

(Photo from Health Canada)



Lessons Learned from Canada: The Imperative to Build a Culture of Preparedness for Health Care Providers as First Responders/Receivers

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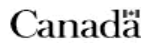
with Tracey O'Sullivan, PhD, Patty Thille, MA and the CRTI Team

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Research Questions: SARS as a Proxy for Infectious Disease Outbreaks

1. How do individual factors, social and physical environments, and behavioural factors interact to influence the health of health care workers?
2. What types of organizational, instrumental, and social support mechanisms are needed to assist health care workers in their roles as first receivers during CBRNE events?
3. Why was SARS a wake-up call for Canada?
4. What can be done to better prepare and protect health care workers as first responders?
5. After 5 years, are we ready?



SARS: A Proxy for CBRNE and All Hazard Disaster Threats: Intentional and Unintentional

SARS was a new corona
(common cold) virus

- A severe acute respiratory syndrome (SARS) that resulted in more than 8,000 cases in 27 countries
- 4-10% mortality and no treatment or vaccine

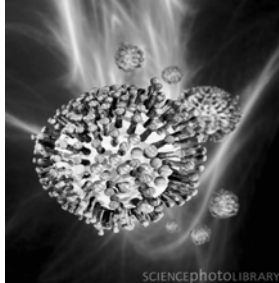


Photo credit: Victor Habbick Visions/ Science Photo Library

SARS in Canada

- **March – August 2003 in 2 waves**
 - 438 people with probable infections; 251 confirmed
 - 43% of those infected in Toronto and Vancouver were health care workers
 - 44 deaths-including 1 physician; 2 nurses
- **SARS in Toronto area resulted in:**
 - Health care worker burn out
 - Stigmatization
 - Severe tourism, racism and economic implications – WHO travel ban to Toronto
 - Loss of confidence in 'chain of command' and health care system resiliency



Artist: Storme Arden

Learning from SARS: Renewal of Public Health in Canada

- “SARS virus is biologically handicapped as it requires prolonged close contact. It had been contained, not by the genomic revolution, not by advanced pharmaceuticals, but by old fashioned public health measures like hand washing, infection control procedures, isolation of cases, tracing and quarantine”
- “In Canada more than 100 health care workers fell ill with probable SARS and 3 succumbed”

Source: Naylor Report “Learning from SARS, October, 2003”



CRTI Caring About Health Care Workers Project: Assumptions

Psychosocial influences on health are critical considerations for workplace health promotion & emergency preparedness (Sallis, 2006; Reissman et al., 2006)

We must learn from the past to prepare for the future. Health care workers require organizational, instrumental (e.g. PPE) and social supports to assist them to balance work-family conflict and stress and to adequately perform their roles (Amaratunga, O'Sullivan 2006)

Lack of support and communication mechanisms for health care workers represents a major threat to public health (Campbell, 2006)

"In many parts of the country, capacity to battle public health threats is limited... rural hospitals seldom have rooms with respiratory facilities (Naylor Report, 2003)

What keeps us awake at night? A Preview of the CRTI project findings

- SARS – a perfect storm –Toronto quarantined 30,000 people – yet health care workers accounted for 40% of SARS infections in Toronto (Naylor, 2003)
- Demographic shifts – 53% of our CRTI project respondents (n=1543 nurses, emergency and ICU nurses) are single parents with dependents – a vulnerable population in time of crisis
- 90% of respondents have never taken part in an emergency drill
- 50% did not know whether their hospital or institution had an institutional emergency plan.
- Nurses told us the 'supply cupboards of the nation are empty' – and they are not ready for another outbreak!

What keeps you awake at night?

Have we learned the lessons of SARS?

- In 2001, ~800,000 health care workers in Canada of which 34% are RNs, ~7% Licensed Practical Nurses (LPNs) – an aging population (44 years for nurses)*
- ~93% of nurses and LPNs in Canada are women*, many of whom are single parents and family caregivers
- In 2005, 39% of Canadian nurses are part time workers* Many nurses work in multiple sites without adequate benefits, PPE or training
- Are health care workers in Canada prepared, trained and protected? What did they learn from SARS?
- Are they and their families ready?

*Source: CIHI, Canada's Health Care Providers, 2007

Pandemic Influenza Predictions: Are Health Systems Ready?

