by **Kimberley Kearsey**

READY OR NOT

On the second anniversary of the SARS crisis in Ontario, infectious disease experts are looking ahead to the latest threat: the possibility – some say probability – of a pandemic, the first since 1968 when the Hong Kong Flu killed more than 700,000 people worldwide. Are Ontario's plans for handling a pandemic outbreak up-to-snuff? Have we heeded the lessons of SARS? Or have we fallen asleep at the switch?

Emergencies – whether biological, environmental or the result of human error – are fraught with uncertainty and powered by unpredictability. Sometimes there's no way to see them coming, and there's no way to plan for every conceivable consequence.

Or is there?

When alarm bells sound at a fire hall, firefighters rely on their experience and knowledge, and on a tried-and-true plan of action that helps them manage the expected, anticipate the unexpected, and prepare for the worst.

Today's emergency planners must follow that philosophy as they prepare for the world's next pandemic outbreak – looming larger today than at any time in the past 36 years.

Dr. Frank Plummer, Scientific Director of Winnipeg's National Microbiology Laboratory, a division of Health Canada and the facility responsible for investigations into infectious disease epidemics, doesn't mince words about the possibility of a pandemic outbreak: "…we're not crying wolf," he says. "There is a wolf. We just don't know when it's coming."

Predictions from infectious disease experts put the number of deaths during an influenza pandemic at between 11,000 and 58,000 in Canada alone. These shocking numbers should help focus the mind around the real dangers associated with flu, and create a sense of urgency around the need to firm up action plans for a future outbreak.

Nurses need to recognize that the wolf is approaching the doors of our health-care system, regardless of sector or specialty. Some experts say it's as close as the front yard while others say it's still making its way through the forest. They all concur, however, that there's just no way to know when or how it will arrive.

The good news for nurses and all health-care professionals is that their experiences during SARS – anger, frustration, exhaustion, and isolation – have motivated pandemic planners to create action plans that strive to keep health-care professionals healthy, physically and emotionally.

The bad news, however, is that despite two years of preparation, there's still no guarantee that the hinges on the doors of our health-care system won't buckle when that wolf starts to push.

Referring to Ontario's public health system post-SARS, The Honourable Mr. Justice Archie Campbell, who released the SARS Commission's *Second Interim Report on SARS and Public Health Legislation* on Apr. 11, says "much more work remains to fix the broken public health system revealed by SARS in 2003." Although he believes there have been significant improvements to the

Illustration: Anson Liaw

system since the outbreak, "more financial and professional resources are needed; otherwise all the legislative changes and program reforms will prove to be nothing but empty promises."

The occupational health and safety of nurses and other health-care professionals, a major focus of Campbell's work, will be dealt with in the Commission's final report, due out at the end of this year. "It cannot be addressed adequately in the confines of this report," Campbell writes, "and it must be addressed together with the stories of the many health-care workers who sacrificed so much to battle SARS."

RNAO executive director Doris Grinspun says these findings can't come soon enough. Grinspun is no stranger to legislative or human resources battles or to emergencies on the front line. She has experienced both first hand in Canada, the U.S. and in Israel, where she first practised as a registered nurse.

"To be prepared for an emergency we need to have all the systems and processes in place and ready to go any minute, allowing us to focus on the unpredictable," Grinspun says. "That's the recipe for success."

With the lessons of SARS still so fresh in our minds, there's no reason Ontario should be ill-prepared for the challenges we can anticipate in the event of a pandemic.

"Systems are systems and processes are processes," Grinspun says. "It doesn't matter what kind of emergency we have, we need to have a clear plan and we need to know how and when to activate it. The only unknown should be the nature of the virus and the treatment of that virus. Everything else should be ready to go," she says citing as examples

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nursing workforce deployment and redeployment, health and safety, and communications.

The question that needs to be at the top of nurses' minds today is: "Are we, in fact, ready to take care of our patients, ourselves, and our families during a pandemic?"

Dr. Karim Kurji, Ontario's Associate Chief Medical Officer of Health, describes pandemic preparedness as a work-in-progress. "There's certainly no quick fix," he says about the government's work in the wake of SARS. He adds, however, that "lots of pandemic activities are just bearing fruition now."

"I would say Canada is at the forefront with regards to two areas in particular. The first area is security of supply for vaccines and the second is putting together a pandemic plan. Canada's (pandemic) document has been praised by many in the world, including the World Health Organization (WHO)," he says.

Kurji is proud that Canada has the respect of the world when it comes to its plans for handling a pandemic, but he's not so confident, however, that we can maintain our lead.

"I would say that many other countries…have probably done better than us in certain areas," he admits. "For instance, some countries are putting more money into research of anti-virals and the development of cell-based vaccines, which have the advantage of more rapid production, and, hence, better availability."

Given the tremendous amount of broad planning work that has been done – and continues to be done – on pandemic planning at the international, national, provincial and local levels, the view of some experts and pandemic planners is that we are in fact ready to respond.

