patients by restricted visiting policies left extra responsibilities for the nursing staff<br/>Some understaffing due to directives to nurses to work at one site/organization only</li> </ul> | <ul style="list-style-type: none"> <li>• Fewer surgical patients - at the beginning of the epidemic, surgery was cancelled in some hospitals; patients were discharged as soon as possible</li> <li>• Fewer patients attended hospitals because some emergency departments were closed, some people were asked not to attend emergency departments if they had respiratory symptoms or because they were afraid</li> </ul> |

\*Staff shortages and issues associated with casualization played out differently in each sector.

*Public Health*

Although public health has very few part-time workers and no casual workers, they did experience challenges when staff were redeployed. Priorities for public health departments during infectious disease outbreaks include providing information to the public, case management of patients identified by hospitals, contact tracing, and

supervising quarantine and staffing information telephone lines (Community Health Nurses Initiatives Group, 2003).

Public health departments in the GTA differed in their prioritization of programs to be maintained and the extent to which they requested outside assistance during the epidemic. Two strategies were adopted for dealing with shortages of infection control personnel. First, personnel were redeployed from programs that had been suspended, including individuals with skills in infection control or the ability to staff information lines or data management positions. Second, appropriately qualified nurses and physicians, public health inspectors and epidemiologists were temporarily transferred from within the province and from elsewhere in Canada or the US. Some physicians were allocated through a health care agency, Med-Emerg, contracted by the provincial government.

To deal with the volume of work, working arrangements for public health employees were transformed from a five-day working week and an autonomous work pattern to a seven-day week with a structured two-shift work system. These organizational changes required negotiations with unions and changes in labour agreements.

#### *Acute Care Hospitals*

In acute care it is difficult to assess the extent that constraints and protocols associated with SARS interfered with nurses' stress levels, productivity, and ability to care for patients. Circumstances varied over time depending on the risk category assigned to the hospital, the involvement of the hospital with SARS patients, and how hospital policies were operationalized. The literature indicates that nurses in some hospitals worked considerable overtime hours during SARS (RNAO, 2003), but figures on hours worked beyond the norm are not yet available. However, using protective equipment, being redeployed to different units, dealing with restricted mobility, SARS related protocols, and caring for sick colleagues was stressful (Farquharson & Baguley, 2003).

As in public health, a heavy burden fell to managers during the SARS outbreak. Their duties included the redeployment of personnel, the interpretation and operationalization of directives from the Provincial Operations Committee (POC), the

procurement of supplies, the organization of staff education, and the management of the environment to minimize the spread of infection.

Hospitals varied in the extent that they carried out business as usual. In hospitals where surgery was cancelled or emergency departments closed, staff members were redeployed to other assignments. Temporary transfers of nurses from other regions, including some nurses from Manitoba, for whom temporary licenses were issued, also provided relief. Med-Emerg provided critical care nurses to care for SARS patients. However, throughout the crisis, specialist staff, including critical care nurses, remained in short supply. Infection control departments remained understaffed even though extra staff was assigned.

Acute care hospitals frequently share their staff with other organizations, but because large Toronto hospitals have high ratios of full-time employees relatively few workers were lost when restrictions were placed on the movement of personnel. However, some hospitals reported that certain nurses who regularly worked for them were unavailable because they had contracted with Med-Emerg. SARS also affected staffing in other ways. Some hospital personnel, including nurses, became SARS patients and others were placed under home quarantine. One case of SARS resulted in the quarantine of 180 staff for 10 days. The RNAO (2003) reported that the Workplace Safety and Insurance Board of Ontario (WSIB) had recorded 79 nurses missing work for more than 15 days because of SARS.

#### *Long-Term Care*

Work became more intense in long-term care facilities during the SARS epidemic as a result of staff shortages and because health care workers had more duties. The directive that nurses work at only one organization had considerable impact on long-term care facilities. Many of their part-time and casual staff also worked at acute care hospitals, sometimes full-time, and chose to work for these facilities during the epidemic. The need for additional staff in hospitals caring for SARS patients and the promise of double pay attracted nurses who usually worked in long-term care. As well, some casual staff chose not to work at facilities caring for SARS patients. Restrictions on visitors were particularly difficult for nurses in long-term care because family members are involved in the social, psychological and, to some extent, physical care of patients.

Outbreaks of the Norwalk virus have provided long-term care facilities with practical experience of infectious diseases and have prompted the updating of policies and procedures on infectious disease control. However, they generally lack full-time dedicated infection control personnel. Furthermore, long-term care institutions have relatively fewer managers than do acute care institutions and fewer resources for staff education. Nevertheless, being smaller, staff and patient communication may have been more effective in these facilities.

### *Home Care*

During the SARS epidemic, home care nurses experienced an increased workload due to using the prescribed protective equipment. As safety procedures took time, nurses probably spent less time with individual patients during SARS. However, unlike other health care institutions, overtime did not greatly increase. The need to be competitive leads home care organizations to discourage overtime.

