4th Floor – The Orthopedic Floor

In hindsight, the unexplained SARS-like illness of the psychiatric patients in April and May and the unexplained SARS-like illness of the Patient A family cluster in May, discussed below, were signs at North York General Hospital that SARS was not contained. We now know that there was another sign of the re-emergence of SARS at North York General: problems on the 4 West orthopedic ward during April and May, including an unusual number of deaths, respiratory illnesses, and illness among staff.

Eighty-three per cent of cases associated with the second outbreak at North York General were epidemiologically associated with 4 West.[663] SARS simmered undetected on 4 West throughout April and May and spread rapidly once precautions were relaxed in early to mid-May. But the evidence of how SARS got a foothold on 4 West and how it spread there in April and May is diffuse and problematic. Answers to questions such as how SARS got on 4 West remain unknown. As the Naylor Report found:

> Meanwhile, unbeknownst to the hospital administration, several elderly patients on the orthopedic ward (4 West) had been fighting what were at first believed to be typical post-operative lung infections. Among them was a 96-year-old man with a fractured hip. Through means still unknown, illness spread from 4 West over the next few weeks to other patients and to several visitors and staff.[664]

While it remains unknown how SARS came to 4 West at North York General, public health officials believe that it originated with one of two patients, both admitted to the 4th floor in the early part of April 2003.

The first patient, Patient A, was admitted to North York General Hospital on March 22, 2003. Patient A was 96 years of age and had been admitted for treatment of a fractured clavicle and hip, caused by a fall. He was first admitted to 8 West, which was

663. SARS Field Investigation, p. 19.
664. Naylor Report, p. 39.

not at the time the SARS unit.[665] He was transferred to 4 West on April 2, 2003. On April 3 he developed a fever. A chest x-ray on April 4 showed bibasilar infiltrates.[666] The SARS Field Investigation, an extensive investigation led by Health Canada into the second outbreak, reviewed Patient A's case and found that he had:

> … multiple episodes of fever and radiographic findings of pneumonia throughout his hospital stay (March 24, April 3, and April 19), initially responding to antimicrobial therapy.[667]

He died on May 1, 2003, while a patient on 4 West. During his hospitalization at North York General he was not identified as a possible SARS case and was not investigated for SARS. Four members of Patient A's family were admitted to hospital during May 2003, after his death. They all had SARS, although as noted in the previous section, they were investigated as possible SARS cases but not classified as SARS until after May 23, 2003. Although Patient A had multiple episodes of fever and radiographic findings of pneumonia throughout his hospital stay, his onset date for SARS is believed to have been April 19, 2003.[668] As the SARS Field Investigation concluded:

> …the onset of his [Patient A's] SARS illness was "most compatible" with the April 19, 2003, date, as his family did not get sick until May.[669]

A second patient, Patient B, was a 56-year-old man who was admitted on April 11, 2003, to the same four-bed room on 4 West as Patient A. Patient B had a fever, cellulites and a leg abscess.[670] The SARS Field Investigation also reviewed his case history and described his progress after his admission:

> He [Patient B] was treated with antibiotics, diarrhea developed on the 15th, and fever returned on the 17th along with respiratory symptoms and infiltrates on chest x-ray.[671]

Patient B improved while hospitalized and he was discharged home.[672] He was iden-

665. 8 West became the SARS unit on April 2nd, 2003.
666. SARS Field Investigation, p. 16. In June 2003, a team of experts investigated the outbreak at North York General. The SARS Field Investigation team, reviewed charts and other sources of patient information, such as radiographic reports.
667. SARS Field Investigation, p. 16.
668. SARS Field Investigation, p. 16.
669. SARS Field Investigation, p. 16.
670. SARS Field Investigation, p. 16.
671. SARS Field Investigation, p. 16.
672. SARS Field Investigation, p. 16.

tified as a SARS case retrospectively, after Public Health and outside experts reviewed medical charts on and after May 23, 2003.

Although these two patients are believed to have been the first patients with SARS on 4 West, it is unknown who passed SARS to whom, or whether there was an unidentified SARS contact with whom both patients had contact. The SARS Field Investigation in June 2003 found that:

> Patient B could have passed SARS to Patient A, or the two patients could have been infected from a common, as yet unidentified source. These two patients had no SARS travel risk, no visit to another "SARS-affected" hospital or prior close contact with known SARS patients other than themselves.[673]

The SARS Field Investigation concluded:

> How SARS was first introduced to 7W [the psychiatry unit] and 4W remains an unresolved issue.[674]

We will never know all the twists and turns of the path of SARS while it simmered on the 4th floor of North York General during April and May until it broke out with a vengeance once precautions were relaxed, starting May 7, 2003. Given the scientific

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673. SARS Field Investigation, p. 16. Although Patient A was a patient on 8 West when Health Care Worker No. 1, whose story is told earlier in this report, was working on the unit, post-SARS studies have not found any connection between the two cases of SARS. As the SARS Field Investigation found:

> Incidentally, on March 30th, 2003, while patient A was on 8W, a nurse on that ward developed SARS symptoms and later tested PCR positive in stool samples and then seroconverted to SARS-CoV. The nurse's mother was an inpatient at Scarborough Hospital Grace Division (where SARS transmission was occurring) in late March; her serology results were positive for SARS two months later but she did not meet the WHO case definition. Evidence of SARS was sought in the other patients with whom this nurse had contact on the only known date she was working while symptomatic. Although two additional patients had isolated, unexplained temperature elevations within ten days of this contact, we found no convincing evidence for SARS. She also should have been in full precautions when seeing patients. The 8W nurse had unprotected contact with another nurse on the ward, who subsequently developed SARS 3 days later. She was sero negative. This appears to be the full extent of this transmission chain. Our investigation failed to find evidence for direct contact between the first 8W nurse and patient A or B. (at p. 17)

674. SARS Field Investigation, p. 18.

impossibility of telling with precision who gave SARS to whom and when on 4 West in April and May, the retrospective evidence of the spread of SARS on 4 West must be approached with caution.

This caution is underlined by the fact that it is all too easy to see things clearly, now that we know SARS was spreading on 4 West, a fact far from clear at the time. It is difficult even to pin down in hindsight the precise details of evidence such as staff illness and unusual levels of death and respiratory illness. This evidence was not systematically investigated and recorded because there was no surveillance system in place at the time. This points clearly to the need for surveillance systems to ensure that these vital pieces of evidence are not missed in the future. But the lack of systems at the time to ensure that such crucial information was recorded, monitored and investigated makes it impossible to draw firm conclusions now from data that were not systematically recorded at the time.

Why did SARS simmer undetected on 4 West in April and May? Why were the cases of SARS, so clear in hindsight, not detected at the time?

It is impossible to prove exactly how the course of events would have been different had all the systems and checks been in place that we now know might have identified SARS on 4 West. It is impossible to speculate with any certainty that any single measure would have detected and stopped the spread of SARS on 4 West. But the clusters of respiratory illness, increases in mortality rates, and staff illness on 4 West were all signs that something was wrong on the unit. These were all signs that were either missed altogether or, when they were noticed, were not reported to or investigated by hospital officials or public health authorities. While it is much easier with the benefit of hindsight to look back and identify the failures in Ontario hospitals' infection control systems, that does not negate the importance of examining the events in April and May 2003 on 4 West, to ask how the signs of SARS were missed and to determine how to prevent an outbreak of the kind that occurred on 4 West from happening again.

Tragically, these lessons were learned at the expense of those who became ill, those who died and those who lost love ones: patients, relatives, visitors and health workers. We must never forget the heroism and sacrifice of the front-line health workers who became ill in the line of duty. We must never forget Ms. Nelia Laroza, an orthopedic nurse who contracted SARS and later died. Ms. Laroza and the other health workers on 4 West went to work every day, unaware of their risk, to care for others. As one physician from 4 West said:

> Nobody was as close and as intimate with the patients, and I use that in the broad sense of the word, than the nurses were. Changing them, in those rooms for long periods of time, nobody got "nuked" more than the nurses. Showering them, cleaning them and their soiled clothing. The risk that the nurses took unknowingly … they could never be repaid for what they went through.

Respiratory Illness and Death on 4 West

It is now known that during the months of April and May, there were cases of unrecognized SARS on the 4th floor of North York General. There was a cluster of respiratory illness on the unit among patients who were later identified as SARS. There was also an increase in deaths on the unit during April and May 2003.

The number of cases of respiratory illness began to escalate after precautions were relaxed in most areas of the hospital on May 7, 2003. By May 23, 2003, patients, visitors and health workers were ill with SARS. As the SARS Field Investigation found during a retrospective review of the onset of illness on 4 West and the spread of SARS to patients, visitors and health workers during April and May 2003:

> Cases began to escalate in the second week of May, shortly after enhanced precautions were selectively relaxed in low-risk settings. Although only 6 additional individuals developed symptoms before then, 8 more developed symptoms in the 2nd week of May, 20 in the 3rd week, and 29 in the 4th week.[675]

Post-SARS, the Joint Health and Safety Committee at North York General reviewed information about the number of deaths on 4 West in April and May 2003, and noticed a significant increase. They found:

> We then obtained, from the hospital, information regarding the number of deaths on 4W during the months of April and May, 2003. (Appendix) There were 6 deaths in April and 7 deaths in May 2003. Two of the deaths would occur on May 1; the 96-year-old patient, possibly the index

675. SARS Field Investigation, at p.18.

> case, was among these deaths. Another two deaths would occur on May 9 for a total of 4 deaths in the first two weeks of May. We also looked at the trend of the number of deaths over a five-year time period from 1999 to 2003; the period from March to June was examined. (Appendix) We discovered that the number of deaths from March to June 2003 was 14. This was almost double the number of deaths recorded for the same time period compared to the previous years examined. Recall that 13 out of these 14 deaths occurred in the months of April and May, 2003. Clearly, this is a significant increase.[676]

During the one-month period of April 19, 2003, until May 19, 2003, four patients on 4 West who we now know had SARS died. Their deaths were in addition to deaths from other causes on the unit.

The cluster of respiratory illnesses and any increase in mortality rates on the unit was not identified to Public Health or provincial officials at the time. SARS-related respiratory illnesses and deaths on 4 West were also not identified to Public Health as such at the time. Consequently, there was no investigation into deaths or respiratory illnesses, and cases were not investigated as possible SARS until May 23, 2003, when public health officials and outside experts began to review cases at North York General. At that time they were investigating a possible link to an outbreak at St. John's Rehabilitation Centre. More will be said about the outbreak at St. John's Rehab later in this report.

North York General senior management and the SARS Management Committee were also unaware of the cluster of illness on 4 West and were unaware that there were possible SARS cases on the unit. Senior hospital officials, including Dr. Keith Rose, Bonnie Adamson (the CEO of North York General), and the two co-chairs of the SARS Management Committee, Sue Kwolek and Dr. Glen Berall, all reported to the Commission that they were unaware of any problems on 4 West until May 23, 2003.

Dr. Keith Rose, the administrative vice-president responsible for SARS, told the Commission that the first he knew of problems on 4 West was on May 23, when Public Health was on site to review files. He told the Commission that when he initially heard about St. John's Rehabilitation Centre, he thought that the concern was whether St. John's Rehabilitation Centre might have spread SARS to North York General. He did not know that the opposite had occurred:

676. JHSC Report, p. 43.

> On May 23rd I was on call overnight, I was in the hospital. I was called to go down to see the emergency around 2 or 3 o'clock in the morning. A breach of precautions intubating a patient from St. John's and therefore a decision to close the emergency department from a lack of staffing and to send staff home on home quarantine and to wait to receive more information about St. John's. It wasn't until 9 or 10 o'clock in the morning that I became aware that there was a link between St. John's and North York. I had no idea, in fact my impression was St. John's had the problem and had potentially spread it to North York through the incident in the emerg department overnight. And then the day unfolded at that point. [Dr.] Don Low was there, along with Public Health. Chart reviews, it became clear by mid-afternoon that 4 West was a very problematic centre, that the staff that had been identified as sick that day were sick and needed to be assessed and we needed to make major changes for the hospital.

Ms. Sue Kwolek, co-chair of the SARS Task Force, when asked when and how she learned of the problems on 4 West, said:

> Not until May 23rd when Dr. Low came to review some of the charts of patients in the organization. This was, you will recall, the St. John's thing, on May 22nd there was an announcement that St. John's had patients under investigation for SARS. I came in early that morning and was advised of the St. John's situation. There was a pre-scheduled meeting with [Dr.] Donald Low at 11:00 that morning. I remember this day very clearly. It's etched in my brain. Eleven o'clock, he came in and started reviewing the charts, and sometime in the afternoon, the manager of Occupational Health and Safety came up to the boardroom where the command centre was and she said, there are quite a number of staff on 4 West who are reporting in ill. And that's the first time that, as a SARS management team, and it was me at that point, there was nobody else on the SARS management team there, that I became aware that there was an issue on 4 West.

There is no mention of the orthopedic floor or any problems associated with the floor in any of the SARS Task Force/Management Committee minutes between April 1 and May 23. Toronto Public Health said that they received no reports about potential SARS patients on 4 West, or about a respiratory outbreak on that floor, prior to May 23, 2003. Hospital administrators, had they known of the problems on 4 West, would

have been required to report not only SARS cases, but any respiratory infection outbreak.[677]

Although senior hospital officials and Public Health were unaware of the problems on 4 West, we now know there were signs that something was wrong on the unit. A cluster of respiratory illness, an increase in deaths on the unit, and staff illness were all signs that something was wrong. The question that remains in the wake of SARS is, did anyone see the signs? If so, what was done to raise the alarm? And, if the alarm was raised, why didn't it reach senior hospital officials or Public Health?

Identification of SARS on 4 West – Did Anyone See the Pattern?

During the SARS outbreak, directives from the Ministry of Health and Long-Term Care stressed the importance of heightened suspicion for any new SARS cases. For example, a directive issued by the Ministry of Health and Long-Term Care on April 14, 2003, provided:

> Health care workers should maintain a high index of suspicion when assessing any patients for new onset of fever or respiratory symptoms.[678]

This message was repeated in later Ministry directives.[679] If this heightened suspicion was supposed to be in place, how were so many SARS cases on 4 West missed?

