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ORIGINAL ARTICLE

Godzilla in the corridor: The Ontario SARS crisis in historical perspective

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Summary Ontario nurses were employed as the front-line workers when SARS descended upon Toronto in March 2003. Once the crisis had subsided, many nurses remarked that SARS had forever altered their chosen profession; employment, which they once viewed as relatively safe, had been transformed into potentially life-threatening. This discussion provides descriptions of these expressions through nurses who experienced the crisis and chose to go on the public record. Secondly, it compares the subjective perceptions of those nurses to those held by nurses who worked through historical epidemics of unknown or contested epidemiology. The historical literature on nursing in yellow fever, cholera and influenza epidemics has been employed to offer insight. The goal is to determine whether the SARS outbreak was a unique experience for nurses or whether similar experiences were shared by nurses in the past? In summary, the reactions of nurses when confronted with the possibility of contracting a deadly disease remain altogether human, not dissimilar in past or present. Nurses' responses to SARS can be usefully studied within a larger historical vision of crisis nursing, and information or impressions from earlier crises are potentially of interest to the nursing profession.

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Introduction

This is an account of the public responses of Ontario nurses to the Severe Acute Respiratory Syndrome (SARS) epidemic of 2003. Its origins lie in an effort to comprehend the reactions of the nurses who worked through the outbreak and who came to

see it as a transformative experience. In testimony gathered after the event, individual nurses stated that the arrival of SARS in Ontario had turned their professional world upside down ([Registered Nurses Association of Ontario \(RNAO\), 2003](#)). Employment, which at its worst might lead to a back injury, had now become something novel: it was life threatening; it was scary. One emergency room nurse stated that for the first time she knew first hand the fear of patients and their families. For

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another, nursing was now confronted by a wholly new phenomenon: the SARS virus was likened to a deadly power as terrible and as real as an invisible Godzilla stalking the hospital corridors (RNAO, 2003). One stated simply: “This has been a very disturbing event that has given me the opportunity to have nursed in probably the worst crisis in nursing history” (Canadian Federation of Nurses Union (CFNU), 2003: p. 20). This account provides an understanding of these and similar sentiments within the context of the stress, isolation and alienation experienced by nurses who worked through the Toronto outbreak. It also provides a historical dimension to these vibrant statements—a way of comprehending the 2003 phenomenon as part of a long tradition of nursing in the midst of public health crises. It is clear that the nurse who believes the outbreak in Toronto to be the worst crisis in nursing history knows little about the history of public health nursing during epidemics. During the 20th century, the health care workers of the modern large urban hospitals of North America became largely freed from the dangers and fears of unrestrained epidemic disease. This relative safety was a stark contrast to the experiences of hospital workers of the past, especially personal care attendants, which had always been considered to be at an elevated risk of infection. One possible lesson from SARS is that the advances of the 20th century cannot be assumed to be normative. It is speculative whether or not nursing will become a more life-threatening occupation in the future. However, it is advantageous to know how nurses responded to this most recent of epidemics. This search began shortly after the conclusion of the SARS crisis with a deceptively simple question: how did nurses in the past cope with workplace and personal stress during epidemics? The literature searched produced disappointingly meager results. Scholars have not found this to be a worthwhile theme for study; the lack of literature in major databases like Medline reinforces this point. What follows in the first half of this discussion, therefore, is not an answer to the original question, but a series of remarks on what at present is known. These remarks focus upon three of the most deadly epidemics of recent human history, 19th-century yellow fever and cholera, and the 1918–1920 pandemic of Spanish influenza. Following this, in the second half of the discussion, is an evaluation of the responses to SARS by nurses who had experienced the crisis and chose to go on public record. The areas covered in this evaluation include: fear, isolation at home and at the work place as well as nurses’ evaluation of deficiencies in the system and how they assess blame.

Historical context

Historically, the role of the hospital nurse was perceived to be one of high risk, and even a brief overview of North American nursing during past epidemics reveals subjective feelings of fear and alienation. Nurses’ fears and feeling of isolation were heightened not only by the high death rates but by the propensity of loved ones and neighbors to flee infected cities leaving nurses to fend for themselves. Finally, the terrible shortages, which left nurses exhausted and vulnerable to feelings of isolation, led many nurses to turn to alcohol or other dangerous methods of stress relief. The following evaluation of yellow fever, cholera and the Spanish influenza will illustrate a continuity in epidemic nurses’ feelings of fear and isolation from the mid-19th to the early 20th century.