During the early days of the crisis, nurses were unable to visit some patients because they had no protective equipment. Suppliers had been told they could only sell to the hospital sector and discharging hospitals did not always supply the required equipment. Consequently, managers “worried about staff being a source of transmission in the community without knowledge and supplies to protect themselves and their patients” (Leiterman, 2003).

When nurses were informed that they could only work in one place, home care agencies lost as many as 20-30% of their nurses to acute care hospitals offering higher wages and greater job security. Being able to work at only one site also caused financial stress (Community Health Nurses Initiatives Group, 2003). Leiterman (2003) noted:

Staff that worked even 1 shift in a hospital were not allowed to work their other 9 shifts per fortnight in the community sector. This created personal financial stress as well as staffing challenges in delivering service at a time when home care played a crucial role in keeping individuals at home and out of hospitals and LTC [long-term care] facilities.

## **10. Current Staffing Practices and Infection Control**

There are limited numbers of public health physicians, epidemiologists and other infection control specialists (e.g., public health inspectors and public health nurses) in

Canada. In acute care hospitals, practitioners in infection control departments frequently have too little authority to ensure compliance with infection control protocols and insufficient resources to educate staff. There is very little expertise in infection control in long-term care and home care. The National Advisory Committee on SARS and Public Health (2003) pointed to a neglected report to the Federal/Provincial/Territorial Ministers of Health (Advisory Committee on Population Health, 2001) to illustrate that the shortfall in public health resource planning had long been recognized but never addressed. Public health, occupational health, and infection control departments remain severely understaffed.

As shift-workers, nurses and other health care workers have above average susceptibility to infection (Mohren et al., 2002). Because they work considerable overtime, their immune systems are further compromised. In 2001, 89% of Ontario hospitals reported that their staff worked voluntary overtime and 18% had imposed mandatory overtime (Hospital Report Research Collective, 2002). During the SARS outbreak, work intensity for managers and clinicians was even higher than the elevated rate typical of normal practice. Additionally, infection control practitioners reported that nursing staff did not apply sound infection control practices consistently, due largely to workload. In summary, current staffing practices leave health care workers particularly vulnerable to disease.

There is little evidence to support or refute the risk of the transmission of SARS from one site to another, but the principle of avoiding potential contamination is sound. For example, the Norwalk virus may have been transmitted to different floors by staff (Dr. Erica Bountavis, personal communication). While employers might like to decrease the mobility of their staff among facilities, this strategy cannot be implemented. Ontario hospitals routinely tap casual pools (49%) and hire agency nurses (30%) (Hospital Report Research Collective, 2002). It is unlikely that they will refuse to employ nurses who work elsewhere. Furthermore, such a policy would infringe upon personal freedom. A legacy of restructuring is that nurses combine high professional commitment with low commitment to individual employers (Baumann et al., 2001). Job insecurity during the 1990s taught nurses to be entrepreneurs and some prefer the variety of work and the autonomy that goes with working in several jobs. They also appreciate the high rates paid

by nursing agencies. The pattern of 12-hour shifts allows nurses the freedom to work two jobs if they wish. Multiple employment is probably highest in large urban areas like Toronto where numerous health care organizations in a relatively small area facilitate movement.

### **11. Scenarios for SARS**

Seasonal variation plays a role in the ability of a system to react to crisis. It was fortunate that the SARS outbreak occurred in the spring. There were fewer surgical patients because the outbreak coincided with the March break and the end of the fiscal year was approaching with fewer bookings. Summer vacations had not yet started, thus organizations were relatively well staffed. The crisis might have been more serious had the epidemic coincided with the yearly influenza season or peak hospitalization periods (Crighton, 2003). The similarity between the symptoms of influenza and SARS would have placed an intolerable burden on services because all influenza cases would have to be treated as possible SARS cases. The real possibility that SARS or a similar virus could coincide with the “flu season” requires plans for that eventuality.

### **12. Best Staffing Practices for Infection Control**

Interviewees explained that they learned lessons during the SARS outbreak that will be invaluable during the next health care emergency, whether it is an infectious disease or some other contingency.

- Excellent communication both internally with staff and externally with governments and intra and inter-sectorial partners:

Some health care organizations developed excellent system of internal communication during the epidemic often at the expense of long hours and intensive work by dedicated personnel. Communication with external partners also improved over time. However, it was evident that structures and protocols for effective communication need to be developed.