None of the orthopedic surgeons from 4 West interviewed by the Commission reported being aware of a cluster of respiratory illness or an increase in deaths on the unit. Similarly, none of the physicians who were involved with patients from 4 West and interviewed by the Commission reported being aware of a cluster of respiratory illness on 4 West or an increase in deaths. Unlike the psychiatric patients, where front-line physicians had their own opinions that the patients had SARS, none of the

677. *Health Protection and Promotion Act*, R.S.O. 1990, c.H.7., s.27; and see Ontario Regulation 559/91, amended to O.Reg, 365/06, Specification of Reportable Diseases.
678. Directive to Acute Care Facilities in the Greater Toronto Area (Toronto, York , and Durham Regions), Directive 03-04, April 14th, 2003. Full text of bullet #8 quoted below in report.
679. See Directives to All Ontario Acute Care Hospitals, Directive 03-04(R), May 1, 2003.

physicians from North York General who were interviewed by the Commission reported suspicions of SARS in respect of any of the orthopedic patients prior to May 23, 2003.

Many of the 4 West nurses who were interviewed by the Commission reported an awareness of an increase in deaths or respiratory illness on the unit, either through their own observations or as a result of discussions with colleagues on the unit. Not all of the nurses, however, reported this, and some said that they were unaware of an increase in deaths or respiratory illness on the unit until on or after May 23, 2003. Even those nurses who told the Commission they were aware of an increase in respiratory illness and/or deaths said they did not know it was SARS. For example, one nurse, who recalled a meeting where concerns about illness and death were raised with the unit administrator, did not recall any discussion about the possibility of these cases being SARS at that meeting or any other time:

> Question: Did anyone ever raise the possibility that SARS was in your unit during that meeting or during that time period? Did those patients have SARS?
>
> Answer: I don't think so.
>
> Question: Did you or your colleagues ever wonder if they had SARS? Is that something that you thought of at the time or did everybody just think that the patients just had respiratory illness?
>
> Answer: Just maybe respiratory illness.
>
> Question: Did you or anyone else to your knowledge ever raise in April or May the possibility that those patients might have SARS?
>
> Answer: No, I don't think so.

It would be easy in hindsight to say that the problems of 4 West should have been obvious, but it is clear that they were not.

By mid-April, SARS seemed to be under control. 4 West was a unit that was not expected to have SARS cases and no one imagined it would be the entry point for a new SARS case. Many health workers, including physicians and nurses who worked

on 4 West, believed SARS was gone. As one nurse from 4 West told the Commission:

> As far as we were concerned, SARS had left the city.

When the psychiatric patients became ill, they weren't classified as SARS because there was no epilink. Hospital officials believed that SARS had been ruled out by Public Health and outside experts. Health workers at North York General were told that the psychiatric patients did not have SARS and that there were no new SARS cases. Many of the staff working on 4 West, including the physicians, did not know about Patient A's family cluster, the family that came through the emergency department in May 2003: they did not know that four family members of one of their patients, who had died in hospital on May 1, 2003, had subsequently admitted to hospital with respiratory symptoms. For those who did know about Patient A's family, the information provided about this cluster of illness was that they were not considered SARS. Many of the nurses and doctors who did not have their own beliefs that SARS was still around, based on their involvement with cases such as the psychiatric patients or the Patient A family cluster, believed that there were no new cases of SARS. In their mind SARS was gone. As one physician from 4 West said:

> Everyone assumed it [SARS] was over, I'm sure you've heard this already, and then all of a sudden more cases appeared.

Decisions about the use of personal protective equipment, the overall vigilance of staff, and their suspicion for SARS were impacted by the belief that SARS was gone. For example, one physician who worked on the 4th floor and who later developed SARS recalled hearing about the psychiatric patients but understood that there was a gastrointestinal illness on the unit. This doctor, like many others, did not know that the three psychiatric patients remained under investigation for SARS throughout April and May, and did not know that four family members of Patient A, an inpatient who died while hospitalized on 4 West, had been admitted through the emergency department, all with respiratory symptoms, during May 2003. As this physician remarked:

> Now, knowing that there were other potential cases, that would have been useful information, but to my knowledge the situation had been cleared so I felt comfortable removing the protective equipment.

Other factors also contributed to the failure to identify the respiratory outbreak or to identify SARS cases on the unit. In late March, Toronto had been hit by a particularly nasty ice storm, resulting in a large number of slip and falls. North York General ended up with a large number of orthopedic patients who came to the hospital through the emergency department, as they picked up spillover resulting from the closure of Scarborough Grace Hospital and York Central Hospital. Because elective surgeries had been cancelled in the wake of the first outbreak in March, 4 West had available bed space, which was used to accommodate patients from 8 West, a geriatric unit that had been cleared to become a SARS unit.

As one orthopedic surgeon told the Commission:

> We had a large number of patients through the emergency department. Part of that was because Scarborough General emergency and, I think, York Central emergency were closed because they had SARS in those hospitals, so we were seeing more than our usual number of emergency cases, and then we had the ice storm and, if my memory serves correctly, we had, in a 24-hour period, about 70 patients that had fractures of various kinds that required surgical treatment. So our floor became full with injured patients during that period of time, many of which had fractured hips and more alarming management problems … At that time we also had a number of bed-spaced medical patients and we didn't have our usual complement of younger elective orthopedic patients that would normally be there. So we had more than our usual number of elderly patients with strokes and other problems apart from orthopedic problems because they were there for other reasons.

When asked about the higher number of deaths on the unit, this surgeon explained how the makeup of the unit was not what it normally was:

> The context of that [the higher number of deaths] is after and during SARS I, during the period that you're referring to [April and early May 2003], we were not allowed and we were not having elective admissions to the floor. Those patients in general, many of them are healthy, otherwise well patients who just have an orthopedic problem. During that period of time, we were only admitting to the emergency department, which meant that we had many bed-spaced patients. 8 West was closed because it was a SARS unit. [8W] is normally a medical floor. So we were taking overflow on our floor. We had patients who were only admit-

> ted through emerg because of injury. These tend to be the less well elderly patients. So it was not our usual patient mix during that period of time.

Many, but not all, of these patients were elderly and were believed to have developed pneumonia, not uncommon in elderly people who are injured or post-operative. As the orthopedic surgeon quoted above told the Commission:

> It's [developing post-operative pneumonia or respiratory illness is] not uncommon. As one of my professors used to say, rarely but not uncommonly. It occurs, and elderly people are prone to develop this, but we're aware of that so now we make every effort to get them up and try to avoid that happening. So it isn't as common as it once was, but it still is the issue, and going back to the years in the early part of the century when a fractured hip meant it was likely that you would get pneumonia and die. That's no longer the case, but there's still the same risks. And so yes, elderly people are prone to get if not pneumonia, certainly adolectisis, that is, collapse at the base of the lung, where they get a little low-grade fever and don't eliminate the secretions from that part of the lung as well as they should, and that usually clears up once they are a little more mobile and can do some deep breathing and coughing, within a day or so. It's not pneumonia, but it is sort of a precursor if you like. It's sort of the stage perhaps before pneumonia, before they necessarily get a bacterial infection, but it does produce a fever, it does produce some respiratory symptoms.

Pneumonia in an elderly post-operative patient did not by itself raise an alarm. When a post-operative patient or a medical patient, especially one who was elderly and had other underlying medical problems, developed respiratory symptoms, there was no clear leap to the possibility of SARS. None of these patients were believed to have had contact with a SARS case or to have a travel history that would put them at risk of being in contact with a SARS case. And, as noted above, among these patients there were good alternate diagnoses. As one physician said:

> Those clinical assessments are very, very difficult to do. The program for SARS is no different from the program for any other infectious disease, influenza or cold, you can't tell. And all you go on is the balance of probabilities. So you had a hip patient who gets a normal post-operative pneumonia, and is 90 years old, nobody could be expected to think that would be SARS. Turns out it was.

Post-SARS, the SARS Field Investigation into the outbreak at North York General Hospital noted that seasonal illness may also have made the identification of new SARS cases difficult:

> The occurrence of seasonal respiratory infections such as influenza may further compound the difficulty in identifying a SARS case, which then may escape early detection by clinical and public health systems.[680]

It was the clusters of illness that in retrospect signalled there was a big problem on 4 West. But individual physicians providing day-to-day care could not easily see the overall patterns in illness or identify clusters of illness. At play was the fact that there was a group of physicians providing care for a group of patients on a rotational basis. No one physician saw each of the patients who developed SARS symptoms on 4 West. One physician who was regularly on the orthopedic unit explained how the shift cycle of picking up medical cases on the unit did not lend itself to identifying patterns of illness on the unit:

> The way it used to work before was, a patient would have a fever of 38, 38.5 and then staff would call the orthopedic surgeon saying, this is so and so, fever of 38.5, has a bit of a cough. And the specialist would most often, some handled their own, some didn't, would order some tests. They would get a chest x-ray and a blood count, which is what surgeons are programmed to do, or some would say, call the internist on call. So the internist on call would come see the patient, maybe within 10 minutes, maybe within six hours, maybe the next day, would see the patient, make recommendations and pass it on to another internist the next day. So you've got this fragmented care. And you've also got some orthopedic surgeons who would call a specialist, some wouldn't, and I think the nurses didn't know what to do.

Another physician, who also was involved with some of the 4 West patients, described how the shift cycle of physicians did not permit for surveillance of patterns of illness:

> As a clinician, I walk in to do my shift, and I go home and maybe a day later or two days later, I go in to do another shift, and I go home. If I am

680. SARS Field Investigation, at p. 26.

> on call on the ICU, I do, that week, seven days straight and then I sign out to somebody else. Before that seven days, I didn't look after these people, after seven days later, I wouldn't look after them again, until my next time on call, maybe a month later. So probably it is a fragmented view of globally what happened at that time.

The "fragmented care," as these physicians described, was not conducive to detecting patterns among patients. As Dr. Tamara Wallington, a Toronto Public Health physician who was part of the investigation into the outbreak at North York General, observed, 4 West had "individual patients who were being managed according to their clinical diagnosis."

The patient makeup of the unit at the time, the similarity between the presentation of SARS and other respiratory illnesses, the belief that none of the patients had been in contact with a SARS case, the availability of plausible alternate diagnoses, the fragmented care, and the prevailing belief that SARS was over, all made it difficult for any one physician to identify the cluster of SARS illness on 4 West.

After the second outbreak, the importance of heightened awareness and vigilance was painfully clear. The Ministry issued new, stronger directives that reinforced the need for vigilance. The directives finally clarified that the absence of the epilink did not rule out SARS:

> **Health care workers should maintain a high index of suspicion when assessing any patients for new onset of fever or respiratory symptoms.** Fever alone must be considered as a sign of potential infection and should be considered even in the absence of other signs of an epidemiological link. Therefore, any person developing the following symptoms or signs after admission – fever, dry cough, unexplained hypoxia, shortness of breath or difficulty breathing – must be treated as follows … [emphasis in original] [isolation and precaution procedures follow].[681]

The SARS Field Investigation, referred to above, identified the importance of considering the possibility of nosocomial acquired SARS, even in the absence of an epilink:

681. Directive to Acute Care Facilities in the Greater Toronto Area (Toronto, York and Durham Region), Directive 03-09, May 31, 2003.

> In a febrile post-operative hospital patient in the absence of known epidemiological links, it is important to consider the possibility of nosocomial SARS acquisition in addition to the usual causes of post-operative fever. This is especially true if the hospital still houses SARS patients or has unusual fever or pneumonia clusters within the institution. Suspicion for SARS should not be limited to community acquired pneumonias.
>
> A standardized assessment for SARS (e.g. clinical, radiographic, and laboratory criteria) might be used among all hospitalized patients with new-onset fever, especially for units or wards in which clusters of febrile patients are identified.
>
> All acute care hospitals should have a low threshold for consideration of SARS in their patients and report this possibility immediately to their Infection Control service and the local public health unit. Risk-based SARS associated infection control precautions should be instituted promptly and SARS-CoV testing performed.[682]

No Provincial or Local Surveillance

While everyone wanted to believe SARS was gone, scientists and experts knew that in the aftermath of an outbreak, it was important to continue to look for cases. In an article published May 9, 2003, the Centers for Disease Control recognized the need for ongoing surveillance to find suspect cases:

> In Singapore, suspect and probable cases are identified and reported using a modification of the WHO case definition that expands contact to include any health care setting. Surveillance for suspect cases includes any fever and/or respiratory symptoms among HCW's, clusters of cases of community-acquired pneumonia, unexplained respiratory deaths, and individual cases with no contact but that are clinically suspicious for SARS.[683]

682. SARS Field Investigation, at p. 27.
683. CDC, MMWR, Severe Acute Respiratory Syndrome, Singapore, 2003.

The importance of surveillance was not unknown, but the responsibility for surveillance for new and undetected cases of SARS was left to individual institutions and to front-line practitioners. Neither local public health nor the Province was involved in this type of surveillance. As Dr. Naylor found:

> Provincial directives required hospitals to isolate patients with fever and respiratory symptoms in either the hospital or the emergency department until SARS had been ruled out, but there was no recommendation for formal, hospital-based surveillance programs. The SAC [Scientific Advisory Committee] had actively discussed the need for heightened surveillance. Its functions, however, were being wound down. Public health officials viewed syndromic surveillance as a matter for institutional infection control and outside their mandate; they lacked resources to implement such a program in any case.[684]

Officials from Toronto Public Health told the Commission that they emphasized the need for robust surveillance within health care institutions and that they fully expected that individual institutions would take steps to ensure possible cases of SARS or clusters of illness were identified and reported to them.