Yellow fever

America’s experience with yellow fever in the second half of the 19th century proved to be both transformative and deadly. This disease resulted in the creation of the first state boards of health, which were central to the development of a national public health system (Humphreys, 1992). The yellow fever outbreak of 1853 in New Orleans was so deadly that the disease was responsible for half the city’s mortality in that year (Humphreys, 1992). Because of its mysterious epidemiology and its ability to devastate a population, yellow fever was particularly feared by both the lay public and protectors of public health. As in the early days of SARS virus research, scientists were baffled by the spread of yellow fever and strenuously debated the best methods of containment and eradication (Humphreys, 1992). Yellow fever nurses worked in dangerous conditions with extremely long hours; severe labour shortages were commonplace as demand outstripped supply. It was common during the onset of an epidemic for the public to flee infected areas. The mass exodus, one may assume, produced feelings of isolation in nurses as family and friends fled. Most who nursed during the epidemics of the 19th century were not regular nurses; they were drawn into the work temporarily for reasons of benevolence or economics. The isolation, the shortages, and the general concern that they may contract this deadly disease presumably placed a tremendous stress upon the nurses. One indirect sign of this stress was that it was not uncommon to have nurses arrested for drunkenness during the epidemics (Adams, 1889). Nurses also had to deal with the experience of loss because

a high percentage of patients did not survive. In respect to both yellow fever and cholera nursing, the evidence produced at the time spoke to the central importance of the personal qualities of the nurse. Health care issues were personalized and systemic issues attracted far less attention.

Cholera

Nurses were essential during cholera outbreaks for they were responsible for helping patients through the most deadly and unpleasant stages of the disease. Cholera hospitals offered nurses a most unpleasant place to work for they were often overcrowded with patients and filled with both a terrible stench and frightening sounds. One nurse who worked during an epidemic in Germany vividly reported the “wailing and screaming and moaning, echoed gruesomely through the room” (Evans, 1987: p. 331). Nurses performed work which was perpetually unpleasant and perceived to be high risk: “to touch a corpse seemed impossible to me, the penetrating stench that rose from the last evacuation of his bowels into the bed almost robbed me of my senses” (Evans, 1987: p. 331). These working conditions combined with the reality of death took a toll on nurses. Nurses’ demands for alcohol as a method to steady nerves or to escape the horrors of a cholera hospital was reported to be high. This demand for alcohol was particularly noticed among volunteer nurses, who were perhaps less prepared psychologically for the fight against cholera (Evans, 1987). Once again, there were routine severe nursing shortages (Rosenberg, 1962). The work was inherently dangerous, far more than SARS nursing. Statistics rarely appear in the published record; however, at the Greenwich Hospital in New York, 14 of the 16 nurses employed during the epidemic of 1832 died of cholera (Rosenberg, 1962). Contemporaries noted that frequently nurses shirked their duties and fled infested cities (Rosenberg, 1962). As with yellow fever, contemporary descriptions of cholera nursing were characterized by a dichotomy: the trustworthy, dedicated nurse versus the dissolute, corrupt nurse. There is no complexity to this portrayal, and rarely do the nurses possess their own voice. What is clear for both diseases is that effective nursing was considered to be of crucial importance to recovery of patients, and that work conditions were appalling by the standards of that age.