- The inclusion of surge capacity in staff planning:

Staffing to meet projected needs rather than minimal requirements provides flexibility to cope with contingencies such as epidemics. Evidence suggests that the strategic hiring of full-time staff to cover expected absenteeism and vacation time is less expensive than overtime and agency labour, and more

reliable than casual labour (Baumann & Underwood, 2002). For example, the collective agreement with Ontario Nurses Association (ONA, 2003) set the hourly rates for nurses within the range \$22.44-\$31.58, depending on experience. Agency rates vary a great deal depending on experience and specialty. However, an experienced nurse might expect to make from \$45-55. A critical care nurse might typically make \$63-65 or even more. Agency expenses were a controversial issue during the SARS outbreak. Specific strategies for a flexible system include:

- Maintaining a high ratio of full-time to part-time staff
- Hiring sufficient core staff to cover the day to day needs would allow for some surge capacity
- Using innovative strategies, including permanent float pools, to increase permanent staff
- Educating sufficient specialist nurses to avoid reliance on agencies
- Investing in sufficient epidemiologists, infection control practitioners and other professional required for infection control
- Employing sufficient support staff such as cleaners
- The importance of emergency preparedness planning:
  - A stable workforce of permanent staff is a prerequisite of emergency preparedness. Full-time staff are less likely to move between hospital departments or health care facilities. It easier to ensure they are educated in infection control protocols and can work within teams that they know. Permanent staff can be appropriately educated and deployed as teams when an emergency occurs. They can be educated in emergency procedures. Specific plans would include:
    - Directives for the redeployment of staff
    - Organization-wide cross-training for maximum flexibility
    - Planning access to supplies
    - Appropriate algorithms for rapid decision-making (see Appendix B for an example)

- Development of “an infection control culture”:
  - Ensuring all personnel whether permanent or casual staff are educated and updated on a regular basis on the organization’s infection control protocols
  - Minimizing the risk of infection at all times through routine infection control precautions and practices
  - Monitoring adherence to basis hygiene and isolation practices
  - Creating an expectation that staff remain at home when sick

### **13. What More Needs To Be Done?**

During the past decade the connotations of flexibility have changed. Prior to restructuring, full-time, part-time and casual nurses had specific roles in health care organizations. Full-time nurses represented the core of nursing, part-time nurses covered the gaps regularly left in nursing schedules, and casual nurses were called in to fill unscheduled gaps due to absenteeism or unfilled vacancies.

As part of restructuring, full-time staffing was reduced and part-time and casual staff worked more hours. Employers made these changes to avoid overstaffing. The unintended consequence was that nurses who would have preferred full-time work built their own full-time jobs by working for multiple employers. Nursing agencies expanded as they fulfilled the function of deploying unused capacity in the health care system to where it was needed.

While multiple jobs were not a preference for most nurses, others found that flexible work patterns suited their lifestyle. As the nursing shortage developed, nurses had increasing control over where they worked. To optimize the contemporary nursing workforce during a crisis similar to or more profound than SARS, decision-makers should understand the workforce, increase intersectoral collaboration, and prepare to manage crisis.

#### *Understanding the Workforce*

Before the SARS epidemic, government and employers had decided that casualization had gone too far. It was injurious to good practice and had ceased to be economical. With SARS they became aware that casualization also increased the potential for the spread of infection. To maximize safety and minimize contagion, health

care decision-makers needed to eliminate “inappropriate” flexibility, encourage appropriate flexibility, and manage unavoidable flexibility.

Nursing representatives and researchers argue that all nurses who wish to work full-time should have the opportunity to do so (Baumann & Underwood, 2002; RNAO, 2003). In recent years employers have attempted to increase their full-time workers; however, if they do not understand the factors that favour or prevent the increase of full-time work, they find it difficult. Government policies, organizational strategies, and individual preferences influence rates of casual and part-time work. For example:

- Decasualizing home care will require policy changes at the ministerial level.
- Increasing full-time ratios in acute care hospitals may require educating managers responsible for recruitment to change staffing strategies adopted during the 1990s.
- Minimizing agency use may involve supporting more nurses in the organization to become knowledgeable and skilled in specialty areas.
- Encouraging people to work full-time may involve understanding why some people choose to work part-time or for more than one employer, and strategizing how the goals of these workers and those of organizations can best be met.
- Knowing who one’s workers are is made easier by the possession of a good human resources database.
- Better models for forecasting staffing needs are required. Projections should take different future scenarios into account.

Decreasing casualization of the nursing workforce should be part of a larger human resources initiative to create a healthy and efficient workforce (Baumann et al., 2001).

#### *Increase Intersectoral Collaboration*

During the SARS crisis, health care organizations faced the unintended outcomes of a health care delivery system designed as a series of unconnected silos (McLeod, 2003). Some of the difficulties experienced among sectors during the epidemic were due to the lack of pre-existing links among managers. Links need to be established at a variety of levels to coordinate planning and activities, including infection control.

Issues related to sharing staff across sectoral boundaries require attention. Home care and long-term care organizations share numerous part-time and casual workers with

acute care hospitals. Increasing the full-time jobs in these sectors would solve the problem, but it is not yet feasible. One approach would be to collaborate to ensure that staff and organizations are fully employed when outbreaks make movement between facilities problematic.

#### *Prepare to Manage Crises*

The level of effort expended during SARS could not be sustained over a long period or undertaken on a frequent basis. In future, infection control should be integral to organizational structure. An emergency preparedness plan with clear lines of communication among relevant government bodies and organizations in all health care sectors should be in place. The stakes are high given that the well being of the general public and staff depend on its efficacy.