- 2 or 3 waves lasting between 13 and 23 months (CDC Atlanta, 2006)
- Globally, between 2 - 7.4 million deaths
- The majority of infectious patients – 95% – 99% be cared for in their own homes, hospitals & treatment facilities will be overwhelmed and MDs' offices will be closed to infectious patients
- City of Ottawa Public Health (Are You Ready Campaign: www.ottawa.ca/city_hall/index) Dept. predicts:
 - 30,000 cases per week
 - 15,000 will seek health care;
 - 500 will be hospitalized
 - 80 will die



Project Research Methods

Comprehensive literature review and synthesis

**Focus Groups (nurses)
(x5) n=100**

Format: Structured Interview Matrix

**National survey (nurses)
n=1543**

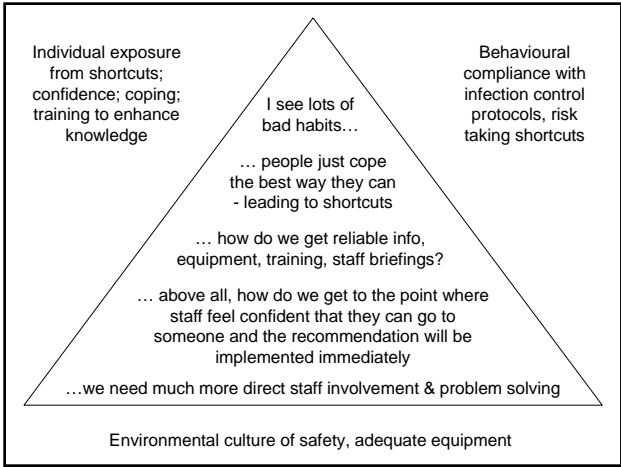
**Work satisfaction;
supports; preparedness;
perceived health**

Policy Gap Analysis

Analysis of multi-jurisdictional plans for visible supports for health care workers (n = 9)

Instrumental Support

- Adequate resources and PPE
- Adequate HR to reduce burnout
- HR movement hampers infection control
- Strong visible trusted leadership
- Basic needs – food, transportation, rest areas
- Benefits / financial support if illness or quarantined
- Professional development & training
- Compensation for risk
- Child / elder care



"In our hospital, we were told that our hospital would be a SARS hospital ... within 2 weeks all management offices were moved to another location - another hospital.

We were told it was all because of amalgamation and it was going to happen anyways ... but it sent a strong message."

- ## Informational Support
- Clear consistent accessible information
 - Single trusted source
 - Education on policies and procedures across practice settings
 - Rights and entitlements regarding refusal to work
 - Public education
 - Proactive training – exercises, practice scenarios
 - Communications between health care workers and families

“There needs to be a support system emotionally, that should include your family, because what we’re coming into contact with affects them and it needs to be long-term”

“There needs to be a command centre – someone who is there all the time that can give you information...”

“We need someone on the units on a daily basis monitoring for burnout”

Emotional Support

- Long and short term psychological support
- Recognition of frontline efforts & validation
- Support to deal with stigma
- Sense of psychological preparedness
- Dealing with non-compliance
- Professional / personal dilemma – work and family concerns
- Ethical issues – treatment limits
- Dealing with fears

Needed Supports

Are the provinces going to fund this on their own or will there be an influx of funds from the federal government?

Is there buried treasure somewhere?

“you’re probably going to get me coming to work if I know my kids are vaccinated”

Emergency Plan Gaps

Survey and Emergency Plan Gap Analysis

National Survey of the Work and Health of Nurses (Statistics Canada, 2006) reported that 1/3 of nurses identified job strain and poor health related to their work environment

The gap analysis identified both strengths and gaps with respect to instrumental, communication and social supports. Overall, there was considerable variation across the hospital, provincial, and federal government plans.