Spanish influenza

Spanish influenza was the most deadly modern pandemic. Responsible for the death of an approxi-

mately 50 million people between 1918 and 1920, this disease attacked an estimated half a billion people, approximately half the world’s population (Johnson and Mueller, 2002). It struck with such force that Cape Town’s Assistant Medical Officer of Health believed that the human population might be completely wiped out (Rosenberg, 1962). Surprisingly, the most terrible epidemic since the Middle Ages has left relatively little effect on the public memory (Crosby, 1981). In fact, except for those who study the disease, the Spanish flu remains nothing more than a folk-memory that is as remote, and has had as little significance to modern disease prevention as the Black Death (Collier, 1974). Like SARS, Spanish influenza caught the world off-guard. By the end of 1918, the disease had infected one in six Canadians (Pettigrew, 1983). Canadian medical services were ill prepared for the arrival of the disease and the nursing profession was overwhelmed. Thousands of nurses remained overseas on war services. Infection rates for nurses were possibly lower than for yellow fever or cholera, but significantly higher than for SARS. In Toronto, for example, 35% of nurses contracted the Spanish flu (Pettigrew, 1983). As customary in epidemics, many people stopped engaging in regular forms of activity and public meetings were kept to a minimum. Nurses reportedly coped with loneliness by developing close friendships with co-workers. During the Spanish flu crisis nurses were encouraged by their superiors to form relationships with fellow nurses as a means of handling stress and isolation (Crosby, 1981). As in the SARS crisis, nurses and the lay public both took to wearing masks in attempts to ward off the disease. The masks were considered by nurses to be terribly annoying but quite successful (Collier, 1974).

Although the Spanish influenza occurred after the Nightingale revolution in Western nursing and following the advent of public health systems with modern record-keeping finding sources that communicate nurses’ emotions and perceptions during this epidemic remains challenging. Nurses’ voices were systematically muted in the public record. A systematic search of the *Globe and Mail*, the leading Toronto daily newspaper, for the 2-year period of 1918–1919, makes it clear that nurses had no public voice. Although there were a host of articles upon the Spanish flu and even some on the role of nurses, none gave any voice to these professionals. Nurses were depicted as the silent followers of protocol. The transfer of knowledge in respect to the Spanish flu only went one way, from top to bottom. Nurses’ roles attracted little coverage except, on occasion; there were a few pub-

lished words that briefly honored those who died in the fight (*Globe and Mail*, 1918). In this feature, there was continuity with the public's attitudes towards earlier yellow fever and cholera nurses. The historical record on Toronto SARS, in contrast, will give pride of place to the front-line workers, the nurses, who have successfully captured public attention. They were perceived in all media sources to be the most notable victims, and moreover, to possess the most authoritative first-hand perspective.

The arrival of SARS

The arrival of SARS, a disease of unknown epidemiology, in Canada in the early days of March 2003 was the beginning of a crisis that would test the abilities of the Ontario health care system and its professionals. The arrival of SARS dominated Canadian media coverage as the public was bombarded with information and suppositions on the rapidly developing disease of unknown nature and duration. In total, the SARS virus claimed 44 victims in Canada, all in the Toronto area. Given that the disease was primarily contained, and spread, within hospital environments, health care workers, particularly emergency and acute care nurses, were at heightened risk of exposure. SARS claimed the lives of two nurses, Tecla Lin and Neila Laroza, who contracted the disease while attending to infected patients (*West*, 2003). An uncertain number of nurses, at least 79, according to the Workers Safety Insurance Board of Ontario, missed 15 days or more of work due to this disease (*RNAO*, 2003). Some nurses as late as a full year after the events had not fully recovered. Others were not psychologically ready to return to a job that they now characterize as disturbingly dangerous (*CBC Online Staff*, 2004). Despite the intense media focus placed upon nurses, this profession possessed a minimal voice in drafting internal policies and procedures on how to deal with the SARS epidemic. In fact, nurses complained that their opinions were rarely listened to by management. This account is intended in part to pay close attention to how the health care professionals who chose to speak out perceived and remember this crisis. This discussion relies on the words and thoughts contained in numerous nurses' submissions to various review bodies. The five submissions studied were: the Canadian Nursing Association Brief to the National Advisory Committee on SARS and Public Health (*Canadian Nursing Association (CNA)*, 2003); a submission from the Canadian Federation of Nurses Unions (*CFNU*, 2003); an inquiry published by the

Registered Nurses Association of Ontario (*RNAO*, 2003), the Ontario Nurses' Association's Commission to Investigate the Introduction and Spread of SARS (*Ontario Nurses' Association (ONA)*, 2003), and Ontario Public Service Employees Union/ONA Joint Report on Health and Safety Matters Arising from SARS (*Ontario Public Service Employees Union (OPSEU) and ONA*, 2003).