Within each organization, plans for operationalizing emergency infrastructure, including a quick response team, should be ready for implementation at any time. Such a plan would be included in an organization's accreditation process. A readiness plan would include best practice guidelines for managing epidemics, infection control standards and protocols, decision-making and accountability structures, patient facilities, and protective equipment to safeguard staff. The plan would comprehend all phases of emergency, including algorithms for rapid decision-making during initial stages, phased response plans, and scenarios for deployment of staff in various contingencies (see Appendix B).

Special attention needs to be directed to severe or widespread emergency situations that require self-sufficiency and long-lasting emergencies during which suspended but vital services must be reinstated. Staffing strategies to complement the readiness plan would include:

- Providing infection control departments with a higher profile backed by more staff with greater authority;
- Investing in the education and placement of nurses skilled in emergency and intensive care nursing;
- Cross-training staff to fulfill alternative roles during emergencies; create specialized resource teams

- Educating and regularly updating all staff in the principles of infection control; and
- Ensuring that sufficient full-time and regular part-time staff are available to cover emergencies without recourse to casual staff.

One possible solution for ensuring sufficient numbers of full-time and regular part-time staff is the use of float pools, commonly called “resource teams”. Float pools played a supportive role during restructuring transitions in the mid 1990s; their modern equivalents may provide prototypes for emergency response teams in the contemporary hospital. Unlike float pools used during the nursing shortage of the 1980s, modern resource teams tend to be staffed by full-time employees who receive cross-training and orientation to all units to which they may be assigned.

In 2002, the Ontario Hospital Association (OHA) reported that 65% of hospitals surveyed had adopted flexible scheduling strategies such as float pools and resource teams (OHA, 2002). Agency and casual nurses who move among unfamiliar units increase the danger of infection. However, resource team nurses moving among known units and following familiar infection control protocols pose far less danger to patients and staff. It is feasible that teams of expert nurses could be created to provide direction and support during an infectious outbreak. These nurses would have expertise in assessing risk, coordinating appropriate personal protective equipment use, and proper use of crisis management interventions (Hayward, 2003). Plans to design, fund, educate, operationalize, and reward such teams should be a priority. Butt et al. (2002) provide a good overview of learning needs of nurses experiencing job change. During the outbreak there was no time to address the required knowledge and skill.

The epidemic was confined mainly to hospitals; however, in future, we may not be as fortunate. The recent report of the National Advisory Committee on SARS (National Advisory Committee on SARS and Public Health, 2003) suggests a complete overhaul of the infrastructure and funding of public health to make it better able to address emergencies like SARS in the future. Of all the sectors, home care was the most neglected during the SARS epidemic and the most poorly funded. Had the epidemic moved into the community as it did in Hong Kong (Callery, 2003), this under-funded sector might have been heavily involved in its containment. It is extremely important to

consider what interventions will be needed to keep the community safe.

Outside hospitals there are some emergency first response teams, outreach teams, and bio-terrorism teams. Military services often supply personnel and resources during disasters. However, these emergency services are not designed to meet civilian hospital needs (Delchanty, 1996).

The Centre for Emergency Preparedness and Response (CEPR) was created in July 2000, serving as the single coordinating point for public health security in Canada. One activity of the CEPR involves working with the provinces and their local public health authorities to ensure that front line health workers have the tools to respond to emergencies (Health Canada, 2001). The CNA is collaborating with Health Canada's Centre for Emergency Preparedness to create a more effective response to emergency situations. The CNA is also working with Health Canada to define nurses' roles in national emergencies (CNA, 2003).

In the US, the American Nurses Association collaborated with the Department of Health and Human Services (HHS) Office of Public Health Preparedness and the Public Health Service (PHS) to establish a National Nurses Response Team (NNRT) to respond to threats of bio-terrorism. Presently, there is no national Canadian emergency nurse registry. However, the RNAO has begun to recruit nurses for a registry, VIANurse (Voluntary Immediately Available Nurse to provide resources in emergencies. VIANurses will be deployed to health care facilities anywhere in Ontario that are designated as having emergency status by the Ministry of Health and Long-Term Care (RNAO, 2003).

## **14. Recommendations**

### **A. Decision making and emergency preparedness for real world crises:**

1. Ensure that the system includes surge capacity.
2. Create a full-time centralized resource team consisting of full-time employees, well oriented, with strong team cohesion and available for continual practice.
3. Cross-train to provide adequate back-up for contingencies; create specialized resource teams.
4. Expand and invest in infection control teams in all health care facilities and public health.