Critical Gap Analysis in 11 Categories

- Personal protective equipment (PPE)
- Training and professional development
- Informational support
- Quarantine knowledge and skill sets
- Psychosocial support
- Due diligence and management responsibilities
- Managing worker fatigue and stress
- Resource management
- Vaccination and anti-viral therapy plan
- Compensation for front line health care workers
- Media strategies

Gap Analysis in 3 Ontario Hospitals

- Hospital pandemic plans were reviewed from 3 cities in Ontario
- e.g. PPE: All reviewed plans included recognition of the importance of stock piling PPE e.g. a 4 to 6 week supply of masks, goggles, gloves, but 2 hospitals had no plans for warehousing strategies, inventory management, equipment maintenance or inspection

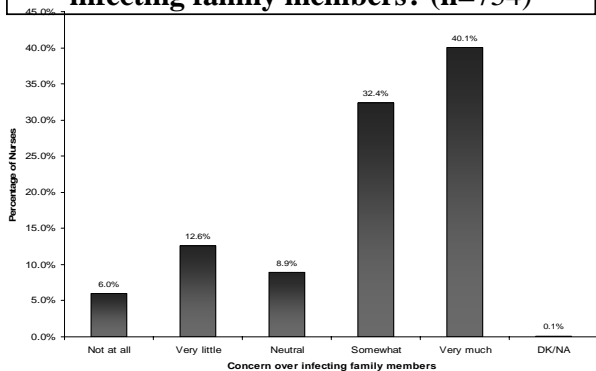
Gaps - examples

- Psychosocial: Plan 2 was the only plan that was attentive to the psychosocial needs of health care workers and had retained the services of an external human resources agency
- None of the plans addressed ethical issues related to patient care
- Due Diligence and Management Responsibilities: Each plan identified management responsibilities, however the strategies were not consistent. All plans recommended a list of resources such as child care, elder care and pet care

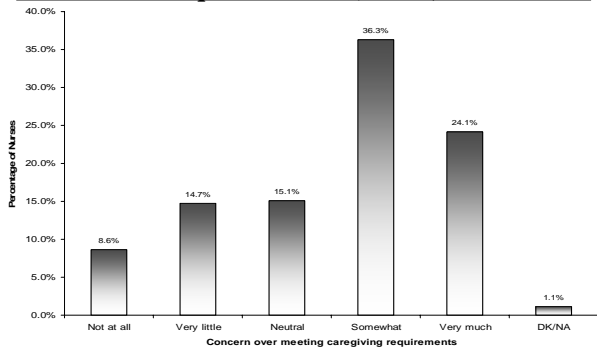
Survey Findings n=1543

- The web based national survey with emergency and critical care nurses (10% of population) focused on work satisfaction, supports, preparedness and the perceived health of health care workers
- Recruitment through CFNU, nursing colleges and associations
- 36% of the respondents, in the last 3 years, had provided direct care for a patient with one of the following infectious diseases: SARS, influenza, HIV/AIDS, Streptococcal, TB, E. Coli, Norovirus, Legionnaire's, and other unknown diseases – 3.1% became infected
- 35% did not know whether they had come into contact with an infectious patient
- 82% of nurses said they did not, or did not know, whether their family has a formal emergency plan in place

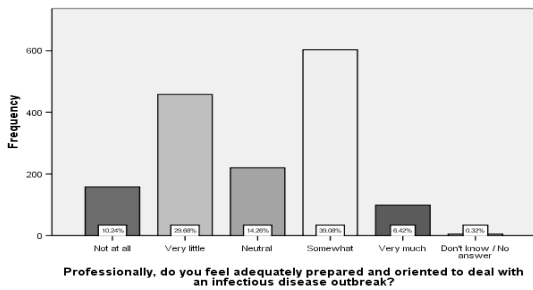
To what extent were you concerned about infecting family members? (n=754)



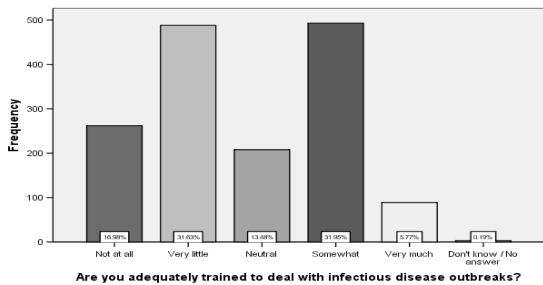
To what extent were you concerned that you would not meet your family caregiving requirements? (n=754)