"Emergency plans are being put into place across the province. We just need to view them through the lens of a pandemic of influenza," says Gerilynne Nephew, RN and manager of the Communicable Disease Liaison Unit at Toronto Public Health. "I think progress has been made…we have to just keep planning one step at a time in order to enhance our ability to be prepared for an emergency like pandemic influenza."

"Are we better prepared than we were two years ago? Yes we are. Do we still have more planning to go through moving forward? Yes we do," she continues. "We also need to have opportunities to practice and test emergency plans so we're able to identify gaps and obstacles to enhance planning. To respond to and recover from an emergency, it's really critical that we prepare using our understanding of the history of pandemics, and utilizing the lessons learned from SARS."

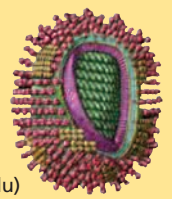
Not all frontline nurses, however, are convinced those lessons have been heeded, and if they have, whether they're transferable to a pandemic situation.

"I think there's a heightened awareness at hospitals that have already been burned once, but…I'm not convinced other hospitals have learned the lesson through Ontario's experiences," says Karen Ellacott, an ER nurse at North York General Hospital, and the author of a touching personal account based on her experience during SARS (*Registered Nurse Journal,* July/August 2003). "If a pandemic does hit, it will spread like wildfire in much the same way SARS did. But I think we need to be in a situation where we're not floundering, like I feel we were with SARS."

GRASSROOTS INITIATIVES

Despite some guidance on pandemic planning from WHO and from Health Canada,

The facts about influenza



- Avian influenza (H5N1) is the front runner for triggering the next pandemic. Scientists believe each time we see a new H1 antigen emerge we experience a pandemic of influenza. H1 caused the 1918 influenza (Spanish Flu) outbreak; H2 and H3 caused the 1957 Asian flu and the 1968 Hong Kong flu, respectively.
- H5N1 has a very high mortality rate; approximately 72 per cent of infected humans die.
- During "normal" influenza season each year, an average of five to 20 per cent of the population becomes ill. During a pandemic, that could go up to 30 to 50 per cent.
- Avian influenza patients do not always arrive at hospital presenting the respiratory symptoms typical of severe influenza cases, adding to the risk that health-care workers will fail to recognize it before others are infected.
- The World Health Organization (WHO) says measures that worked during SARS may not be effective against the influenza pandemic because flu is more contagious, has a short incubation period, and can be transmitted before the onset of symptoms. **RN**

there still seem to be far more lingering questions than firm answers for frontline health-care professionals. Fortunately, at the local level, working groups, committees, stakeholders and public health officials are meeting regularly to go over plans of action at the grassroots level.

Ann Corner is manager of the Communicable Disease Program for Simcoe County, which services a population of about 450,000. She is also on one of the Ministry of Health and Long-Term Care (MOHLTC) working groups providing input to the provincial pandemic plan.

"I know a lot of health units are working hard on their local planning processes," she says. "I was impressed (at a recent provincial meeting) with where people had gone, the detailed questions that people are now beginning to ask, and the fact that we've gone beyond the overview and big picture; we're getting down to the nitty gritty."

In Simcoe County, Corner and her team are answering questions like: How do we work with the ministry to get anti-virals for treatment of the ill? How do we keep staff well? What should we watch for in our communities to know we have something unusual? Do we know how many retired nurses we have in Simcoe County to help give shots?

Detailed discussions like these continue across the country and around the world. But, wherever they are held, and in whatever language, one reality shapes discussion: emergency preparedness and planning is not a static process.

"I see a pandemic plan as an "evergreen" document, it continues to grow as we get more information," Nephew says. "You don't develop a plan, write it all down in 200 pages, put it into a drawer, and pull it out when something happens. A good emergency plan is one that is constantly changing based on the best information available and best practices."

The federal and provincial governments describe their pandemic plans much the same way – evolving, just as viruses evolve. Keeping pace with this constantly changing environment, the government has created committees and advisory groups at the local and provincial level, each identifying what's needed to fight a pandemic, and exploring processes that will address those needs.

On April 12, the Ministry of Health's Emergency Management Unit (EMU) hosted a provincial consultation with pandemic planners across the province to review

Photography: Brooke Palmer

Producers look to nurses for expertise, experiences on the set of *Plague City* – a movie about SARS

RN Pat Tamlin never expected to be sharing her nursing experiences with actors, directors and producers on the set of a movie about SARS. But that's just what she was doing when she was invited late last year to be a consultant for *Plague City*, a made-for-TV movie about Toronto's experience with the disease.

A critical care nurse at The Scarborough Hospital (TSH), Tamlin worked the front lines during the SARS outbreak, and was among the first group of health-care professionals to contract the contagious disease. It was her dual experience as an RN and a patient that attracted the attention of producers at Toronto's Slanted Wheel Entertainment – who also consulted with RNAO executive director Doris Grinspun – as they began their intense research for the project.

"Nurses were essentially the front line in this battle," Collin Friesen, the script's co-writer, says. "They were the ones who recognized it first. They were the ones who sounded the alarm. They were the ones who were ignored. And they were the ones who essentially bore the brunt of what this disease can do."