On 5 March 2003, SARS claimed its first Ontario victim when Sui-chu Kwan, a 78-year-old woman who had returned from a trip to Hong Kong, died of the disease. The unknown epidemiology of the disease was an immediate cause of concern for those within the upper echelons of health care management and government. The responsibility for containing this disease fell especially upon nurses who were employed as the front-line of defense (*RNAO*, 2003). According to the report published by RNAO, the arrival of this disease placed a significant strain on the nurses of Ontario: "not only did we need to manage an infectious disease, whose origin and transmission were initially unknown, but we had to do this from within a depleted health care system" (*RNAO*, 2003: p. 3). This emphasis upon an under-financed and under-staffed provincial health care system was a concern that was not new to the nursing unions of Ontario (*CFNU*, 2003). The SARS epidemic brought this long-standing concern to the forefront of public discussion, and nursing leaders have led the campaign to link the crisis of SARS to chronic public under-funding (*RNAO*, 2003). The disease could not have arrived in Ontario at a worse time, as hospitals were forced to operate within strict budgetary restraints and were suffering from a significant shortage of nurses. In fact, at the time of the SARS crisis, Ontario ranked last in Canada for the ratio of nurses per patient (65 Registered Nurses per 10,000 of the population, compared to a Canadian average of 73.4) (*RNAO*, 2003). This shortage grew desperate when nurses who worked for more than one hospital (an employment trend of the 1990s) were ordered to limit themselves to one institution to prevent disease transmission. Employers responded by assigning double and sometimes triple nursing shifts. Nurses worked these extremely long hours with few breaks and because of the shortages they hesitated to call in sick (*RNAO*, 2003). Nurses later reported that they had never had to work so many hours at any job: "I was working from 7 a.m. to 10 p.m. My life was my work. I don't think I could have continued much longer" (*RNAO*, 2003: p. 19). As we will observe, exhaustion was possibly the least problematic issue that the nurses had to deal with during the drawn-out threat of SARS.

Nurses' responses to SARS

Fear

Nurses' close interaction with SARS engendered a variety of responses, but the predominant emotion reported by nurses was a feeling of fear. These feelings of anxiety were directly rooted in the unidentified nature of the disease and lack of knowledge concerning how it was spread. This fear was made worse by the potential that a nurse could unknowingly contract the disease and then unwittingly spread it to family and friends (RNAO, 2003). One nurse who worked in the acute care section of a Toronto hospital noted that not only was she terrified to attend work, but that this sense of trepidation even entered into her dreams: "I dream of disembodied mouths gasping for air and wake struggling to catch my own breath . . ." (RNAO, 2003: p. 17). This fear made the working environment extremely tense and the lunchrooms and halls were filled with rumors concerning how SARS was spread and its potential to do much more damage (RNAO, 2003). There certainly was a consensus amongst nurses that the worse aspect of the SARS experience was the fear of the unknown. Nurses reported being in constant fear that anyone who was in the hospital, be it patients or colleagues, could already have contracted the disease and be transmitting it (RNAO, 2003). Fears were heightened by the contradictory and often confusing information that nurses received. According to Barb Wahl, the President of the Ontario Nurses' Association, nurses reported hearing:

a steady stream of contradictory, confusing, inconsistent and incorrect information about the means of transmission, infection controls, effective protective gear and the protective protocols health care workers needed to follow. (ONA, 2003: p. 3)

This misinformation served to heighten nurses' fears about their own safety and that of their families. According to one nurse, the best source for reliable information on the SARS crisis was not her employer, but the media (CNA, 2003). Statements such as this demonstrate that at least some nurses felt strongly that management was doing a poor job at communicating developments in the struggle against SARS. Nowhere in the submissions was there a sense of common cause; on the contrary, after years of neglect, employers and government were perceived as being less than helpful—possibly less than honest. At the time of writing, it still remains to be seen if information was purposefully kept hidden from health care professionals or whether

the slow dissemination of knowledge to front-line workers was due to structural and bureaucratic problems that slowed the diffusion of pertinent information.