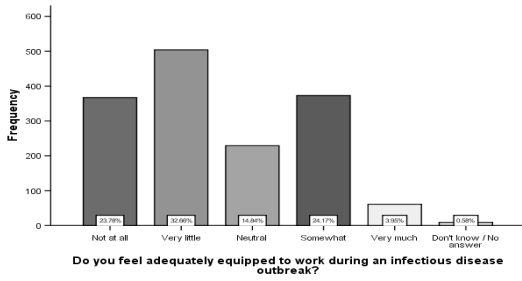
Disaster Preparedness N =1543



Adequate Disaster Training N=1543

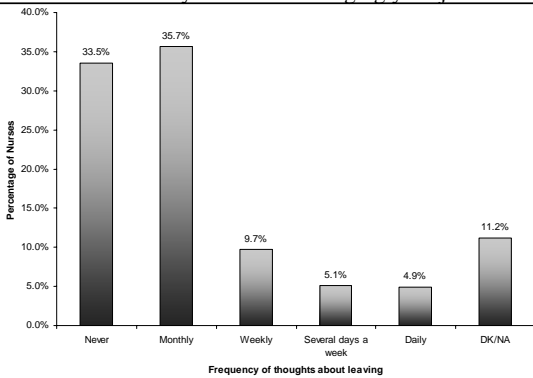


Adequately Equipped N=1543

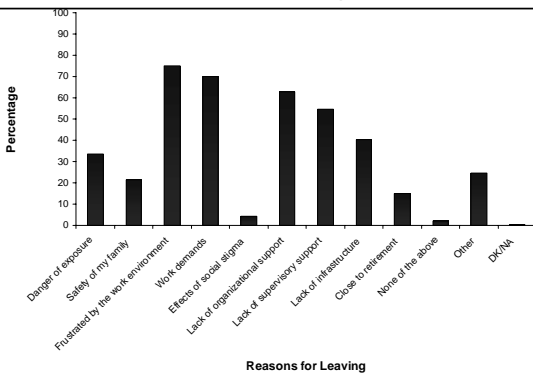


Desire to Remain N=1543

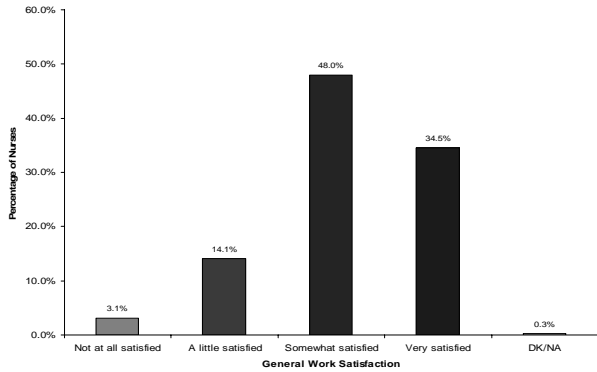
How often do you think of changing your job?



Reasons for Leaving N=1543



General Work Satisfaction N=1543



Key Lessons from SARS

- Health systems were not prepared
- Ineffective communications
- Jurisdictional boundary confusion
- Leadership/chain of command confusion
- Cross-disciplinary and sector tensions
- Vulnerability of health care workers
- Work-family conflict and stigma
- Collateral damage – racism against ethnic Asian populations and businesses

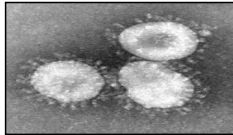


Photo credit: National Geographic

Emerging Themes

The health, well being, and performance of First Responders'/Receivers' during infectious disease outbreaks is impacted by the interaction of individual, behavioural, and social/physical environmental factors

Individual factors:

Exposure, prophylactic barriers (vaccines, anti-virals), existing vulnerabilities (chronic disease, weakened immune system), fatigue, knowledge, coping skills

Behavioural factors:

Compliance with infection control guidelines, stress management, lifestyle

Environmental factors:

*Social – work-family role conflict, stigma, relationships with colleagues, work conditions; gender power relations
Physical – adequate engineering controls, availability of personal protective equipment, training culture*

Population Health Approach

A socio-ecological framework is useful and appropriate for examining the complexity of factors impacting health care workers' well being, which in turn impacts public health response and surge capacity during a large scale outbreak

Individual factors (biological, cognitive) interact with behaviour, and social / physical environmental factors in cumulative ways to impact nurses' health