At the provincial level, officials emphasized the importance of maintaining a high vigilance for SARS. The SARS Clinical Decision Guide (Ontario) from the Provincial Operations Centre, dated April 23, 2003, provided:

> The diagnosis of SARS remains a challenge as the identification of a link to a known probable case becomes more complex. Although the epidemiological link will always be important when it is present, it may not always be identified initially. This link may not be found for several days, or it will become evident in several days if other close contacts of the patient become ill. It is for this reason that high vigilance for SARS needs to be present for every case of pneumonia.[685]

Although Public Health continued to investigate new possible cases, there was no surveillance system to look for SARS throughout the health care system. Early into

684. Naylor Report, p. 38.
685. Ministry of Health and Long-Term Care, SARS Provincial Operations Centre, SARS Clinical Decision Guide (Ontario), April 23, 2003.

the outbreak there seemed to be an attempt at a form of surveillance through the Office of the Chief Coroner, begun on April 5, 2003.

On April 5, 2003, a directive was released from the Office of the Chief Coroner through the SARS Provincial Operations Centre. The directive provided as follows:

> As a result of the recognized overlap in clinical and radiological findings between SARS and other clinical conditions and in an effort to better identify patients who may have died as a result of SARS or while infected with the SARS virus, hospitals in the GTA should, effective immediately and retroactive to March 14, 2003 report the deaths of all patients who appear to have died as a result of (or while diagnosed with);
>
> 1. Congestive heart failure,
> 2. Pneumonia (typical or atypical),
> 3. Respiratory failure,
> 4. Adult Respiratory Distress Syndrome
>
> to the Office of the Chief Coroner (OCC). The coroner will review the clinical information available and make a decision as to whether the case will be accepted for a coroner's investigation.
>
> Hospitals should refer these cases to the Dispatch Office of the OCC at [number provided].[686]

The directive appeared to signal a recognition that the danger as the number of new SARS cases abated was that new cases would go undetected. The memo appeared to be an attempt at surveillance of hospitals in an effort to identify potential unidentified SARS-related deaths. But just 10 days after it was issued, the directive was rescinded.

Dr. James Young, then Commissioner of Public Safety and Security and Chief Coroner for Ontario, explained the decision to rescind the directive:

> At the time this directive was issued, the SARS outbreak was in its early stages and the clinical, laboratory, and epidemiological features of the

686. SARS Provincial Operations Centre, From the Office of the Chief Coroner, April 5, 2003.

> disease were poorly understood. There was concern that cases of SARS may be missed because of confusion with other diseases, and the directive was intended to capture all possible cases.
>
> This directive resulted in a large number of cases being sent for review, with considerable additional workload for hospital staff and reviewers. This process did not, however, identify any additional cases of SARS. It was apparent that the medical staff in GTA hospitals were keeping abreast of the developing body of knowledge regarding SARS as the outbreak progressed, and that they were able to identify potential cases with the assistance of public health officials as required.
>
> As a result of this experience, it was decided that there was no added value in reviewing the very large number of patients who appeared to have died as a result of (or while diagnosed with) congestive heart failure, pneumonia, respiratory failure or adult respiratory distress syndrome, where SARS was not already being considered by clinical staff or public health officials.
>
> Therefore, on April 15, 2003, Dr. [Barry] McLellan issued a directive to all hospitals in the GTA that they no longer needed to report these "potential" cases to the Office of the Chief Coroner. This decision was made following consultation with the SARS Scientific Committee that was providing advice to the government at that time. Hospitals were, however, instructed to continue to report all SARS deaths.[687]

In hindsight, the assumption that "medical staff in GTA hospitals … were able to identify potential cases with the assistance of public health officials as required" turned out to be optimistic.

The Joint Health and Safety Committee of North York General Hospital, which conducted an internal investigation into the death of Ms. Nelia Laroza and the illness among health workers, questioned another assumption that underlay the cancellation of the directive:

687. Letter from Dr. James Young, April 14, 2004, to Joint Health Safety Committee, North York General Hospital.

> It is certainly questionable whether we were so much more knowledgeable about SARS in the space of ten days (April 5 to April 15).[688]

SARS continued to be difficult to diagnose. There was still no quick test to determine whether a patient had SARS or some other respiratory illness such as pneumonia. Even where the clinical impressions of front-line physicians and nurses who were admitting and caring for patients identified a case as possible SARS, their clinical impressions were discounted where there was no epilink to a SARS case or a SARS region. We now know that the ability to diagnose SARS cases with accuracy was not progressing as well as it was thought at the time, and that the assumption which underlay the April 15 cancellation of the Chief Coroner's directive turned out to be incorrect. This is clear from the number of patients at North York General who had SARS but were not identified as possible SARS cases and from those cases who were identified as possible SARS who were said not to have SARS when we now know they did.

Post-SARS, some health workers wonder, if the April 5 Coroner's protocol had remained in place, would the deaths on 4 West have been recognized as an unusual cluster that warranted further investigation, which would have uncovered the simmering SARS on 4 West? As the Joint Health and Safety Committee at North York General concluded:

> … the subcommittee believes that if the April 5 directive had been left in place for hospitals who had SARS patients, the unusual number of deaths on 4W might have been seen to be suspicious by the Coroner and subsequent events might have unfolded differently. Recall, that there were 4 deaths on 4W in the first two weeks of May; possibly two of them either in the same room or closely located in terms of room number and possibly with a similar diagnosis. To us, this important directive represented a valuable check and balance within the health care system. In hindsight, it is very clear that patients with SARS on 4W/S went unrecognized and undiagnosed despite the retrospective assurance of Dr. James Young that, "the medical staff in GTA hospitals … were able to identify potential cases with the assistance of public health officials" … (Personal Communication, Dr. James Young, April 14, 2004).[689]

688. JHSC Report, p. 45.
689. JHSC Report, p. 45.

One physician who worked with SARS patients thought it would have made no difference at all:

> We have so many patients with ARDS [adult respiratory distress syndrome] and respiratory failure and congestive heart failure. I think they would have just been totally inundated and it would have been the same problem, too many cases that they wouldn't have been able to wade through and sort out anyway. So, no, I don't think that would have made any difference.

Because it was cancelled so soon after its implementation, it would be speculative to suggest that the Coroner's directive might have identified problems on the orthopedic floor at North York General. An obvious limitation of the Coroner's directive is that it was intended to catch deaths only, but as we now know there were many patients who were ill with SARS before May 23, 2003, who had not died and who ultimately survived the illness. These cases would not have been captured by the Coroner's memo, even if it had remained in place.

What can be said is that provincial or local surveillance initiatives might have made a difference. We now know that the diagnosis of SARS was not clear and that cases were missed. There was nothing system-wide to ensure that undetected cases were caught. Any system that might have identified clusters of illness or death could have been helpful and might have prompted a look into what was happening on 4 West.

Whether or not the Coroner's directive would have made a difference, physicians agreed that a strong surveillance system could have helped. As the above-quoted physician said:

> Question: If there were a system in place that required the question to be answered, what do these clinical indications of SARS, that we're not calling SARS, mean? In other words, instead of asking itself the question, do these patients have SARS, if the hospital had asked itself a different question: What does this show is going on? Maybe we better take a look at mortality rate here, a cluster there? In other words, let's do an epidemiological investigation, would that make sense?
>
> Answer: I think if we had the infrastructure and the expertise to do that on an ongoing basis, then, sure, because we probably

> would have picked up that in March there were, you know, five orthopedic deaths, and in April there were 25, hey, what's going on. But nobody that I'm aware of had that kind of top-notch, or very few anyway, had that kind of a top-notch epidemiologic surveillance infrastructure and system set up to track that kind of thing on a reasonable time basis. And if we did, sure, we might have picked that up that there was a funny blip in the mortality rate on that floor.

Another physician who argued that surveillance would have made a difference, as was evidenced in other areas, said:

> One of the things that happened after the hospital closed, was I went back and started reading the CDC Atlanta's Morbidity and Mortality Weekly Reports, and discovered that there was one dated May the 9th, that was in the library where the authorities, I think it was in Singapore, had started tracking nosocomial pneumonia regardless of contact history, beginning as early as late March. And this was then reported in May the 9th. If we had been tracking the literature appropriately, or what was happening in other centres, that whole clustering on 4 West, the orthopedic floor, potentially could have been avoided.

It turned out that the pattern of illness was not hard to see as soon as one focused on 4 West. When experts went in on May 23, 2003, they knew within a matter of hours that they were looking at a cluster of illness within the hospital. As Dr. Tamara Wallington told the Commission:

> We continued to review the charts anyway, and I would say after about an hour, we realized that we were dealing with a major outbreak. We reviewed these charts and realized that there was a serious, a significant clustering of febrile respiratory illnesses associated with deaths, all in one small ward. [All between] the 17th and May 23rd. And again, the numbers are significant, and I mentioned 23 health care workers and patients to you between April 17th and 23rd, and that's less the Patient A family [five family members]. That's less some of the people we already knew about. So the numbers were very significant, and these were names that were completely unfamiliar and unknown to us.

By that evening Dr. Low was announcing to the public, under media cross-examination, that it was a significant cluster and that the focus was on the orthopedic unit of the hospital.

As one physician pointed out, when Public Health came to the hospital on May 23, 2003, to review charts, the pattern of illness was much easier to see, as they knew what they were looking for:

> They were looking for it. They had a preconceived idea, and a reasonable one, that's why they came looking to North York General. It wasn't that it was so simple … They knew that there was this funny cluster of cases at St. John's, and they figured out that, well, isn't it funny that a lot of these patients actually started out at North York General. So, they knew what they were looking for, and they went right to it, and it doesn't take long to find something when you know what you're looking for. So, when it's happening sort of in a scattered, very obscure, somewhat occult way around you, and you're living in real time, it's not always that obvious.

While it is no doubt true that the discovery of the outbreak on 4 West was much easier with the knowledge that they were looking for SARS and that there had been a patient associated with 4 West who was now believed to have SARS, Public Health officials did not go to the hospital expecting to find a large cluster of illness. They thought they were going to review the chart of Ms. N, the patient who had been transferred to St. John's Rehabilitation Centre from North York General and who later developed SARS, to look at the chart of her roommates, and to look at Patient A's chart. Public Health officials did not know going into North York General on May 23, 2003, that they would discover a cluster of ill patients and ill staff on 4 West. As Dr. Wallington said:

> We had no reports at all of any febrile respiratory illnesses at 4 West from the hospital. We were completely unaware of what was happening on 4 West until we went in on May 23rd. And, in retrospect, it would have been helpful to have known about what was happening on that unit. So, no, 4 West would not have been considered a place where someone would be epilinked.

The pattern of illness became clear only when the files were reviewed as they were looking for possible unidentified SARS cases. But that is the point of surveillance: to look for SARS even in places where you might not expect to find it. And that was not happening.

Surveillance would have also required greater infection control resources. As Dr. Wallington said when asked if she would expect any hospital with a SARS unit to have active surveillance throughout the hospital:

> That's a really good question, and I think in an ideal world that would have been and should have been happening. I think that hospitals would probably tell you that there would've been real difficulty with that since for many, many years, infection control has been ignored, it's been under-resourced. And in order to do that, which I think is a really good point, and it's something that should exist, in order to do that you need to be resourced to do it. It is not a simple task. It takes a high level of expertise and commitment to do this. So, you have to have the right people with the right training in place to do that.

Speculation is a slippery slope. But it is certainly possible that the simmering SARS cases on 4 West might have been detected earlier had an independent review of the kind envisaged by the April 5th Coroner's memo or some other kind of system-wide surveillance sparked a review of the 4 West cases.

Surveillance Within North York General

Without a provincial or local surveillance system, surveillance for new or undetected SARS cases was left to the infection control program of individual hospitals. Consequently, the level of surveillance and approach to surveillance varied among hospitals. But many hospitals, including North York General, did not have a robust program and did not have the infection control resources to implement such a program during SARS. As Dr. Naylor found:

> Hospitals responded by treating all patients admitted with community-acquired pneumonia as potential SARS cases until proven otherwise. Most took special precautions with inpatients who developed respiratory symptoms suggestive of infectious disease. Some hospitals also did "fever surveillance." For example, at York Central Hospital, all inpatients had their temperature checked twice daily. Chest x-rays were ordered for all York Central inpatients with fever and respiratory symptoms and they were isolated promptly; and until SARS could be ruled out, a specialist in lung diseases assessed and treated all pneumonia patients in isolation. Similar measures were used in Singapore health care facilities.

> Although infection control practitioners attempted to institute comprehensive surveillance programs in some hospitals, such a program alone requires approximately 2 full-time staff members for a 500-bed hospital, more than the majority of hospitals have on staff for all infection control tasks. At North York General Hospital, for example, one full-time and one part-time infection control practitioner were responsible for 425 acute care beds. The infection control director, Dr. Barbara Mederski, occupied the role without any salary, protected time, or even an office. In the absence of a directive, and with ongoing budgetary concerns, instituting full syndromic surveillance was not seen by most hospitals as necessary or feasible.[690]

Identified SARS cases or cases under investigation for SARS were required to be reported to infection control, who, along with Public Health, monitored the status of these cases daily and were required to report daily lists to the Ministry of Health and Long-Term Care. During SARS I, in accordance with Ministry directives, the hospital had initiated and maintained screening of anyone entering the hospital, whether they were patients, visitors or health workers. Hospital resources were directed at screening for new cases of SARS to enter the hospital. What was missing was a strong surveillance system to look for unidentified cases of SARS in the hospital.

Surveillance was especially important in areas like 4 West, a unit that was vulnerable because it was a place no one expected to find SARS. Unlike the emergency department, where staff maintained vigilance for new cases because they knew they might have a new SARS case come through the emergency department doors, the staff on 4 West did not expect that SARS could be on their floor. And, as noted above, health workers were led to believe the outbreak was over.

As one 4 West nurse told the Commission when asked about surveillance:

> Question: Was there anyone during this time whose job it was to monitor these things [respiratory illness and deaths] on your unit? For example, to keep track of the number of deaths and keep track of the number of respiratory problems.

690. Naylor Report, pp. 38-39.

Answer: Not really. Because we all thought it was going to be temporary. SARS was going to disappear and these people [the medical floor patients] are going to go back to their floor and then we would be normal again.