5. Enhance staff education and ongoing training in infection control in undergraduate programs and in health care staff development programs.
  6. Ensure emergency response protocols are in place and staff are ready to implement them.
  7. Rebuild health care support (e.g., housekeeping, staff counseling) lost during restructuring.
- B. Optimize return on investment in human resources:
8. Reduce overtime and sick time costs by increasing base staff allocation.
  9. Maintain a high ratio of full-time to part-time staff by offering full-time positions to all who want them.
  10. Develop sustainable infrastructure for home care.
  11. Increase the complement of full-time jobs in long-term care and home care.
  12. Hire sufficient public health staff to carry out public health programs while addressing infectious disease control.
  13. Create healthy workplaces to ensure that health care personnel enjoy good health and have optimal physical defense against illness and injury.
  14. Create workforce databases that can be used for planning and projection.
- C. Nurture excellence, continuity, and employee loyalty:
15. Address the problem of unequal wages for nurses in different health care sectors.
  16. Harmonize the financial reward systems of agency and hospital workers.
  17. Eliminate casual staff in critical situations wherever possible.
- D. Increase intersectoral collaboration:
18. Open more communication channels among health care sectors for mutual planning and exchange of information.
  19. Encourage the establishment of collegial relations at various levels, including personnel dealing with infection control.
  20. Recognize that people work across sectors and strategize how to capitalize on their cross-training.
  21. Establish a national Canadian emergency nurse registry.

## References

- Advisory Committee on Population Health. (2001). *Survey of Public Health Capacity in Canada Highlights*. Report to the Federal Provincial and Territorial Ministers of Health.
- American Federation of State, County and Municipal Employees of Medicine. (2002, September 24). *Comments of the American federation of state, county and municipal employees of medicine: Work environment for nurses and patient safety project* [Electronic version]. American Federation Employees: United Nurses of America. Retrieved January 9, 2003, from <http://www.afscme.org/una/una0209.htm>
- Australian Institute of Health and Welfare. (2000). *Media Release: Nursing numbers continue to fall* [Electronic version]. Canberra, Australia: Australian Institute of Health and Welfare. Retrieved from <http://www.aihw.gov.au/media/2000/mr000901.html>
- Armstrong-Stassen, M., Cameron, S. J., & Horsburgh, M. E. (1996). The impact of organizational downsizing on the job satisfaction of nurses. *Canadian Journal of Nursing Administration, 9*(4), 8-32.
- Baumann, A., & Blythe, J. (2003). Nursing human resources: Human cost versus human capital in the restructured health care system. *Health Perspectives, 3*(1), 27-34.
- Baumann, A., Blythe, J., Denton, M., O'Brien-Pallas, L., & Zeytinoglu, I. (2002). [The new health care worker: The implications of changing employment patterns]. Unpublished raw data. Funded by the Canadian Institute of Health Research.
- Baumann, A., O'Brien-Pallas, L., Armstrong-Stassen, M., Blythe, J., Bourbonnais, R., Cameron, S., et al. (2001). *Commitment and Care: The Benefits of a Healthy Workplace for Nurses, Their Patients and the System*. Ottawa, ON: Canadian Health Services Research Foundation.
- Baumann, A., O'Brien-Pallas, L., Deber, R., Donner, G., Semogas, D., & Silverman, B. (1996). Downsizing in the hospital system: A restructuring process. *Healthcare Management FORUM, 9*(4), 5-13.
- Baumann, A., & Underwood, J. (2002). *Innovations and strategies for addressing nursing workload*. Nursing Effectiveness Utilization and Outcomes Research Unit. McMaster University. Hamilton, ON, p. 12.
- Blythe, J., Baumann, A., & Giovannetti, P. (2001). Restructuring in three Ontario hospitals. *Image: Journal of Nursing Scholarship, 33*, 61-68.

- Butt, M., Baumann, A., O'Brien-Pallas, L., Deber, R., Blythe, J. & DiCenso, A. (2002). The learning needs of nurses experiencing job change. *The Journal of Continuing Education in Nursing*, 33(2), 1-7.
- Callery, S. (2003) *The SARS outbreak: Sharing strategies and experiences with regions of China*. Presentation at OHA, October 2<sup>nd</sup>.
- Canadian Institute for Health Information. (2003). *Registered nurse database: Supply and distribution of registered nurses in Canada, 2002*. Ottawa, ON: Author.
- Canadian Institute for Health Information. (2001). *Health personnel in Canada 1991 to 2000*. Ottawa, ON: Author.
- Canadian Nurses Association. (2002). *Planning for the future: Nursing human resource projections*. Ottawa, ON: Author.
- Canadian Nurses Association. (n.d) What every nurse should know about bioterrorism and emergency preparedness. Retrieved on December 11, 2003 from the CNA website: [http://www.cna-nurses.ca/\\_frames/resources/resourcesframe.htm](http://www.cna-nurses.ca/_frames/resources/resourcesframe.htm)
- Cary, A. (2002, August 7). CBC, health agencies remedying nursing shortage [Electronic version]. *Top mid-Columbia Stories*. Washington: Tri-City Herald. Retrieved December 9, 2002, from [www.tri-cityherald.com/news/2002/0708/story2.html](http://www.tri-cityherald.com/news/2002/0708/story2.html)
- Chan, B. T. B. (2002). *From perceived surplus to perceived shortage. What happened to Canada's physician workforce in the 1990s*. Ottawa, ON: Canadian Institute of Health Information.
- Crighton, E. R., Moineddin, R., Upshur, R.E.G., & Mamdani, M. (2003). The seasonality of total hospitalization in Ontario by age and gender. *Canadian Journal of Public Health* 94(6), 453-457.
- Commonwealth Department of Education, Science, Training and Youth Affairs (DETYA). (2001). Chapter 6: The nursing workforce in Australia [Electronic version]. In *National review of nursing education: Discussion paper*. (ABN 51 452 193 160). Canberra, Australia: The Commonwealth of Australia. Retrieved June 3, 2002, from <http://www.dest.gov.au/highered/nursing/pubs/discussion/chap6.htm#nurse>
- Community Health Nurses Association of Canada (CHNAC). (2003, December) A Briefing Note Prepared For the Dec/03 National Roundtable Discussion With the Honourable Anne McLellan.
- Community Health Nurses Initiatives Group. (2003, July). *Lessons learned from SARS: The experiences of community health and public health nurses*. Submitted to the Registered Nurses Association of Ontario.