Proactive policies, procedures and reform are urgently needed to enhance Canada's collective ability to combat a large scale CBRNE event, to retain, recruit and protect health care workers – as first responders / receivers, as well as their families

Summary of First Receiver/Responder Needs

- ✓ Personal protective equipment and uniform services
- ✓ Education for all staff regarding emergency plans
- ✓ Informational support – clear communications, internet access
- ✓ Clear delineation of management responsibilities and roles
- ✓ Quarantine guidelines and training
- ✓ Emotional / psychological support – to balance work and family life
- ✓ Human resource policies focused on worker fatigue / stress
- ✓ Instrumental supports – training, drills, education
- ✓ Vaccination / anti-viral therapy plan, including families
- ✓ Recognition / compensation
- ✓ Media strategies
- ✓ Professional development, rewards, incentives

Policy Report Recommendations December, 2007

- Prepare for and improve health care surge capacity
- Augment training and professional development opportunities for frontline healthcare workers
- Improve retention of health care workers during emergencies with training, incentives, enhanced communication and instrumental supports
- Anticipate health care system failure
- Refine occupational health and safety legislation regarding the rights and responsibilities of health care workers who put themselves in danger

Canada's Response to SARS

- Creation of the Public Health Agency of Canada (PHAC)
- National Health Emergency Response Teams (HERT) with skills to establish mobile responses within 24 hours of a request for assistance
- Curriculum development – online course for front line workers, physicians, nurses, nurse practitioners
- DND – multiple strategies to support military and their families
- Canadian Federation of Nurses Unions – multiple projects to improve recruitment and retention of nurses
- Canadian Council on Health Services Accreditation (CHSsA) documents exceptional practices on website

Ontario's Response to SARS

- Ontario - New legislation to make the Chief Medical Officer of Health more independent
- Increased funding to local health units by more than 65% - to \$442 m in 2006
- Established Provincial Infectious Disease Advisory Committee – with Ministry of Labour and additional Occupation Health Physician
- Created the Emergency Mangement Unit in response to SARS and power outage of 2003
- Worker safety Insurance Board and 7 Ontario Medical colleges collaborate on an occupational health curriculum
- Ontario Health Plan for Pandemic Influenza (2007) describes engineering controls, admin work practices, PEP, infection control measures for employers and addresses discrepancies in benefits for employees
- Every hospital has a joint Occupational Health and Safety Committee

Ontario Response to SARS

- Improved communications among the ministry and health care stakeholders, including front line staff
- Emergency Management and Civil Protection Act passed in June 2006 with additional powers to province to respond to provincial emergency
- Stockpiling of antivirals in Ontario as part of the 55 m doses across Canada, supplies, equipment, distributed more than 15,000 infection control kits to front line workers
- Appointment of new, permanent health and safety advisory committee under the Occupational Health and Safety Act – with representatives from health care employers and unions

Recommendations for Strengthening Health Care Institutional Resiliency

- Stockpiling PPE and fit testing / training for first responders/receivers and employees
- Specific training / professional development - accessible for all staff
- Clarify protocols and supports for different quarantine restrictions
- Planned psychosocial services to reduce negative emotional impact; acknowledgement of dual-role conflict as signif. source of stress for staff
- Visible leadership and support for ethical decision-making
- Creative HR mobilization strategies; Monitor staff for burnout / fatigue
- Concise documentation of assessed resource needs, (checklist)
- Clearly defined strategies for dissemination of vaccine and anti-virals, combined with informational resources regarding priority groupings
- Recognition and compensation for all staff involved in the response
- Strategies to reduce sensationalism and stigmatization through regular contact and planning with the media,
- Creation of calming and confidence-inspiring public messages which accurately portray health care workers and their contribution to community response

Conclusions: Preparing Resilient Health Care Systems

- Progress has been made since SARS but Nurses say much more needs to be done to prepare them with communication, instrumental supports for emergency preparedness
- The Health care system surge capacity and resiliency are dependent upon recruitment and retention of first receivers – 90% of nurses are women and family caregivers – they need additional social supports to balance professional and family life, as well as communication and instrumental supports to perform their duties safely
- Protecting the public depends on our ability to prepare and equip front line workers – we can and should do better!

Are We Ready: “In Gauze we Trust” 1918-19 pandemic slogan



Painting credit:
Storme Arden