Another nurse reported that although they noticed that there seemed to be more deaths, there was no system to report or investigate those deaths:

> Because I know one of my concerns was that when Mrs. X [a 4 West patient] passed away, I remember at the nursing station I said, there's eight deaths, and my question was if these people are in the nursing home and this person had come to us from the nursing home and the person died, we'd have to contact them and find out what number is she on their list. Because if it becomes 10 deaths, then we have to do an inquiry. So we were up to eight at that point, and that was my concern, that we have eight deaths. I wasn't even thinking of SARS when I was thinking of that. My concern was that if the nursing home reached 10 deaths, we have to call. Whenever a person comes from a nursing home and died, we have to call to find out what number is this person on your list, because there has to be an inquiry after 10 deaths in a certain space of time. And here we are up to number eight, what is the policy for our floor? That was my concern.

One physician who worked on 4 West and provided care to SARS patients in both SARS I and II, when asked about reporting of respiratory infections, said:

Question: Were there any rules or procedures in place about reporting infections, respiratory infections in particular?

Answer: Not that I am aware of.

Question: What about a procedure for reporting patients that might fall under the category of persons under investigation?

Answer: If there was, I was not involved.

Had the cluster of respiratory illness been identified, even without a link to a possible SARS case, it should have raised the alarm and it should have been reported to Public Health. As Dr. Wallington told the Commission:

Question: If you had been in that room for some other reason that morning and the ICPs had started bringing in the charts and saying we need a second opinion? So everything the same, except nothing from St. John's. Can you explain what it would look like?

Dr. Wallington: I would still be very concerned. This was clearly a clustering of febrile respiratory illnesses with deaths.

Question: Coming out of 4 West?

Dr. Wallington: Coming out of 4 West, and so this is an outbreak that we would take very seriously.

Question: Even forgetting about St. John's and the tests?

Dr. Wallington: Yes. Absolutely. This was an outbreak that was happening in a hospital, an acute care facility which still housed SARS patients. So this was an outbreak that we would have to take very, very seriously.

Unfortunately active surveillance for infectious respiratory illness was not mandated at the time by any provincial directives and there was no clear standard of surveillance that had to be met by hospitals.[691] It was not until weeks after SARS II hit that the Provincial Operations Centre issued a SARS surveillance program directive. On June 16, 2003, Directive 03-10, Directive to Acute Care Facilities in the Greater Toronto Area (Toronto, York, and Durham Regions), required the following:

> All hospitals must institute active surveillance for infectious respiratory illnesses as outlined in the appended document Active SARS Surveillance Program.[692]

691. Although, as noted above, hospitals were required to report to public health any outbreak within the institution of respiratory infection. *Health Protection and Promotion Act*, R.S.O. 1990, c.H.7., s.27; and see Ontario Regulation 559/91, amended to O.Reg, 365/06, Specification of Reportable Diseases.

692. Directive 03-10, Directive to Acute Care Facilities in the Greater Toronto Area (Toronto, York, and Durham Regions), June 16, 2003.

The appended document outlined the importance of surveillance. It provided:

> Active surveillance is an important epidemiological tool that serves a variety of purposes, both during active outbreak situations, and during times when specific outbreaks are not declared.
>
> The ability to identify cases early in an outbreak, or in anticipation of an outbreak, offers enhanced protection to patients, staff, visitors and the community at large. It also identifies the need for appropriate infection control precautions and prevents transmission of disease.
>
> The presence of an Active Surveillance Program in acute care hospitals is important for the early identification of "clusters" of cases requiring investigation. Regular attention by clinical nursing and hospital staff to the combination of certain symptoms (e.g., "fever and respiratory symptoms") in a systematic fashion across the hospital environment also provides continuous opportunities for staff education on both infection control practices and other SARS-related information. An Active Surveillance Program minimizes the possibility that SARS cases will be missed.
>
> Further, an appropriately resourced Active Surveillance Program will build and maintain public confidence in the public health and hospital care systems, both during periods of transition and over time.
>
> Ultimately, an efficient system will significantly reduce costs to both human and other resources.
>
> An Active Surveillance Program is not meant to replace Infection Prevention and Control practices already in place in acute care hospitals, but rather to supplement them.

The program was to be applied to all inpatient units, with the exception of critical care units.[693] As part of the program, unit staff were to monitor and record on a surveillance sheet if any of their assigned patients had unexplained fever, cough,

693. The program provided that "Another method of case finding will be developed for Critical Care Units."

hypoxia and/or shortness of breath. An assigned surveyor was to be responsible for going to all inpatient units daily to review the patient lists and speak to staff and/or review charts as necessary. The surveyor and infection control practitioner were to review all information provided by the surveillance to enable infection control staff to quickly determine if there were gaps in the identification of at-risk patients and their appropriate isolation.[694]

Post-SARS, the need for strong surveillance systems and strong infection control programs to support such systems is clear. As the SARS Field Investigation found:

> Enhanced surveillance is needed, including for the following:
>
> > Absenteeism among hospital workers
> >
> > Unusual fever or pneumonia clusters among patients and hospital workers within health care facilities, particularly in facilities providing care to SARS patients
> >
> > Abnormal death patterns within health care facilities and pneumonia deaths
> >
> > Significant increase in laboratory testing for respiratory pathogens or SARS Co-V
> >
> > Patients discharged from hospital with pneumonia of unknown etiology
> >
> > Community acquired pneumonia in areas with recent SARS transmission[695]

The SARS Field Investigation emphasized the importance of strengthening the infrastructures, both in a hospital and in public health, to support disease surveillance systems:

> It is critical that hospital infection control, disease surveillance systems and public health be strengthened with increased resources

694. Paraphrasing Directive 03-10, Directive to Acute Care Facilities in the Greater Toronto Area (Toronto, York, and Durham Regions), June 16, 2003.
695. SARS Field Investigation, p. 27-28.

> across Canada. There should be increased staffing and the infection control medical director should be compensated for the time devoted to infection control issues.[696]

Tragically, strong disease surveillance systems and resources necessary to support those systems were not in place prior to SARS II. Although some hospitals had limited forms of surveillance, North York General was not out of step with the generally prevailing surveillance standards. Had Ontario's surveillance standards been higher and mandated in all hospitals, the systems better and the resources more available, the cluster of illness on 4 West should have been detected before May 23.

Isolation of Febrile Cases

One of the big questions that remains in the wake of the second outbreak is, even if the patients were not identified as SARS, if they had respiratory symptoms, were they handled with droplet and contact precautions? If so, how then could SARS spread so widely on the unit?

On April 16, 2003, North York General Hospital issued a revised policy for droplet and contact precautions. The revised policy included the following:

> Criteria for Full Droplet and Contact Precautions are required:
>
> 3. When a patient has respiratory symptoms suggestive of an infection and have been put on droplet and contact precautions (i.e. CHF, CAP, Vented, Pneumonia, Asthma).[697]

At that time, provincial directives required isolation and the use of precautions for any patient who developed fever or respiratory symptoms. An April 14, 2003, directive to all acute care hospitals required:

> HCW's [health care workers] should maintain a high index of suspicion when assessing any patients for new onset of fever or respiratory symp-

696. SARS Field Investigation, p. 28.

697. North York General Hospital, SARS Task Force, Droplet and Contact Precautions for Staff, April 4, 2003, revised April 10, 2003, revised April 16, 2003.

toms. Any person developing the following symptoms or signs after admission – cough, unexplained hypoxia, shortness of breath or difficulty breathing – must be treated as follows:

a) Transfer to a single room if available. If a single room is not available, cohort similar case presentations (e.g., congestive heart failure cases with other patients with congestive heart failure) and maintain at least one metre spatial separation between beds. If there is more than one patient in a room, the curtains must remain closed between beds to minimize droplet transmission.

b) Patient activity should be restricted i.e. patients should remain in their room with the door closed until SARS is ruled out.

c) All visitors and health care workers must wear a N-95 mask or equivalent when entering the room.

d) Where possible, diagnostic and therapeutic procedures (e.g., imaging, hemodialysis) must be done in the patient's room.

e) Patients should be out of the room for essential procedures only and wear a surgical mask during transport.[698]

The new normal directives, issued May 13, 2003, also stressed the need for isolation and use of precautions for patients who had respiratory symptoms suggestive of an infectious disease, until SARS could be ruled out.[699]

It is unclear the extent to which the North York General Droplet and Contact Precautions policy was followed. Although the majority of staff, including physicians, interviewed from 4 West recalled the policy, few remembered it clearly and most could not recall whether or not they applied it. Most reported to the Commission that if the policy was in place, they would have followed it. As one physician told the Commission:

698. SARS Provincial Operations Centre, Directives to All Ontario Acute Care Hospitals, Directive 03-04, April 14, 2003.
699. Directives to All Ontario Acute Care Facilities, Directive 03-04(R), May 13, 2003.

> My observation would be that it was followed pretty carefully. Certainly on our floor it was. I think that, I'm sure there may have been some breaches from time to time, but my observation being on the floor a fair amount was that it was carefully certainly all the surgeons, nurses and so on were very careful with this. I mean, there was significant concern during that time with respect to this illness, so people were observing the precautions that were outlined carefully.

Another physician who worked on the unit agreed with the observation that the policy was followed. He said:

> Everybody tried when the policy came about. The nurses were informed. They were pretty good about doing it. I don't think too many corners were cut.

But how then did SARS spread throughout the unit? Even if the patients weren't identified as SARS, if they had "respiratory symptoms suggestive of an infection" or, as per the directives, if they had a cough, unexplained hypoxia, shortness of breath or difficulty breathing, they were supposed to have been put on droplet and contact precautions, which included isolation.[700]

Because there wasn't a strong system of surveillance to focus on the possibility of undetected SARS transmission in all areas of the hospital, including those thought to be "safe" or "SARS-free," SARS cases were not identified when they simmered on 4 West. When possible SARS cases were not identified on 4 West, the problem was compounded by the fact that those cases of respiratory illness, which we now know had SARS, were not always isolated or treated with droplet precautions. As Dr. Wallington told the Commission:

> People with febrile, respiratory illnesses were to be managed in precautions, they were to be managed in respiratory precautions. That was the direction. And there was a good reason for that. It was to prevent potential spread of SARS or any febrile respiratory illness. And I think what we're seeing here [on 4 West] is that when you don't put people in isolation, you get this unrecognized, ongoing, low-level, grumbling transmission. And then the health care workers start to take their masks off and they get sick.

700. April 16th NYGH Policy.

One member of the infection control team at North York General told the Commission that when a patient was put on isolation, infection control were supposed to be notified. They recalled later noticing that on May 20, 2003, a date when we now know there were many patients ill on 4 West with SARS, no patients from 4 West were flagged as being on isolation. As they told the Commission:

> Any patient who developed fever or respiratory illness was put on isolation and they were supposed to be flagged in the patient care system so that we would have a record of who was on isolation … I do know, in looking back afterwards, I saw one of those reports from May 20th, and there wasn't anyone's name on it from 4 West. We weren't notified through the system.

Clearly, the policy that was in place was not working.

This is not to blame the health workers or physicians who worked on 4 West, or to suggest that anyone was at fault. Many factors contributed to the failure to isolate all respiratory patients during April and May, including lack of awareness and understanding of the policy, difficulties in complying with the policy, and a general inattention to robust infection control throughout the Ontario health care system.

One physician, when asked how SARS spread so extensively on 4 West notwithstanding the policies that were in place, suggested that either the precautions were not adequate or the precautions were not adequately applied:

> … if cases developed while we were taking precautions, and I'm not sure about the time frame here as to when the cases actually became ill, whether it was after we abandoned some of those precautions or not, but if it occurred while we were using those precautions, then that would suggest the precautions weren't adequate or weren't adequately applied. And one would have to, in future, be very careful about instructing staff of the importance of observing these precautions carefully. The other possibility is that if they were observed well, then the precautions weren't adequate, that the sort of use of a simple cotton gown and gloves and mask were not enough to protect you from that particular virus.

The existence and application of the droplet and contact precaution policy was not brought home clearly to all front-line staff. Some nurses did not recall the policy and were not aware of its requirements. Few nurses recalled receiving any training on the policy. One nurse said she was aware of the existence of the policy, but that there was never time to sit and read the policies:

> I remember that [the isolation policy], but I think they just put it at the desk and said go and read it if you have a chance. But in nursing, when will you have a chance to do that? It would have been better if they had had a meeting and informed us. There is hardly any chance [to sit and read] with the workload, because 4 West is a heavy, heavy workload floor.

Of those who were aware of the policy, some nurses reported uncertainty about its application and about who could institute the isolation protocols. Even some doctors, while aware that they could isolate patients, were unaware of who else might do so and of the application of the policy outside of their involvement. Who decided initially whether a patient should be put on precautions? Some nurses thought only infection control could put a patient on isolation. Others thought only a doctor could make the decision to isolate a patient. Other nurses thought that only a manager or head nurse could isolate a patient. As one nurse told the Commission when asked about the isolation policy, she understood that a manager had to approve it and that the application of the policy was dependent on bed availability:

> Question: And were you aware of a policy in existence during April and May that required that a patient who had a respiratory illness be isolated?
>
> Answer: It rings a bell, but I believe they had to have respiratory symptoms and a fever, when a lot of the patients that were dying in our unit had no fever.
>
> Question: And whose decision would it be to isolate a patient, to put a patient in isolation?
>
> Answer: I think it has to be in consultation with the manager. And also you have to consider if there's going to be an open bed.
>
> Question: That was going to be my next question. What was the situation like on the unit as far as the ability to isolate patients?
>
> Answer: Non-existent really. We were very, very busy in there. Very rarely did we have empty rooms.

4 West was not a place where anyone expected SARS. The resources and emphasis on strict adherence to isolation and use of precautions were not as strong as in areas that anticipated handling SARS cases. As one 4 West physician said when asked how

SARS spread on 4 West despite the policies in place with respect to isolation and the use of protective equipment:

> It is hard for me to answer that question. We had a number of patients come to 4 West from other floors during that time when 8 West was closed, to make it a SARS ward. The precautions that were being taken were relatively simple. We were not wearing, at the early stages, N95 masks, for instance. At the time, there was no obvious disease on the floor so these precautions were being observed, but they were pretty simple. And I'm sure that there were some errors of handling something after you took your gloves off perhaps, or I think errors in technique I'm sure were made during that time that could allow it to spread. And then in terms of patient-to-patient, a four-bed room, if one patient gets an illness, it's clear that it can spread to the patient in the next bed without much difficulty, because it was droplet, so I have to assume that's how it occurred.