Isolation at work

Nurses were forced to deal with the feelings of isolation that were ever-present during the SARS epidemic. The workplace was perceived to be a very dangerous place, no longer collegial and welcoming. Nurses were instructed to keep contact with their fellow co-workers to a minimum and at some hospitals nurses were directed to sit two seats apart in the cafeteria (RNAO, 2003). In hindsight, the hospital atmosphere was characterized as being full of anxiety, fear and confusion. Nurses understood how deadly the SARS virus could be, one nurse commented: "I didn't sleep the night before I decided to work in the SARS unit. I knew that one suction catheter from a SARS patient would have enough virus in it to begin an epidemic" (RNAO, 2003: p. 20). During the SARS epidemic nurses felt both alone and afraid of their working environment. Management's insistence that workers keep contact with each other to a minimum only served to heighten nurses' feelings of isolation.

Isolation at home

This feeling of isolation and alienation was enhanced when nurses' regular home life was seriously disrupted. Some nurses were forced to miss important events such as graduations or funerals due to restrictions placed on free movement. One nurse reported that no matter where she was, both friends and families would ask, "Should you be here? We don't want you here, I don't want to see you until this is all over" (RNAO, 2003: p. 17). As public anxiety concerning the SARS virus heightened, nurses perceived that they were being treated as modern day-lepers. It upset and angered nurses that they were depicted as a threat to the community and that some Toronto businesses had posted signs forbidding the entry of hospital staff (RNAO, 2003). This feeling of abandonment by the community left nurses feeling very much alone. The greatest sense of isolation was experienced by those nurses who were forced to endure the boredom and loneliness that is associated with being in quarantine. After suffering through quarantine, nurses struggled to find words to convey how truly isolating the experience was: "I don't know what the experience of being in jail is like. But, it's [the quarantine] like being in jail" (RNAO, 2003: p. 18). The isolation and perceived stigma that was

attached to nursing during the SARS outbreak was extremely hard to accept, or to forgive.

After the crisis

Deficiencies in the system

After the crisis subsided the largest grievance harbored by the Ontario Nurses' Association is that the provincial government was not prepared for this epidemic. The story, as told by nurses' leaders, is that the reason that nurses' lives were put into significant danger was due to deficiencies in the system, limitations which they had long brought to public attention. In this way, SARS has served as a vindication of the reforms that nursing leaders have been calling for over the past decade (ONA, 2003). Even since the SARS crisis the trends in the public health sphere remain disturbing. The Canadian Nurses' Association predicts a national shortfall of 78,000 registered nurses by 2011 (ONA, 2003).

Nurses' also criticized the government and health care managers for ignoring their knowledge and insight into crisis management. One reported example is illustrative:

At one facility, nurses identified a cluster of patients with SARS-like symptoms and reported to management and the medical staff. Nurses' concerns were dismissed and nothing was done for several days. This led to the second major SARS outbreak. Unfortunately it was similar at other hospitals. (ONA, 2003: p. 5)

The nursing leadership believes that nurses, had they been properly employed and their expertise listened too, could have been an integral part in managing the disease. Instead, the silencing of nurses proved deadly as the SARS virus continued to spread placing both the public and health care workers at heightened risk. The sense of alienation is abundantly clear.

Assessing blame

One post-crisis theme is that the government should have been better prepared for a public health emergency, especially after the tragedy of 11 September 2001 and the known threat of bioterrorism (OPSEU/ONA, 2003). Although nursing unions had alerted authorities to the need for more full-time permanent nurses, these requests were not met. The state of the nursing profession, especially the reliance upon part-time work at mul-

iple locations, had left Ontario susceptible to severe labour shortage in the time of an epidemic (ONA, 2003). In retrospect, the nursing leaders were correct: in times of major public health crises the system could not deal with the rising demand for nurses (ONA, 2003). Nurses learned first hand how deficiencies in the system, including the lack of proper equipment or standardized protocol, could jeopardize their safety. There is subjective testimony to support this interpretation. For example, one nurse stated in respect to space constraints:

We have had several episodes where we were suspicious of patients that may have SARS. It was very difficult for us to isolate these individuals as we only have one single room in the Emergency department and it is not equipped with negative pressure air flow. Also there is no private washroom for the individual. (CNA, 2003: p. 7)