- Davis, C. R. (Ed.). (2002). *Characteristics of foreign nurse graduates in the United States workforce 2000-2001: A survey by the Commission on Graduates of Foreign Nursing Schools (CGFNS)*. (Rep. No. ISBN 0-9630592-0-3). Philadelphia, PA: Commission on Graduates of Foreign Nursing Schools.
- De Pape, N. (2002). *La balade européenne des infirmières*. Le soir en ligne, 27 avril.
- Esser, D. A. (2002). A summary of item 130 of the 2002-2004 Appropriation Act: A study of the funding needed and sources of funding to train nurses in Virginia [Electronic version]. Virginia Employment Commission. Retrieved January 9, 2003, from <http://legis.state.va.us/jhc/1008vec.pdf>
- Farquharson, C., & Baguley, K. (2003). Responding the severe acute respiratory syndrome (SARS) outbreak: Lessons learned in a Toronto emergency department. *Emergency Nursing*, 29, 222-228.
- Friss, L. (1994). Nursing studies laid end to end form a circle. *Journal of Health Politics, Policy and Law*, 19(3), 597-693.
- Glaser, C. A., Gilliam, W. W., Dassey, D. E., Waterman, S. H., Saruwatari, M., Shapiro, S. et al. (2002). Medical care capacity for influenza outbreaks, Los Angeles. *Emerging infectious diseases* 8(6), 569-574.
- Grinspun, D. (2002). A flexible nursing workforce: Realities and fallouts *Hospital Quarterly* 5(3), 7984.
- Health Canada (October 2001). Health Canada's Centre for Emergency Preparedness and Response. Retrieved December 11, 2003 from: [http://www.hc-sc.gc.ca/english/media/releases/2001/2001\\_110ebk2.htm](http://www.hc-sc.gc.ca/english/media/releases/2001/2001_110ebk2.htm)
- Hospital Report Research Collective. (2002). *Hospital Report 2001 vol. 2 Exploring nursing, women's health, population health*. Toronto, Ontario Hospital Association and the Government of Ontario.
- International Council of Nurses. (2002). *ICN workforce forum overview paper* [Electronic version]. Reykjavik, Iceland. Retrieved from <http://www.icn.ch/forum2002overview.pdf>
- Joint Provincial Nursing Committee. (2001). Good nursing, good health: A good investment., Toronto, Ministry of Health and Long-Term Care.
- Joint Provincial Nursing Committee. (2003, in press). Good nursing, good health: the return on our investment. Toronto, Ministry of Health and Long-Term Care.
- Leiterman, J. (2003). VON Canada's brief to Independent SARS Commission.

- McLeod, H. (2003). SARS Health care in Ontario: What has the system learned? *Hospital Quarterly*, 6(4) 53-54.
- MIEH (McMaster Institute of Environmental Health) - City of Hamilton SPHS. (2002). *Template for assessing public health response to disasters*. Hamilton, ON: Author.
- Ministry of Health and Long-Term Care. (2003, April 25<sup>th</sup>) *SARS Bulletin for Health Care Providers*. Toronto, ON: Author.
- Mohren, D. C. L., Jansen, N. W. H., Kant, I., Galama, J., van den Brandt, P.A., & Swaen, G. M. H. (2002). Prevalence of common infections among employees in different work schedules *Occupational and Environmental Medicine*, 44(1), 1003-1011.
- Murray, V. V. (1970). *Nursing in Ontario*. Ottawa, ON: Queen's Printer.
- National Advisory Committee on SARS and Public Health. (2003). *Learning from SARS: Renewal of Public Health in Canada*. Ottawa, ON: Health Canada.
- Nursing and Midwifery Staffs Negotiating Council. (2002). *Staff side evidence to the review body for nursing staff, midwives and health visitors* [Electronic version]. London, UK: Nursing and Midwifery Staffs Negotiating Council. Retrieved December 12, 2002, from <http://www.rcn.org.uk/pdf/brol.pdf>
- O'Brien-Pallas, L. (2003). Here today, gone tomorrow: A reality that must change. Toronto, *RNAO Healthy Workplaces Conference*, November 21.
- O'Brien-Pallas, L., Thomson, D., Alksnis, C., & Bruce, S. (2001). The economic impact of nurse staffing decisions: Time to turn down another road. *Hospital Quarterly*, 4(1), 42-50.
- Ontario Hospital Association Hospital HR Policy & HR Unit (2002, Spring). *The state of nurse scheduling: Key survey findings prepared for the OHA regional nurse scheduling workshops*. Toronto, ON.
- Ontario Ministry of Health and Long-Term Care. (2003). Retrieved October 25, 2003, from [http://www.health.gov.on.ca/english/providers/program/pubhealth/sars/sars\\_mn2.html](http://www.health.gov.on.ca/english/providers/program/pubhealth/sars/sars_mn2.html)
- Ontario Nurses' Association (2003). Frequently asked questions. Retrieved November 26 from <http://www.ona.org/faq/index.html>.
- Orr, B. (2003). Defining the new normal. *Hospital Quarterly* 7(1), 28-32.
- Richardson, S., & Allen, J. (2001). Casualization of the nursing workforce: a New Zealand perspective on an international phenomenon. *International Journal of Nursing Practice* 7, 104-8.