As the Joint Health and Safety Committee at North York General so eloquently described the problem:

> 4W was not considered to be the "front lines" and not deemed to be at high risk like other areas, such as the ER, the ICU, or the SARS Unit. Therefore, there was possibly less suspicion and less vigilance. As well, it was common for post-surgical patients to have fever and respiratory complications and patients were not isolated since it was not considered to be unusual. Neither the 96-year-old patient nor the other patient who could also have been an index patient were initially isolated. Both were located in the same four-bed room. The 96-year-old patient was finally isolated but only because he was having diarrhea. Both patients had fever, respiratory symptoms and diarrhea. In retrospect, we saw that SARS would appear in "low risk" areas, such as the original 8W (Geriatric Unit), 7W(Psychiatry) and on 4W/S (Orthopaedics/Gynecology). The reality was that all areas of the hospital were the front lines and were high risk since we had patients with SARS in the building, since we didn't know everything there was to know about SARS (and still don't) and due to the possibility of human error or that things might be missed. Most of the focus seemed to be on the "gate" which was the ER. Viruses, however, will move wherever they are taken. During an outbreak of disease or during the transition period (which turned out to be a very dangerous time), the highest level of vigilance must be maintained

> throughout every area of the hospital and concerns from any area must not be dismissed. The problem is deciding when it is safe to relax precautions.[701]

Even if a nurse or doctor was aware of the policy and tried to strictly follow it, there were challenges in its application. One nurse from 4 West described to the Commission the challenges they faced when they tried to comply with isolation procedures:

> We don't have isolation rooms. These are regular rooms, so our isolation rooms would have to be that if a patient is in the room and two of them [two patients] are in there, you have to take one out. You have to take one out, they clean the room and put the patient in and just pray that whatever one had the other one doesn't pick it up before you do that isolation. We put the other one in a room by themselves … So if they have a private room that's empty or there's somebody in there that doesn't mind moving, then you take that person out and put them into a room with somebody else, put the isolation patient there … We have about four rooms that are private. And those are the rooms that act as our isolation rooms, and if these patients refuse to give up their private rooms, to bunk with somebody else, we have nowhere to put these patients.

One physician said that, although there were errors in isolation on 4 West, isolating patients on 4 West was not easy:

> Errors that occurred on 4 West were not so much errors of definition of SARS, they were errors of quarantine. People coughing, people with fevers that should have been isolated. Now the trouble is we don't have the resources to do that. You take a 90-year-old person who's got a cough and try to put a mask on them, you need 24-hour nursing to get that mask to stay on, because they'll just take it right back off. It's an unbelievable set of resources that's required to enforce respiratory isolation and, you know, when you call it SARS, suddenly you get all those resources, negative pressure rooms and lots of funding and staffing, but when we go back to our normal surveyance, what you have is policy. This is respiratory isolation policy, we have a sign on the door, and that's very different from staff and funding.

701. JHSC Report, p. 48.

Another physician who worked on 4 West described how many factors, including the type of patients on 4 West, made it difficult to comply with isolation procedures and to minimize exposure and risk to staff:

Question: Some of the staff from 4 West have pointed out that the unit is not conducive to isolating a large number of patients. Any observations on that?

Answer: It's not, because when you have a full unit, a unit has 32 people, 32 beds, and only one, two, three, maybe four or five rooms that you can make isolation rooms.

Question: By isolation, that would mean the patient is in the room alone?

Answer: In the room alone. And that is not the greatest isolation, because you don't have, as far as I know, and perhaps now they do, this negative pressure in those rooms. Is it a perfect isolation room? In the emergency department we have perfect isolation rooms, up to the standard of, whatever standards you would use to make it an isolation, they have, and they probably have it in ICU and CCU, but on the floors, I don't know if the standard is as it should be for a strict isolation, although I assume it is. The other thing about isolation is, these people are orthopedic patients who are recovering from surgery, who need physiotherapy, who need nursing care, they are surgical patients, so there are often people going in and out. During SARS, when you actually had a SARS patient, in the actual SARS unit, there was minimal in and out of that room. It is my understanding that the nurses made their rounds occasionally, did everything at one time, no visitors, this was quarantine and isolation the way it should be. Last week, we had a patient on 4 West that was isolated because of a cough and a bit of a fever. She wore a mask, the patient wore a mask during physio, the physiotherapist had to go in there and give her some physio, the nurses had to go in there, the lab had to go in there, tests had to be done, visitors are allowed in.

In the wake of SARS, the importance of isolation and droplet precautions with respiratory cases became clear. But prior to SARS, isolation of patients and use of protective equipment were not routine. This was not true only on 4 West; it was true throughout the health care system in Ontario. Many physicians told the Commission that before SARS, the only time they isolated patients and used a mask was when they thought the patient had TB. Even then, the mask used was typically a surgical mask. One senior physician, who regularly worked on 4 West at North York General, candidly described a higher level of knowledge and degree of care in respect of isolation and worker safety post-SARS. He explained how SARS changed the way he practised medicine:

> Answer: SARS has changed medicine for me unbelievably. Now part of that is not just me, part of it is I am forced to be aware of it, because the minute somebody develops a fever with a respiratory component, they are isolated by the hospitals. There are strict orders to isolate, so I am forced to examine this very carefully.
>
> There is better knowledge of what happened. So that in itself, and I keep stressing this because we are aware of what happened, we are more knowledgeable now. Anybody with a fever and a respiratory, a fever and cough, is isolated, until you sort it out. That's one. If somebody has a fever with no symptoms, the nurses note it and I am notified, because they could just have a urinary tract infection. Then I go through the questions, is it this, is it that. A fever with respiratory illness or respiratory complaints, or probably fever with cough, are isolated. Cough without fever may not be and if you are not sure, 24-hour/7 we have an ID [infectious diseases] team we can call for advice, which the staff use, and they use it wisely. Anybody who has a medication that is delivered by droplet, because there are certain oxygens we give, that happened to me the other day. I had a patient who I am pretty sure we are talking about congestive heart failure, it was congestive heart failure, required high-concentration oxygen to keep their oxygen up, the respiratory therapist came by and decided this oxygen should be humidified. I was not informed, but this was her mandate. As soon as that happened, because it was droplet, the patient was put in isolation. When I came in the next day, I

asked, why was this patient in isolation? When we intubate a patient, I have to mask and gown and glove, something I never did for 25 years. I still, still have difficulty with that. Although the younger doctors do now, it is like seatbelts.

Question: Do you do that for all patients now, or ones with respiratory illness?

Answer: If I'm intubating, you've got three-point protection.

Question: And are these changes that have happened as a result of knowledge since SARS?

Answer: Since SARS – none of this was around before SARS. I can recall doing mouth-to-mouth on patients before SARS, as part of CPR. I was going to say, it's like seatbelts, you know my kids don't think twice about seatbelts. It's their natural reflex.

Where isolation and precautions were strictly followed, it was easy to see how even the most diligent health worker could make an honest mistake in its application or how there could be a breach in protection for those patients on droplet precautions. One physician who routinely cared for SARS patients described how difficult it was to maintain precautions and how the use of the protective equipment was not routine:

> Even with a policy that tells you to do this, it was something that we didn't practise on a daily basis up until then. It takes a conscious effort to ask me to remember the sequence. Until you do that, it is difficult to think, but basically it is not a second nature, so you have to remember to wear masks, do this, do this, do this. Once it is finished, take this and this and this and that. All of that is not a second-nature thing. It is uncommon. It is almost like you have to follow – that's why the signs are so big, so that you can actually remind yourself. And even though you do that every day, you still have to remind yourself what to do and at times, you kind of maybe forget about one step. So that is human nature, you don't remember.
>
> We were breathing under the N95 mask. We were breathing our carbon dioxide back into our brain, and working 16 hours under those masks and gowns. It was very difficult to concentrate, to remember what to take off

> first, etc. And so even with the policy, sometimes just down to the nitty gritty, it's like okay, the gloves go here, gown here, maybe there is a crack, maybe a droplet goes there and you forget and you wipe your nose.
>
> I think everybody was trying to follow instructions. Nobody wanted to get SARS. We were trying very hard, everybody was trying very hard to follow whatever was there. And myself, working in the intensive care unit, I was intubating these people with a space suit etc. Again, you were taking it off, trying not to contaminate yourself, you have to make a conscious effort. It is a very slow process and it takes you forever. Instead of going in and out, it takes you forever to see one patient. So, you can see that in so many hospitals, there can be cracks.

The nurses on 4 West were hard-working, caring and attentive. They were used to providing close, constant care for the patients on their unit. They were not used to limiting their exposure to patients or leaving them alone and unattended in their rooms. For example, one nurse who contracted SARS recalled working with one of the elderly patients on the unit, who we now know had SARS. This nurse explained to the Commission that she spent a lot of time in this patient's room, not because she was the patient's nurse, but because she spoke Russian and would go in and speak with the patient and provide comfort to her. As she told the Commission:

> She wasn't my patient, but the doctor would sometimes ask me to translate because I know Russian and she didn't speak English. I came to her room so many times to help. After she knew I was Russian, she said, come and talk to me, I am so lonely here. So I came to her to talk, whenever I had a minute. I was not wearing a mask.

This type of compassionate patient care is what we all hope for in a health worker. Tragically, health workers, like the one quoted above, were unknowingly put at risk, simply by being good nurses.

It is much easier in hindsight to look back and say what should have happened on 4 West. But at the time, no one working on 4 West believed their patients would have SARS. The hospital had a SARS unit, which was not anywhere near 4 West. They believed SARS was contained. As one nurse told the Commission:

> On the 8th [floor], that was suppose to be a SARS unit, but not on our floor. We didn't have any idea there was anyone with SARS.

One physician from 4 West reflected that it was easy to look back now and see what went wrong, but it was not so obvious at the time:

> I don't think anything went wrong. It was the demon that was so new and we were learning about it and we had no test and had no treatment. The study cohort is so few. It is easy to look back and say what we should have done. For me what went wrong, looking back, and it is only because I have the knowledge now, is that perhaps everybody, as they had fever and cough, should have been isolated and we should have been more aggressive in isolating them and consider SARS as a cause.

Post-SARS, one of the emergency room nurses reflected on how the different levels of training likely contributed to the difference in the numbers of staff who were exposed and who became ill with SARS:

> For some reason, not one nurse in emerg contracted SARS, not one, yet the 4 West nurses did, because that was a little different. Those people who were exposed, I think it was because they had improper education [on] and understanding of isolation.

The story of 4 West underscores the importance of regular, mandatory education and training programs for workers on the use of personal protective equipment and on hospital policies, such as isolation protocols. It shows the challenges associated with isolating and using precautions when treating the very ill, the scared and the elderly. It also shows that during an outbreak of an infectious disease in a health care institution, suspicion for new cases and awareness about the disease must be emphasized in all areas of the hospital. As 4 West showed, there is no such thing as a "low risk" or "safe" area, especially in a hospital that has SARS patients.

Were Concerns Raised by Staff?

Hospital officials told the Commission that they were unaware of any problems on 4 West until May 23, 2003, when news of the second outbreak broke. However, as noted above, many of the 4 West nurses interviewed by the Commission said they were aware of an increase in respiratory illnesses and/or deaths on the unit, either through their own observations or through discussions with colleagues.[702] Many of these nurses believed that concerns were raised about these patients to management and/or physicians and that nothing was done to investigate their concerns. This has contributed to a feeling of mistrust among staff, as some point to it as an example of senior management's not listening to nurses.

The Joint Health and Safety Committee reported anecdotal evidence that illness on 4 West among staff and patients had been ignored:

> Other health care workers on 4W would comment, … so many patients died of pneumonia on 4W (over 10 in 2mos.) … they should have investigated for SARS.(Phase 1 –Interview # 23). Another would comment, "Patients were dying with respiratory illness. We were told not to worry, it's not SARS." (Phase 1 Interview #24) Another comment, *"Concerns about why so many patients were dying with respiratory symptoms were not investigated promptly."* (Phase 1 Interview # 24) *"I had nursed patients with respiratory problems who later died. I was told after I had been admitted into hospital that these patients died of SARS … Patients with respiratory illness were not investigated properly. There were 6 or 7 deaths in a matter of a few weeks. When concerns were raised by us, nobody listened. We were told they are elderly and what do you expect?"* (Phase 1- Interview #26) Another HCW stated, *"We had approx. 10-11 patients die of pneumonia and we mentioned it to the U.A. who I hear asked DR. and felt it was nothing. Staff began to get sick, 5-6 sick calls a day and U.A. said it was a bug going around. If it had been looked into when patients started to die this would not have been such a big outbreak and people might not have died."* (Phase 1 – Interview # 39) *"Massive death within short period of time, which had never happened before."* (Phase 2 – Interview).[703]

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702. As noted earlier, not all of the nurses from 4 West reported an awareness of problems on the unit. Some 4 West nurses said they were unaware of problems on the unit until May 23, 2003.

703. JHSC Report, at p. 46.

Some nurses who did report to the Commission that they were aware of problems on the unit, either through their own observations or conversations with others, said they did not raise concerns with anyone themselves and did not know if anyone had raised concerns with the manager or any hospital official. For example, one nurse reported being aware of problems on the unit but did not know if anyone raised concerns with the manager or anyone else:

> I don't know if anybody actually went to her and said it to her. But I know that was one of our concerns, but did anybody go to her and actually say to her that we have so many deaths, what are we doing about it? … Their connection was just not there … I didn't know if anyone had actually gone to her [the unit administrator] and said, so and so, so and so. I don't know if anybody had actually gone to her and said it.