The danger to nurses was also increased by the lack of fit testing, which should have ensured that the mandatory safety mask fit perfectly. Nurses later experienced concern that this measure, which was so important to the protection of their health, had never been properly instituted. One nurse stated: "It is disappointing that after 22 years of infection control precautions, fit testing has never been considered in hospitals" (RNAO, 2003: p. 20). Management's handling of fit testing changed from location to location and even from day to day. As another nurse recounts, going through fit testing was necessary for her to work in the hospital on one day, but on the next, this measure was abandoned completely:

I was initially told that I wouldn't have to work in the unit if the mask didn't fit. I went through several masks and none of them fit properly – so I was sent home. The next day I was called [to return to work] and told that they weren't going to be doing any more mask fit testing. (RNAO, 2003: p. 21)

At the conclusion of the crisis, nurses publicly questioned the provincial government's fiscal aims asking: "What good is a budget surplus or a \$300 personal income tax cut, if the system can't make a reasonable effort to save your life" (CFNU, 2003: p. 4). Nurses, who now have a heightened understanding of their role as protectors of public health, have ensured that they told their side of the story. Their sentiment and purpose was quite clear: "I feel obligated as a survivor to make damn sure that this doesn't happen again" (CFNU, 2003: p. 18). Of course, objectively almost all nurses were 'survivors'; the statement conveys the sub-

jective intense feelings of fear, frustration and alienation.

In retrospect, the SARS nurses acknowledge that they were mentally unprepared for the dangers of the epidemic and that this crisis has led them to take a hard look at their profession. They speak about “a different world view” on nursing (CFNU, 2003: p. 18), and of a “world [which] was turned upside down. Suddenly the job I had was torture” (RNAO, 2003). Nurses were caught off-guard, for their job had suddenly turned into a life-threatening profession. It is evident that nurses had little knowledge of previous public health crises and no context in which to place the SARS epidemic. The published nursing literature provides only very modest information on the topics of fear, isolation and resentment during public health crisis. A Medline search using the term “History of Nursing,” provided a plethora of results however, few of the returns dealt directly with how nurses have historically coped with epidemic disease. Although there are some studies that directly engaged the question of how nurses in the past handled epidemics these few studies, such as Walton and Connolly’s “A Look Back: Nursing Care of Typhoid Fever” are too few in number and limited in scope to provide a comprehensive picture of nurses’ responses to epidemic disease (Walton and Connolly, 2005). Clearly, the lack of poignant scholar literature combined with the absence of a North American public health crisis featuring highly contagious diseases within living memory meant that the SARS workers could not draw on the experiences of previous generations of nurses for guidance or reassurance.

Conclusion

If the public health triumphs of the 20th century prove not to be normative, aspects of hospital nursing will, perhaps, come to resemble ‘a world turned upside down’ from the viewpoint of those on the shop floor. SARS may be a harbinger of new dangers. However, the fear and isolation so vividly expressed are renewed phenomena, not new ones. There is a larger and longer historical trend in evidence. This discussion suggests that nurses, past and present, trained or untrained, volunteer or professional, reacted to public health crisis of mysterious origin in an altogether human manner. That is they reacted to health care crisis of unknown epidemiology with much fear and, due to the nature of nursing during these crises, are prone to feelings of isolation. What is clearly distinctive is the

status accorded in the media to the SARS nurse as both prime victim and leading authority. The nursing leadership has been successful in placing their concerns at center stage. The personal stories of how nurses felt and dealt with the crisis remained the focus of the media for many months after the general threat of SARS had dissipated. No other patients, no other health care professionals, received anything close to this level of attention. The other important change is the shift from the 19th and early 20th century focus upon the individual and her/his moral ethic, to the 21st century emphasis upon systemic problems and solutions. Nevertheless, after several centuries of societal change and profound development – in no way unimportant – the evocative images of the SARS crisis remain those of personal betrayal by superiors, public humiliation when confronted by doubtful Torontonians, and the living nightmare of an invisible Godzilla in the corridors of a once-welcoming workplace.

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