- Registered Nurses Association of Ontario (RNAO). (2003). *Survey of Casual and part-time registered nurses in Canada*. Toronto, ON: Author.
- Registered Nurses Association of Ontario (n.d). *VIANurse: Voluntarily immediately available nurse*. Retrieved on December 11, 2003 from the RNAO website: <http://www.rnao.org/vianurse.asp>
- Tilly, C. (1991). *Half a job: Bad and good part-time jobs in a changing labour market*. Philadelphia, PA: Temple University Press.
- World Health Organization. (2003). *Severe acute respiratory syndrome (SARS): Status of the outbreak and lessons for the immediate future*. Geneva, World Health Organization. Communicable Diseases and Response.
- Zeytinoglu, I. U. (1993). Negotiation issues for part-time workers: The impact of occupation. *Industrial Relations*, 48(2), 305-320.
- Zeytinoglu, I. U. (1999). Flexible work arrangements: An overview of developments in Canada. In I. U. Zeytinoglu (Ed.), *Changing work relationships in industrialized economies* (pp. 41-58). Amsterdam, The Netherlands: John Benjamin, Advances in Organizational Studies.
- Zeytinoglu, I. U., & Muteshi, J. K. (1999). Changing work relationships: Enacting gender, race/ethnicity and economic class. In I. U. Zeytinoglu (Ed.), *Changing work relationships in industrialized economies* (pp. 1-17). Amsterdam, The Netherlands: John Benjamin Publishers, Advances in Organizational Studies.