However, a significant number of nurses interviewed by the Commission stated a clear belief that concerns had been raised with the manager, although almost all reported that they were not present when the conversation took place. They understood from colleagues that the manager was aware of the problems on the unit. For example, one nurse from 4 West recalled staff being alarmed because of the number of deaths and reported hearing that a colleague had raised concerns with the manager:

> I didn't know what the ratio was for patients dying in that area because I came from [another] site, and I could remember the other staff members, they were all alarmed, why we were having so many people dying on the floor. People came in with a fractured hip and broken bones and usually they would recover, go to rehab and be okay. But many of them were dying with respiratory problems. In conversation with one of my coworkers, she said that she had mentioned it to the manager, why so many people are dying, and her response was that they are old … [The nurses] were concerned.

Another nurse, when asked if she noticed an increase in the number of deaths, reported a similar scenario of awareness and belief that someone had raised it with the manager. She believed that concerns had been raised with a doctor as well, although she did not know which doctor. She said:

> Question: At some point during April or May, did you ever notice that there seemed to be a higher than normal number of deaths on the unit?

Answer: Yes, because during my night break, we were kind of talking about it, like "do you remember this patient? She passed away last week." And they said, "really," and then during that week, another patient died, again, and then somebody died, and so many deaths.

Question: Did you ever raise that with anybody, your manager?

Answer: My manager was aware at that time and I heard from my colleagues, I don't know, I can't remember which colleagues I was talking to, but the doctor knows about it but they can't find anything. They thought it's plain pneumonia and they're on antibiotics and puffer and nebulizer, whatever.

Question: So you heard about it from your colleagues. Did you, yourself, ever talk about it with your manager?

Answer: I was on night shift so I didn't see her.

Question: So when you say that your manager was aware of it, is that something that someone told you, or is that because you actually talked about it with your manager?

Answer: I did not talk to her. Somebody talked to her about it.

Question: Do you know who that person is?

Answer: I don't know, because I just heard from, when we were kind of sitting down in the nursing lounge and then somebody said that [the unit administrator] knows and she talked to the doctor.

One nurse recalled a meeting between the unit administrator and staff where the issue of deaths and illness were raised. She could not recall the date of the meeting or who was present but was certain that the issue of increasing deaths and respiratory illnesses on the unit was raised. She said that at the meeting the question of SARS was not raised and that although she recalled concerns about the increase in deaths and illness, she did not remember anyone connecting it to SARS at that time. This nurse reported that she also noted that a lot of patients had respiratory

problems, but post-operative fever or pneumonia was not unusual and SARS did not cross her mind:

> I noticed it, but on our floor, surgery, some of them spike fever, post-op. So initially you may not think that it's pneumonia or whatever because it's a complication of surgery, especially if they tend to be feverish, especially when they don't deep breathe and cough.

Another nurse reported discussing the deaths with a charge nurse, but the explanation given was that the patients are elderly and have medical problems:

> I heard that some nurses talked to the head nurse and talked to the nurse in charge at the desk about these deaths, because there were just so many pneumonia patients who died. And the charge nurse said that, actually, I was there when one of the nurses told her about it, and she said, well, they're old and they have past medical history, so they're expected to die.

Others nurses reported hearing rumours that colleagues had raised SARS concerns with doctors or that the manager had raised concerns with one or more doctors:

> I heard later that the nurses mentioned concerns about SARS, but the doctors they just, maybe wishful hoping, denied it. I didn't hear it from them directly, I just heard a rumour like that.

Another 4 West nurse reported being aware of an increase in deaths on the unit and a belief that concerns were raised with the doctors, although she did not know with whom:

> There seemed to be lot of illness and death. To be honest we did talk about it, and I think the nurses did tell the doctors, but that is just what I was told. The main excuse was these patients are elderly and they have problems and that dying is natural. But we said it is unusual. Even on the 8th floor [the geriatric unit] we did not have that many deaths. Here [on 4 West] every time I went in it seemed someone had passed away on the day shift or the night shift.

None of the physicians interviewed from 4 West recalled anyone identifying the high rate of illness and death among patients on the unit prior to the discovery of the second outbreak. Infection control staff also told the Commission that they were unaware of the high rate of illness or an increase in the number of deaths on the unit.

There is no record of anything being raised in respect of 4 West in the minutes of the SARS Task Force/Management Committee. Toronto Public Health reviewed their call logs and did not locate any reports of unusual illness or deaths on 4 West by any staff member at North York General Hospital.

One physician who cared for SARS patients noted that, despite the perception that warnings were unheeded, to his knowledge no one raised the alarm in respect of the patients on 4 West:

> Given what we now know about the index case and how it was, I think that would have been a very, very difficult thing. I know there are physicians or nurses that are saying, there was this funny cluster of deaths that we couldn't really explain. But I don't remember hearing anything about that. I don't remember hearing anybody at the time saying, this funny thing is happening on 4 West … There was no talk about anything at the time that people were worried about. A lot of people I guess have come up retrospectively, I remember thinking, but at the time there was nothing, there was absolutely nothing that I recall being concerned about or worrying about.

The Joint Health and Safety Committee at North York General Hospital investigated reports of health workers that concerns were ignored and found:

> It remains uncertain how concerns regarding an increasing number of deaths and possibly numbers of patients with respiratory symptoms and/or pneumonia were escalated by the health care workers on 4W or by the UA [unit administrator]. We have the statements of the staff on 4W that issues were raised with the UA. No one we interviewed from Infection Control, the administration or the doctors claim to be aware of any concerns being raised on 4W prior to May 23rd. During the transition period prior to recognition of the SARS outbreak on May 23rd, the UA's were supposed to be meeting each week on Wednesday. Problems were then reported to the SARS Management Team. There is no evidence from the minutes of the SARS Management Team that there were any problems on 4W. The immediate supervisor of the 4W UA states that nothing unusual was reported to her.[704]

704. JHSC Report, p. 46.

It is difficult to reconcile the perception of health workers that events were reported with the absence of any documentation of such reports or any recollection by anyone that such a report was made. It is difficult to determine with certainty who said what to whom at the time. The difficulty is compounded by the fact that because there was no system allowing for whistle blowing and no record-keeping of concerns raised by front-line staff, accounts of reports to others are based on individual perceptions which may or may not be tempered by the benefit of hindsight and must therefore be approached with caution. For example, one nurse reported to the Commission that she knew a colleague had raised concerns with the manager. When the colleague, who was identified by the nurse was interviewed, she reported that she had not spoken to the manager herself. She was also under the impression that another colleague had raised concerns with a manager, but she was unable to recall which colleague did so.

It is impossible now to say with certainty what was in the minds of all those involved at the time. There is the further difficulty of separating hindsight and rumour from actual recollection.

The unit administrator was unable to be interviewed by the Commission and was therefore unable to respond to any of the comments made about her or to provide her perspective on what transpired on 4 West. But there is no evidence that anyone in charge on the unit, including the unit administrator, knew these patients had SARS and failed to report them as such. While many nurses said they thought the unit administrator was aware of the illnesses and deaths, there is no evidence that SARS cases were identified to her and that she failed to respond. It would be unfair to hold the unit administrator or any other supervisor at fault for what happened on 4 West. No one identified the cluster of SARS cases, including doctors. It would be unfair to suggest that the unit administrator should have known what no one else did, that these were cases of SARS.

Despite rumours that 4 West staff identified and reported suspected SARS cases prior to the second outbreak, the Commission found no evidence of any such report. Nor is there any evidence that any physician detected or failed to report any suspected SARS cases.

There is no evidence that doctors identified cases of SARS on 4 West and then failed to report or raise concerns to hospital officials or to Public Health. The Commission does not doubt that had the doctors who were caring for these patients during April and May suspected SARS, they would have reported their concerns and managed the patients accordingly. They would not have put themselves and others at risk.

Had a physician identified an outbreak of respiratory illness on 4 West, he or she would have been obliged to report such a belief to hospital administrators, to enable the hospital to meet its reporting obligations under the *Health Protection and Promotion Act*. Since SARS was not only a reportable disease but also a communicable disease,[705] physicians had a legal obligation independent of hospital administration to report to public health if they formed the opinion that a patient is or may be infected with an agent of a communicable disease.[706] As Dr. Wallington told the Commission:

> My understanding is at that time, if SARS was even considered as a diagnosis, it should have been reported. SARS was not considered as a diagnosis in any of these cases and so they weren't reported. It was an outbreak, it was a cluster of respiratory illnesses, so technically, under the reporting requirements, respiratory outbreaks in facilities should be reported. Having said that, when you look at the charts of the individuals on 4 West who were sick before we got there, there were good alternate diagnoses, and so perhaps one could argue that everyone had their own reason for having this pneumonia and maybe they weren't all linked and maybe that's why it wasn't reported as a respiratory outbreak. It would have been very helpful for us, considering the numbers of sick people in one ward and the deaths that were associated, to have known about it.

There is also no evidence that health workers on 4 West identified SARS patients to senior management or those in charge of the SARS response. There is no evidence to suggest that senior management or those in charge of the SARS response ignored reports of SARS cases on 4 West or that they failed to respond to such reports. When Dr. Wallington was asked why the hospital couldn't take steps to control the outbreak earlier, such as steps that were taken to control the outbreak at St. John's Rehab once a cluster of illness among patients was identified, she said:

> Question: You made a note on May 21st, four others at St. John's have fever, recommend the ward close, active surveillance of staff and patients, active surveillance of what people were getting sick, contact to inquire about sick staff …

705. Ontario Regulation 559/91, amended to O. Reg. 365/06, Specification of Communicable Diseases.

706. Section 26. A physician who, while providing professional services to a person, forms the opinion that the person is or may be infected with an agent of a communicable disease shall, as soon as possible after forming the opinion, report thereon to the medical officer of health of the health unit in which the professional services are provided. *Health Protection and Promotion Act* R.S.O. 1990, c. H.7, s. 26.

Dr. Wallington: Yes.

Question: … and actually look after the ill staff, couldn't North York General have taken that kind of step much earlier, as soon as they had questions about sick health care workers – some on 4 West, they had the psychiatric patients, and they had the Patient A family cluster. Why couldn't North York General before May 23rd have taken the steps that you took immediately on May 21, in respect of St. John's?

Dr. Wallington: I think part of the issue, in retrospect, was that they were not aware, I do not think the administration was aware of the outbreak that was occurring. It was an outbreak that went undetected.

Question: The outbreak of febrile respiratory illness on 4 West?

Dr. Wallington: Yes, it was not identified or labelled as an outbreak. They were individual cases, individual patients who were being managed according to their clinical diagnoses, so it was not declared an outbreak. And I think that is why the measures that you are alluding to were not taken, because I know at the senior level they were not aware.

Hospital administration had a legal duty to report not only suspected cases of SARS but also an outbreak of respiratory illness. Senior officials and those in charge of the SARS response at North York General understood their obligations. The Commission does not accept any suggestion that senior management or hospital officials would have ignored cases of SARS or that they would have deliberately put patients, visitors and staff at risk. The Commission is satisfied that had North York General officials and members of the SARS Task Force/Management Committee been aware of the possibility of SARS on 4 West, they would have sought the advice and assistance of Public Health and would have taken measures to ensure the safety of staff, patients and visitors to the unit.

While it is impossible in retrospect to know what exactly transpired on 4 West, the Commission finds that some of the staff who worked on 4 West did have concerns at the time about the number of deaths and respiratory illnesses and that there was no effective system to bring those concerns to the attention of someone who had a clear duty to investigate their concerns, to report back to staff on the results of their inves-

tigation, and to satisfy front-line staff that their concerns were heard and that something was being done to address them. Whatever concerns arose at the time among front-line staff, those concerns did not make their way up the chain of command.

The Commission does not doubt the credible and sincere accounts by the many staff who reported being aware of an increase in deaths or respiratory illness on the unit. But there was nothing in place at the time to capture the concerns of front-line staff in a concrete way. As the investigation by the Joint Health and Safety Committee concluded:

> We were never sure of exactly how or when the nurses or other health care professionals on 4W escalated their concerns. It is believed that the UA of 4W took concerns to doctors, but to which ones, we are not absolutely certain although names have been suggested. It is easy to understand why the doctors may not have reacted. This is conjecture but we are thinking that concerns may have been brought in isolation to different doctors at different times and no connection may have been made. Also, it is traditional to bring concerns to doctors, since they are thought of as the ultimate authority in the medical model. However, this emphasizes to us the need to always document concerns in writing and to bring these concerns to the administrative side of the hospital as well as to the medical side, since the consequences immensely affect the administrative side of the hospital.
>
> We must not have medical silos which are separated from the administrative side of the hospital. The administrative and the medical sides of the hospital must become integrated as they are part of the same organization and key people on the administrative side must be kept up to date on all important developments, including medical ones, during or after an outbreak.
>
> As well, we never saw any indication that a specific nurse brought concerns to the attention of a specific individual other than the UA. There is no mention of Infection Control being notified of any problems and they confirmed this in their interview. There were never any "I" statements, such as I did this or I did that. The bottom line is that everyone is responsible for infection control. The question is how do we as an organization enable and empower individuals and how do we encourage leadership at every level within the organization? Tackling diseases, such as SARS, requires immense leadership and co-operation from everyone.[707]

707. JHSC Report, p. 47.

Because there was no system to ensure the effective reporting of concerns to senior officials in the hospital, concerns of front-line staff did not seem to move past the unit level. The SARS Field Investigation into the second phase of SARS also identified and stressed the need for strong feedback mechanisms to address staff concerns as part of a multi-faceted approach to infectious disease control and outbreak prevention and management.[708]

During an infectious disease outbreak, it is important to have strong feedback systems between front-line staff and senior management, but it is also important that front-line staff have the power and protection to report public health concerns to public health officials. As the Commission found in its second interim report, *SARS and Public Health Legislation*, there must be strong protections for employees who report a public health risk:

> Any health care worker should be free to alert public health authorities to a situation that involves the risk of spreading an infectious disease, or a failure to comply with the Health Protection and Promotion Act. Public health officials do not have the resources to be present in every health care facility at every moment. While one would expect that a facility administrator, infection control specialist or practitioner would report to public health officials situations or cases that might risk the public's health, the cost of nonreporting or inaction is too high. In the event of such a failure to report, regardless of its cause, it is not enough to hope that public health officials will stumble across the problem eventually. SARS and other diseases clearly demonstrate the importance of timely reporting of a risk to public health. Health care workers can be the eyes and ears of public health and the front line protectors of the public's health. They must be free to communicate with public health officials without fear of employment consequences or reprisals.[709]

The Commission finds that the problem on 4 West was not a failure by senior hospital officials or those in charge of the SARS response to listen to nurses or to heed warnings. It was, however, a failure to have in place a system whereby concerns of front-line staff were documented and reported to someone with the time, resources, authority and responsibility to investigate, take action and report the results of their investigation and any actions taken back to staff, management and senior hospital officials.