## Appendix A

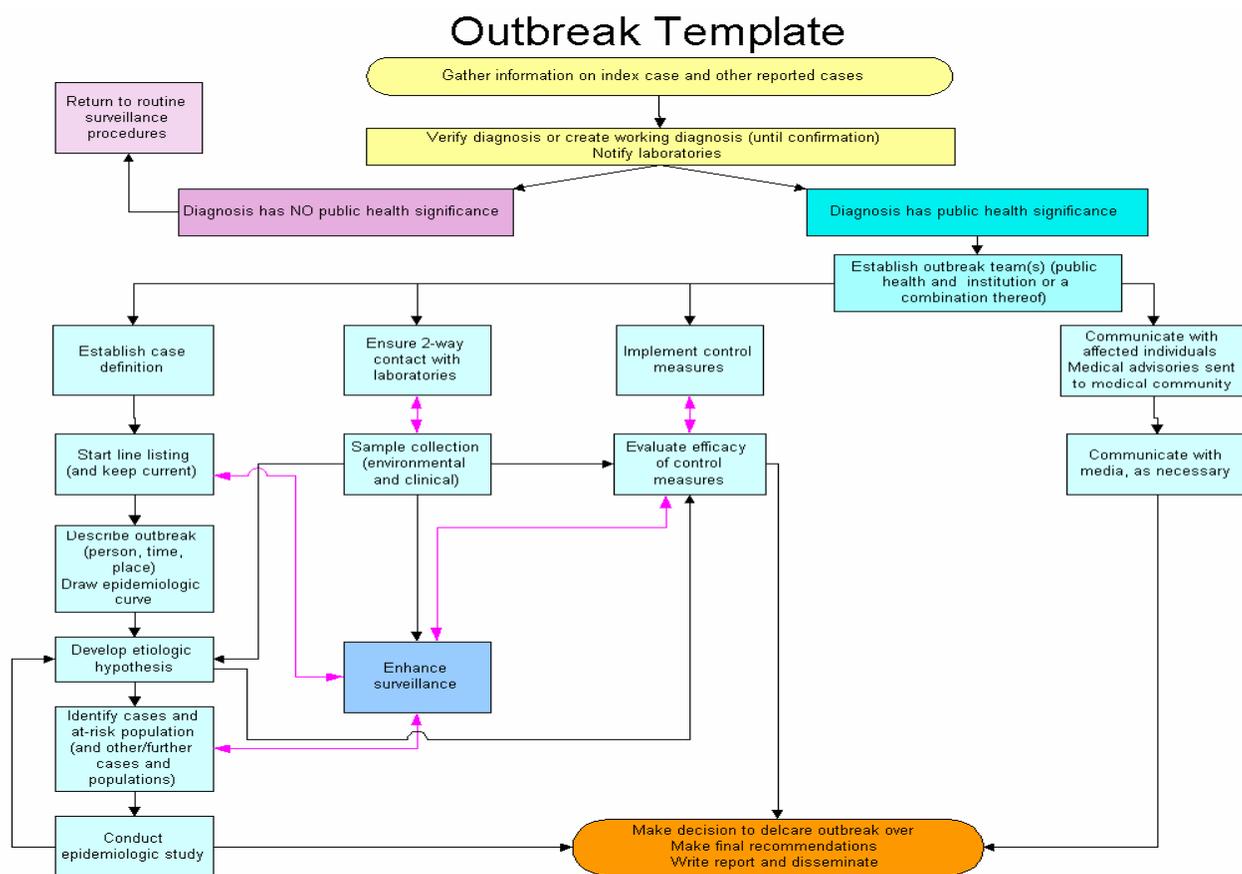
### List of Interviewees

| Interviewee                          | Location  | Title   | Contact Information   |
|--------------------------------------|---|---|---|
| <i>General Hospitals</i>             |   |   |   |
| Marg Czaus                           | Humber River Regional Hospital                        | Chief Nursing Officer & Professional Practice Program Director, Medical Program | 200 Church Street<br>Weston, Ontario<br>M9N 1N8   |
| Dr. Leslie Vincent                   | Mount Sinai Hospital                                  | Vice President, Nursing   | Mount Sinai Hospital<br>600 University Avenue<br>Toronto, Ontario<br>M5G 1X5<br>Tel: 416-586-4800 ext. 2357<br>Fax: 416-586-8756<br>email:<br>cfraser@mtsinai.on.ca |
| Georgina Velhorst                    | North York General Hospital                           | Vice President, Patient Services and Chief Nursing Executive                    | 4001 Leslie Street<br>Toronto, Ontario<br>M2K 1E1   |
| Frances Flint                        | Sunnybrook and Women's College Health Sciences Centre | Acting Chief Nursing Officer  | 2075 Bayview Avenue<br>Toronto, Ontario<br>M4N 3M5  |
| Pat Norman                           | Southlake Regional Health Centre                      | Vice President, Nursing   | 596 Davis Avenue<br>Newmarket, Ontario<br>L3Y 2P9   |
| Susan Evans                          | The Scarborough Hospital, Grace Division              | Vice President, Programs  | 3030 Birchmount Road<br>Scarborough, ON<br>M1W 3W3  |
| <i>Public Health Units</i>           |   |   |   |
| Anita Evely                          | York Region Public Health Services                    | Chief Nursing Officer   | Box 147 17250<br>Yonge Street<br>Newmarket, ON<br>L3Y 3Z1   |
| Donalda McCabe                       | Toronto Public Health                                 | Regional Director, West Region  | 277 Victoria Street<br>5 <sup>th</sup> Floor<br>Toronto, Ontario<br>M5B 1W2   |
| <i>Long Term Care/Rehabilitation</i> |   |   |   |
| Mary Grace Grossi                    | St. John's Rehabilitation Hospital                    | Professional Practice Leader of Nursing   | 285 Cummer Avenue<br>Toronto, Ontario<br>M2M 2G1  |
| Linda Novotny                        | West Park Healthcare Centre                           | Director Program Operations   | 82 Buttonwood Avenue<br>Toronto, Ontario<br>M6M 2J5<br>Tel: 416-243-3600<br>Fax: 416-243-8947   |

| Interviewee                     | Location                                | Title  | Contact Information  |
|---------------------------------|---|--|--|
| <i>Home Health Nursing</i>      |   |  |  |
| Diane McLeod                    | VON Toronto York Region Branch          | Chief Executive Officer                                      | 7100 Woodbine Avenue<br>Suite 402<br>Markham, Ontario<br>L3R 5J2<br>Tel: 905-479-3201<br>Fax: 905-479-3086<br>email:<br><a href="mailto:mcleodd@vontoryork.com">mcleodd@vontoryork.com</a> |
| Barb Mildon                     | Saint Elizabeth Health Care             | Vice President,<br>Nursing Practice<br>during SARS outbreak, | 8920 Woodbine Avenue<br>Suite 303<br>Markham, Ontario<br>L3R 9W9<br>Fax: 905-944-0566<br><a href="mailto:bmildon@rogers.com">bmildon@rogers.com</a>  |
| <i>Community Health Centres</i> |   |  |  |
| Janet Meyer, BScN, RN           | South Riverdale Community Health Centre | Acting Clinical Coordinator during SARS outbreak             | 955 Queen Street East<br>Toronto, Ontario<br>M4M 3P3<br>Tel: 416-461-1925<br>Fax: 416-461-8245   |

## Appendix B

### Template for Assessing Public Health Response to Disasters



Source: MIEH (McMaster Institute of Environmental Health), 2002. Reprinted with permission of the author.