708. SARS Field Investigation, p. 28.
709. SARS Commission, second interim report, p. 248.

Spread of SARS Among Health Workers on 4 West

On May 7, 2003, the hospital, in accordance with provincial policies, began relaxing precautions in certain areas of the hospital. This meant that staff were no longer required to wear masks at all times when in the hospital or when providing care to patients. The relaxation of precautions included the 4th floor at North York General, where the orthopedic unit was located. The 4th floor was also home to the short-stay surgical unit. It too was an area of the hospital where precautions were relaxed following the May 7 directive to staff.[710]

We now know that as May progressed a number of staff from 4 West and 4 South, as well as a number of physicians who either worked or consulted on the 4th floor during May 2003, became ill with SARS. It is clear from the onset of illness among staff that as precautions came down, the number of SARS cases, particularly among staff, went up.

When precautions were relaxed on May 7, 2003, not all staff on 4 West removed their equipment. However, some staff did remove their protective equipment, trusting what they were told, that SARS was over, and believing that they were safe. As one nurse said:

> For weeks we weren't wearing anything … they told us that we didn't have to wear anything. We had no protection. Because we were told we didn't need to, everything was over … there were directives from the government, the directives would come up on the email, the hospital sent us things, the supervisors told us.

Wearing the masks made work conditions difficult, at times almost unbearable. Many nurses and doctors said that they were relieved when they were told they could remove their equipment. As one nurse candidly told the Commission:

> We were all tired of wearing this equipment, we were all getting headaches every day.

710. See the earlier section titled "Relaxation of Precautions", for a more in-depth review of the relaxation of precautions at North York General Hospital.

One 4 West nurse described how, even after some initial hesitation, she was relieved to remove the equipment and finally did so:

> I didn't [remove the equipment] when they first said we could. I probably wore it for another day or two. It was so horrible wearing all of that stuff, I did take it off finally.

One 4 West physician described his relief when he learned he no longer had to wear protective equipment:

> I recall that [when masks came off], because we were all so relieved. I don't recall exactly, but I recall a time that it was intimated SARS is over, we can take the masks off, we don't need to have any precautions, and it was just such a relief. You can't imagine how difficult it was, working eight-hour shifts with those masks and gowns on. I couldn't wait to get outside to take it off for a second. The second they told me to, I did.

Others, like Ms. Nelia Laroza, a 4 West nurse who died of SARS, worried that SARS was not gone and continued to wear the equipment.[711] Ms. Laroza was exposed to SARS sometime between May 7 and May 16, when she fell ill from SARS. She died on June 30. As one nurse described Ms. Laroza and her approach to protection:

> We took our breaks together a lot, and I remember joking with her. I said, oh, Nelia, you will never catch anything. Because she just was covered completely.

Another nurse described Ms. Laroza's precautionary approach:

> She was our co-worker, we laughed with her, we cried with her, we nursed together, we did a lot of things together, and she was very afraid that she would get SARS and she double-gloved from the very beginning. And when the memos came around, you don't have to wear a mask, she wore everything. We didn't wear masks. She was very, very protective of herself.

By all accounts Ms. Laroza was a careful, cautious nurse who continued to wear the protective equipment even after the precautions were relaxed in the hospital.

711. Although most SARS victims are identified in this report by anonymized initials, Ms. Laroza's name is used because her tragic death has been widely reported in the public domain.

Ms. Laroza was not the only nurse on 4 West who chose to continue to wear protective equipment past May 7. Other nurses made the same decision, despite provincial and hospital policies that said they were no longer required to do so. One nurse who worked on 4 South, the short-stay surgical unit, told the Commission:

> We wore everything. Whenever they told us to start, I can't remember what day we started it, but whenever we were told to start, we did. We wore everything right up until whenever they told us we didn't have to. And lots of nurses wore it after we didn't have to, for a while. And a lot of the nurses on the 4 West side did, more than on our side. I guess they just didn't feel comfortable taking it off.

But there was no consistent approach, as each individual nurse determined his or her own level of protection. As one 4 West nurse said:

> I remember I went in one morning and we were told that we were not allowed to wear masks anymore. We don't have the masks, gown, and gloves anymore, and that was told to us as we reached the main entrance to come in. So I said, well, I'm going to still wear it, so I still put my mask on there. I put it on, I put on my things, I went up to the floor and did my normally change as we would, put on your stuff and I went about my duties.
>
> And when I walked on the floor, I saw some of the nurses not wearing a mask or gown or anything and I said, why aren't you guys wearing your stuff. They said to me that we're not required to wear them anymore. I turned to them and I said, I don't think we're out of the woods yet, so if I were you, I wouldn't have jumped and taken off my stuff yet because we're not sure how it's spreading, what's going on. Even though we get the go-ahead from Public Health not to wear our stuff,[712] I think for our own precautions, we should still wear them. Well, their [the other nurses'] reply was that if they don't have to wear, they don't see why should they wear it.

Some 4 West nurses reported that when they wanted to continue to wear protection, supplies were not always readily available. One nurse, who was caring for an ill patient

712. Public health officials said that they were not involved in the decision to relax precautions in the hospital, and that that was an internal hospital decision. See the earlier section titled "Relaxation of Precautions".

on May 22, the day before news of the outbreak was announced, recalled worrying that something was very wrong with the patient. She decided to wear a mask while caring for the patient. But the only mask that was available to her was a surgical mask. Other nurses similarly reported that after the policy was announced to relax precautions, masks and other equipment became scarce on the floor.

Along with concerns about availability of protective equipment, some nurses who continued to wear protective equipment after May 7 reported feeling pressured to remove their equipment. One nurse reported feeling pressure to remove the equipment after May 7:

> My boss said to me, why are you still wearing your mask and stuff? I said to her, I don't think we're out of the woods yet. She said, you guys are making yourself sick because you're re-breathing in your carbon dioxide.

Another nurse recalled overhearing a manager admonish a nurse for wearing the equipment:

> But I remember specifically being in the hall one day and she said to one of the nurses on their side, when are you going to stop wearing that stuff, because you don't need to wear it, and you're just going to be scaring the patients. So we were really being encouraged to not wear it.

Another nurse described the pressure she felt to stop wearing protective equipment, and her belief that it was safe to do so:

> Answer: Things started dying down. As far as we knew, there weren't any diagnosed cases on the floor, anybody in isolation on the floor, and we were told that we could stop wearing our protective gear. Not everybody did immediately. There were some of us, including myself, who were a bit scared to take it off, so I kept it on for maybe a day or two, and then gradually took it off.
>
> Question: So after about a day or two, you followed what everybody else was doing, and took it off?
>
> Answer: Yes, because everybody else was taking it off. Actually, it was kind of getting embarrassing because people would come on the floor and say, what are you still doing in

> this, don't you know you are not supposed to be wearing it anymore?

It is important to note, however, that this was not the experience of all health workers on 4 West. Some nurses interviewed by the Commission said that they did not feel pressure to remove the equipment and that the decision about protective equipment was theirs to make. One nurse said the choice of whether to use protective equipment was her own:

> It's not really the pressure [that caused her to remove her equipment] but I think it's my own decision.

Another nurse from 4 West who continued to wear a mask when doing certain procedures or close patient care said that she never felt pressure to do otherwise and that she never had trouble finding a mask:

> Question: So did you feel at that time that if you wanted to put a mask on you could?
>
> Answer: Yes, I did.
>
> Question: And were there masks available on the unit?
>
> Answer: There were masks available on the unit and I think still in the main entrance because some of the units, they still had the policy [to wear masks at all times].

As noted earlier, the unit administrator was unable to be interviewed by the Commission and was therefore unable to respond to staff reports of unavailability of equipment and of pressure to remove the protective equipment. It is important to note that there is no evidence that the unit administrator was aware of any risk to staff, visitors and patients on the unit, or that she believed there were SARS cases on the unit.

Despite the continued use of protective equipment by some nurses, no one working on the unit was safe from SARS. Even nurses who continued to wear the protective equipment, like Ms. Nelia Laroza, contracted SARS.

Because there was no rule in place requiring the use of masks at all times, and because the nurses on 4 West believed SARS was over and that they did not have any SARS

patients on their unit, even those who decided to continue wearing a mask did not always do so. One nurse explained her approach to the use of protective equipment:

> I was wearing my mask, but I know they told us when the first outbreak cleared, and there were no more cases. They said, we've got a directive that masks can be removed.[713] It's okay not to wear the mask anymore. Everybody was happy because it's so horrible when you're wearing it and you can't breathe. But I did not remove my mask, because during that time some of my patients were coughing and they had pneumonia-like symptoms. I didn't want to get sick.

When asked if she wore the mask all the time, she said:

> Out of 100 per cent, I'd wear it [the mask] 80 to 85 per cent. If I removed it, maybe I'm eating, or my patient is really, really stable, they're not that bad and don't have respiratory symptoms.

When asked if she would wear it if she was just at the nursing station, she said:

> I wore it but I removed it on and off. Because it gave me, I'd feel light-headed already for the whole 12-hour shift because I'm on 12 hours. So we didn't leave the mask on, but by the ninth hour, I'd be light-headed already.

The varied approach to the use of protective equipment potentially exposed 4 West staff to SARS through contact with patients, visitors or other staff. One nurse, who reported that she, like Ms. Laroza, continued to wear protective equipment at all times when dealing with patients yet contracted SARS, told the Commission that in addition to contact with others, there were many other places where they could have contracted SARS in the unit:

> Between me and her [Ms. Nelia Laroza], we wore a mask all the time so my conclusion then is that if we picked it up, then it had to be anywhere between the nursing station, because if it's droplet then mask goes off, people talk. So we could pick it up from there. Or even by the med sheets, because we have to use those med sheets, everybody used them.

713. The directive from the hospital telling staff (in some but not all areas of the hospital) they were no longer required to wear masks was issued on May 7, 2003. See the earlier section titled "Relaxation of Precautions".

> So it could be on the med sheets also, or the cardex that people use and stuff like that. The patients charts are on the door, it's outside the room door, so you finish inside and you come out and you just pick it up from there and you do your charting, but that week when there were no masks or anything being worn, and you come out of that room, you could have been coughing and it just landed on the book or whatever you're doing, and then somebody else comes along, picks it up and signs on it or whatever it is that you have to do.

It is believed that droplets can contaminate the surfaces and articles on which they land. As the Healthcare Health and Safety Association of Ontario noted:

> … viable organisms may survive long enough in droplets deposited on environmental surfaces to contaminate the hands of caregivers and then be further transmitted.[714]

Infectious disease experts recognize the possibility of transmission of SARS through objects contaminated by droplets, known as fomites. A May 2005 article by the Centers for Disease Control and Prevention found:

> Epidemiologic features of SARS provide keys to its diagnosis and control. The pattern of spread suggests that SARS-CoV is transmitted primarily through droplets and close personal contact (Seto 2003; Varia 2003). Studies documenting stability of the virus for days in the environment suggest the possibility of fomite transmission.[715]

Even those nurses who continued to wear protective equipment after May 7 removed their masks when outside of patient rooms, when interacting with each other, and when on breaks. This meant that a nurse could protect herself when in a patient room only to be exposed to SARS when she took a break with a nurse who had had unprotected exposure to SARS. As one expert told the Commission:

> At North York General, don't leave with the impression that everyone took their masks off. Even though the memo came out May 7th relaxing

714. Healthcare Health and Safety Association of Ontario, "Respiratory Protection Programs, Second Ediction," (Toronto: 2005), p. 1.

715. CDC, "Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS) Version 2/3", May 3, 2005, p. 20

> precautions, many of the nurses were not comfortable doing that. According to a number of nurses and nurse managers, a majority kept their masks on when working with patients. Only a handful took their masks off. But we found out that the nurses were taking their masks off with each other.

On May 16, there was a Nursing Appreciation Breakfast at the hospital. Nurses from 4 West ate their breakfast in the small makeshift lounge described below. They were not wearing masks. Precautions had been relaxed on the unit for over a week by this point and, as noted above, even those nurses who continued to wear masks when providing patient care did not do so when simply interacting with colleagues, as they believed they were safe to interact with each other unprotected. The SARS Field Investigation found that this breakfast was a likely source of transmission:

> On May 16th, 2003, staff from 4W took food back from the NYGH Nurses Appreciation Breakfast event to the small staff lounge on 4W and ate there. Two of the nurses on 4W working that day were unknowingly infected with SARS.[716]

Of those nurses who told the Commission that they continued to wear the protective equipment after May 7, none had been fit tested or instructed on the proper use of the N95 respirator. This meant that they could have been wearing a mask that did not properly fit their face or wearing the mask improperly, potentially negating the protection afforded by the mask. For example, one nurse reported that although she continued to wear a mask after May 7, she did not learn until her fit testing in September that she was wearing it improperly:

> We were told that we didn't need them, but I felt somewhat uncomfortable, so I would kind of wear mine around my neck and then when I went into a patient's room would put it on. But now, as of September [2003], I had the mask fitting test and I'm told that is a total no-no because you're infecting yourself if the outside of your mask has touched with clothing and then going up near your face. So that's another thing, I was never mask fitted and we were never instructed on the proper use of the personal protective equipment.

Another 4 West nurse reported that she wore tissue between the mask and her face,

716. SARS Field Investigation at p. 18.

because she had an allergy to the mask. She too was unknowingly compromising the protection afforded by the mask.

While it is clear that the relaxation of precautions led to the spread of illness among staff, the makeup of the unit also potentially contributed to the widespread transmission of SARS on the unit. During this time the hospital had been under renovations, including the 4th floor, and space was limited. Nurses from 4 West described the unit as cramped and expressed frustration about the conditions of the unit. One nurse described the situation:

> This specific unit, 4 West, had two units on it. I think that they were renovating and they had put two units together, and the nurses at one point were sharing one of the patient rooms as a lounge. Then they built them a makeshift room for a lounge in the middle, outside of the unit, with a curtain around it. It was out, it wasn't a room, there wasn't a ceiling, it was just like a little makeshift portable, connected to the unit.

The report of the Joint Health and Safety Committee described the conditions in 4 West:

> 4W/S was repeatedly described as cramped and cluttered since two units were combined. There were too many people in too small of an area, which would have created an excellent environment for SARS to spread from person to person once PPE precautions were relaxed. Since the nursing station and halls were cluttered, this would have severely hampered efforts to clean surfaces properly, which is absolutely essential in controlling SARS as this virus can live on surfaces for hours. As well, 4W/S had a makeshift staff lounge, approximately 11' by 14' with no sink for people to wash their hands. Staff on the night shift also slept side by side in this small room which provided further opportunity for the spread of SARS.[717]

It is important to emphasize that staff on 4 West did nothing wrong by removing precautions and working unprotected. They were told that it was safe to do so. But we now know that it was not safe. As precautions came down among the crowded conditions of 4 West, SARS spread. Health workers became ill. The continued use of personal protective equipment at the discretion of individual health workers on 4

717. JHSC Report, at p. 48.

West did not stop the undetected spread of SARS at North York General. As the investigative report of the Joint Health and Safety Committee concluded:

> These *"early 4W cases subsequently ignited a chain of transmission, spreading to other patients, their visitors and hospital workers."* (TPH/HC Report p.17) This chain of transmission would be directly linked to relaxed SARS precautions. At this point, PPE was optional except when dealing with patients on droplet/contact precautions and people didn't have to sit a metre apart while eating food. Some of the HCW's on 4W, such as Nelia Laroza, would choose to continue to wear their masks except while eating. The TPH/HC Report states that: *"Among hospital workers, cases began to escalate within 10 days (one incubation period) of the relaxation of precautions."* (p.17) The report goes on to add that two nurses on 4W *"unknowingly were developing SARS symptoms"* on May 16. (p.17) It is interesting to note that PPE must have been effective since HCW's on 4W were not getting sick until after its use became optional.[718]

There were clearly different experiences among health workers with respect to the availability of equipment and the support from colleagues and superiors for continuing to use the protective equipment if they chose to do so. But the reports from health workers who felt some measure of pressure, whether through lack of equipment or through pressure from others to remove their equipment – subtle, direct, well-meaning, or otherwise – are troubling. During a public health crisis, no health worker should be discouraged from using the approved protective equipment and infection control and worker safety procedures he or she believes are necessary for protection. While there is no evidence to suggest that senior management or those in charge of the SARS response discouraged the use of protective equipment, the stories of those health workers who felt reluctant to protect themselves underscore the important responsibility that senior managers have to ensure that no one is discouraged, directly or indirectly, from taking reasonable steps to protect themselves.

The story of 4 West also underscores the importance of ensuring that staff are trained in the safe use of personal protective equipment, are aware of its limitations, and, in the case of N95 respirators, are fit tested. These are requirements of the *Occupational Health and Safety Act* and Health Care Regulations 67/93, and they predated SARS. Unfortunately, in a major systemic flaw, few in the health sector were aware of them before and during most of SARS. To compound this problem, not enough was done

718. JHSC Report, p. 41.

during SARS to alert hospitals to their worker safety obligations. It was not until a set of directives was issued on May 13, 2003, that the legal requirement of fit testing was explicitly communicated to hospitals. And, unlike in B.C,. where the first proactive inspections were conducted in early April 2003 to ensure that worker safety requirements were implemented, the Ministry of Labour did not proactively inspect SARS hospitals until June 2003. By that time, the outbreak was virtually over.

As precautions were relaxed, health workers on 4 West were exposed to SARS and began to have symptoms. But the illness among staff did not raise alarms until May 23, the day the second outbreak was discovered. In the wake of SARS, the question remains, was the illness among staff detected and, if so, why wasn't anything done about it?

Sick Calls

As precautions came down, SARS spread throughout the orthopedic unit at North York General Hospital. According to provincial records, the first ill health workers on 4 West developed symptoms on May 16. On that day, three nurses from 4 West developed SARS symptoms. By May 19, two nurses from 4 South, a nurse from 4 West and a health worker had developed symptoms. On May 20, three more 4 West nurses were ill. On May 21, two physicians who had been on 4 West and another 4 West nurse developed symptoms. On May 22, another 4 West nurse developed symptoms. This meant that by the morning of May 23, twelve health workers and two physicians had developed symptoms, all of whom were associated with the 4th floor at North York General Hospital.[719]

Many health care workers interviewed thought there were a large number of sick calls on the 4th floor leading up to the second outbreak and were angry that nothing was done about it. One nurse said:

> I was quite angry at the hospital, 4 West, I don't think they, of course, planned on anything, but they had so many sick calls of the nurses. Eleven sick calls, I heard that day, and how come they didn't think of it. You know, that time with SARS and everything in the public, how come they didn't think of it or suspected it.

719. Ministry of Health and Long-Term Care Line-List Records.

Senior management at North York General told the Commission that they were unaware of the cluster of illness among staff prior to May 23, 2003. Like the clusters of respiratory illness and the increase in deaths on the unit, illness among staff did not raise any alarms among senior hospital officials because they did not know about it. Despite the perceptions of some that senior hospital officials were aware of staff illness, they were not.

Senior management understood the importance of monitoring staff illness. A policy had been developed during SARS that each unit within the hospital was to report sick calls to the occupational health department, which in turn would report to the SARS Management Committee. The Joint Health Safety Committee described the process in their report:

> It was current policy at that time that each unit within the hospital was to forward a daily list of their sick calls (an absence due to illness form) to the Occupational Health Dept. This was to be done twice daily at specified times. Even if no one was ill, this form was still to be sent and if no one was ill, this fact was to be indicated. The Co-ordinator of Occ. Health, Sharon Robbins would follow up and report to the Command Centre.[720]

The coordinator of the occupational health department told the Commission that her department would then follow up with the sick calls to do surveillance.

A significant increase in sick calls was not seen until May 20. This was confirmed by the findings of the Joint Health Safety Committee investigation. As part of their investigation, they accessed pay cards, to determine when there was a noticeable increase in staff illness:

> The subcommittee obtained the pay cards from all staff from 4W/4S through the Human Resources Dept. All names were removed, except that of Nelia Laroza, to ensure confidentiality. Nelia's name was left because we had to establish that she had worked on 4W during the critical months of April and May, 2003. From her pay card, we saw that Nelia had worked full-time on 4W during those months and that she had never been ill prior to contracting SARS. We were unable to see a significant increase in the number of sick calls until May 20, 2003 when there was a total of 5 sick calls from the two units, bearing in mind that each

720. JHSC Report, at p. 42.

> unit operates independently, having, separate unit secretaries and separate UA's.[721]

Between May 20 and May 23, the increase in sick calls among staff on 4 West failed to raise the alarm. The coordinator of the occupational health department reported to the Commission that they were not notified of any staff illness on 4 West until the morning of May 23, 2003. The occupational health coordinator told the Commission that they did not receive any sick calls for 4 West for the month of May:

> Answer: 4 West, I didn't receive any all month.
>
> Question: You did not receive any from 4 West all month?
>
> Answer: Yes.

The Unit Administrator for 4 South reported that prior to May 23, only one staff member had called in sick. She told the Commission that two other staff members were also off work, but one had been off for two months and had previously been cleared as non-SARS-related. The other was on scheduled time off, although she was home ill and was later was identified as a SARS case.

The investigation by the Joint Health and Safety Committee at North York General also found:

> In an interview with the U.A. of 4S, who had staff off sick with SARS, this U.A. stated that she ensured that this list was being sent daily. If she didn't send it, then the charge nurse would. However, it is clear from the records kept in Occ. Health, that these forms were not always either being sent from 4S or being received by Occ. Health. Either way, there was a problem.[722]

The unit administrator of 4 South said she had understood that sick-call reports were being forwarded and she did not know why sick reports from her unit were not forwarded to the occupational health department.

721. JHSC Report, p. 41.
722. JHSC Report, p. 42.

This system for surveillance of staff illness did not work. Had it worked, staff would have understood the importance of ensuring that the reports were made to the occupational health department. The occupational health department would have had the resources to monitor and ensure that the reports were provided, and to report to management instances of noncompliance with the policy.

It is also important to note that the monitoring of sick calls by the occupational health department would not have caught all the cases of the nurses who were at home, ill with SARS symptoms, but who were not scheduled to work and therefore would not be required to report their illness to the hospital.

Surveillance for clusters of illness among health workers during SARS was an important precautionary feature. Particularly in light of the relaxation of precautions, staff illness should have been a sentinel for problems. Any cluster of staff illness should have initiated an immediate, thorough investigation, including reinstatement of protective equipment, until the risk to other staff, physicians, patients and visitors had passed. As one physician from Toronto Public Health remarked:

> A large number of staff sick from the floor, regardless of the situation whatever was happening, whether they were sick patients, whether you think there is anything going on, any time you would get a number of health care workers sick on a floor, it would be cause for an investigation.

One of the most troubling things about the story of the nurses on 4 West is that although senior management and the occupational health department were unaware of the incidents of illness among staff on 4 West prior to May 23, the problem did not go unnoticed. How could it? Although sick call reports were not provided to occupational health, the fact remains that nurses did call in sick and that those in charge on the unit had to have been aware of the illness among staff.

One of the nurses who took the sick calls on 4 West the week of May 20 recalled being aware of the high number of sick calls and discussing it with the unit administrator. She told the Commission that no one wanted to think it could be SARS. She said:

> Answer: … I was getting the phone calls. And at first, a couple of sick phone calls, we didn't question them as to what was wrong with them or why they were, but then when we started getting more than one in, one almost every day, we started to phone them and, at that time, we did

> ask them if they had a temperature and what their symptoms were, and whether they have a temperature or not, we directed them all to go to the emergency to be seen.
>
> Question: And was this something that you were told to do or was this something you just did?
>
> Answer: We had so many sick calls that we were having a hard time staffing the floor, that it just became that we had to do something and, I guess, deep down you didn't want to think that it was SARS, but somehow or other you suspected that it was.

None of the nurses who were ill the week of May 20 reported being told to go to the emergency department at North York General prior to Friday, May 23, the day the second outbreak was announced. Instead, they went to family clinics, some more than once, which subsequently resulted in the quarantine of hundreds of contacts. When the nurses were finally contacted and told to come to the emergency department for assessment on May 23, no one raised with them concerns that they might have SARS. More will be said about the poor communication with sick or potentially exposed nurses below.

One health worker told the Commission that she became aware of the cluster of staff illness and that she asked the unit administrator about it during the early part of the week of May 20:[723]

> I told my boss, I told [the unit administrator], I said, we've got 10 nurses sick on your unit, or was it eight, I can't remember how many. I said to her, what's going on? You have so many sick calls. She said to me, oh, it's okay, they're just all stressed out. I said, but that's a high number. I've never, ever seen so many nurses sick, you know, within a week. She said, oh, don't worry about it, everything's been taken care of.

This health worker understood the unit administrator's comments to mean that their illnesses had been reported and investigated. She said:

723. She could not recall the precise date but said it was either the 20th, 21st, or 22nd of May 2003.

> I thought that she called the people to see what their symptoms were. The occupational health department must have called them, because when you have this many nurses sick or staff sick on your floor, you want to call them and you find out what are the symptoms. If they all have the same symptoms, you want to investigate it. But if they all have different symptoms, then, well maybe there's something else going on.

Although the above-quoted health worker thought something was suspicious, she candidly admitted that she never thought it might be SARS:

> I felt something was not right but I didn't know what it was. But I never thought that this would be SARS in our hospital.

As noted earlier, the unit administrator was unable to be interviewed by the Commission and was therefore unable to respond to the events and comments reported above. It is important to point out that some of the 4 West staff interviewed by the Commission made positive comments about the unit administrator. One 4 West nurse described her as open and receptive to input about what was happening on the unit, and another nurse described her leadership and support as "great." Another 4 West nurse described the unit administrator as a quiet person who did not want to "rock the boat." She said:

> She was very, she liked to be in the middle of things. She didn't want to get anybody upset. She didn't want to do favours for anybody. She was just in the middle. She wasn't bothering you but yet she wasn't aggressive about anything, she was passive. And I didn't have any problem with her. I thought she was very good because nobody wants to have a manager who is constantly breathing at your neck and telling you what to do and following you around.

Whatever the unit administrator's role, it would be unfair to suggest that she alone was accountable for the failure to identify ill staff on the unit before May 23, 2003, or to use her as a scapegoat for the problems on 4 West. An important process like the surveillance of ill staff during an infectious disease outbreak should not fall apart because of one person. A system must be strong enough to overcome individual errors and it must encourage communication of concerns by middle managers to senior hospital officials.

Illness among staff, which should have been a sign that something might be wrong on 4 West, was not identified to hospital officials until May 23, 2003. The cluster of staff

illness on the 4th floor, especially among staff working on 4 West, which should have been evident before May 23,[724] was not investigated, and important decisions about whether staff were at risk and how they should be protected were not made. Knowledge about the cluster of staff illness was not reported past the unit level. Regardless of whether the illness among staff was suspected to be SARS-related or whether those aware of it thought it was due to any other possible cause, it should have been reported and immediately investigated and steps taken to ensure the safety of staff working in that area. The system to monitor and investigate staff illness did not work. The occupational health department was uninformed about what was happening on the unit and lacked a robust system to monitor and enforce compliance with the policy.

In the end, the failure to monitor, report and investigate staff illness meant that another important step in the chain of protection, surveillance for illness among health workers, had broken.

724. As noted above, the number of sick calls increased the week of May 20, with five nurses calling in sick between the two units. It is important to note that these numbers capture only those who call in sick for work. They do not include those health workers who were at home, ill, but were not scheduled to work and therefore would not be required to call in sick. According to provincial records, by May 20 there were 10 health workers from the 4th floor who had developed symptoms.