Tamlin says she wasn't at all hesitant when producers invited her to play the role of consultant. "They really wanted to honour what we did during SARS. They were really good about listening and asking my opinion. I actually had some very busy days on set because I'd be called left and right."

Tamlin recalls one day when an actor playing a doctor inserted an endotracheal tube upside down during an intubation scene. "You better not use that scene," she told the director, laughing. That actor, Tamlin says, relied heavily on her when he was doing his scenes. "He was always saying 'Pat, would it look this way?' or 'Pat, did it look realistic enough?' He was really willing to utilize my experience."

Tamlin also offered tips on what a hospital looks like, how many patients would typically be in a room, and the level and kind of protective gear required in certain situations.

Tamlin recalls juggling her work schedule with filming, and feeling exhausted with only one weekend off between shifts and seven days of production. Still, "It was a great experience," she says. "It's probably the only opportunity I'll ever have to do something like this."

Described as "a human and political thriller that reveals Toronto's brush with a 21st century pandemic," *Plague City* chronicles the transmission of SARS from a small town in China to Ontario. The movie portrays nurses as heroes, similar to the firefighters of 9/11.

Tamlin says she'll tune in when the film airs on CTV on Sunday, May 29 at 9:00 p.m. "I was glad I was able to inject some of my experiences into the movie," she says, noting there is one scene that she predicts has come directly from what she told Friesen.

"All the nurses in the movie are composite characters," Friesen says. "If all of the things that happened to one of the nurses in the script happened to a nurse in real life, that poor nurse should be getting stress

Head nurse Kari Matchett, tends to friend and co-worker Rosie (Lannette New) during her battle with SARS.

leave for the rest of her days. That is the nature of screenwriting. You tend to take all of the experiences and put them into one character. It's economical, and it's often the way things are done."

"I really felt they were happy to have me there as a resource," Tamlin says. "How it (the movie) will come together and be packaged will be interesting to see." **RN**

If Canada is a leader in pandemic planning, where does Ontario stand?

IN the aftermath of SARS, the MOHLTC created the Provincial Infectious Disease Advisory Committee, comprised of infectious disease specialists, public health experts, and epidemiologists who advise the Chief Medical Officer of Health. It also:

- created regional infectious disease networks
- created screening and surveillance programs for febrile respiratory illness
- purchased and outfitted a 56-bed mobile hospital
- created an emergency medical assistance team
- maintained a stockpile of protective equipment for outbreaks
- maintained a stockpile of anti-virals for protection and prevention purposes
- established a province-wide hospital distribution system for supplies
- revised a number of the SARS outbreak directives offered by the SARS Commission
- offered tabletop test exercises to increase awareness of pandemic plans and identify areas for improvement
- hired 25 full-time equivalent positions for infection control practitioners

What MOHLTC is still sorting out, however, is how to address predictable system and human resources issues during an emergency such as:

- inadequate nurse-to-population ratios
- troubling workloads that leave little confidence the system can handle a sudden influx of sick
- too few full-time nursing positions
- insufficient education and public awareness programs that promote a culture of prevention and encourage public health practices to decrease the spread of disease
- deficient timelines for sector-specific pandemic plans that can be implemented on a moment's notice
- no clear testing procedures to take us through our response to emergencies, ensuring everything and everyone is seamlessly coordinated and dispatched. **RN**

" A good emergency plan is one that is constantly changing based on the best information available and best practices."

progress to date. The provincial steering committees have taken those progress reports and will release a revised *Ontario Health Pandemic Influenza Plan* in late May.

"I am impressed with the incredible efforts and work accomplished to date," Grinspun, who represents ENAC on the steering committee, says. "However, I would like to see more resources allocated to this initiative so we can accelerate our progress." Improvements such as the move to 70 per cent full-time employment in nursing, the creation of Family Health Teams, and funding for housing will help us deal with a flu pandemic or future emergencies, she added.

NURSING INITIATIVES

Local planning committees like the one Corner is on are assessing whether nursing has the surge capacity and the human resources needed to respond to a pandemic outbreak. "You can't stop everything if there's a pandemic," Corner says. "We can't ignore other public health issues. We have to think about key activities, we have to prioritize. If we have a chemical spill, for example, we have to still be able to answer to that. If we had a major illness outbreak in a long-term care facility, we'd have to deal with that."

Nancy Purdy, a nursing PhD student at the University of Western Ontario (UWO) and the consultant who led the team responsible for RNAO's SARS report, commends the government for its work since SARS. Still, she is concerned nurses' workplaces and workloads, described in the SARS report and largely unchanged since the outbreaks, could hinder response to a pandemic.

"I think the easy, procedural issues have moved forward because they've had to, and they've done some great work. I don't want to discount that. But my concern is that fundamentally we've not addressed the significant work environment issues," she says. "If you want a long-term solution, you have to have the health of your resources looked after first. That will help weather whatever kind of crisis comes forward."

Key to addressing the health human resources issues is shoring up our ability to mobilize nurses during an emergency. At the height of the SARS crisis, RNAO led the coordination of skills-based rostering through its VIANurse database. Since 2003, the database has been through two successful simulations, and it was used during the tsunami disaster at the end of 2004.

The MOHLTC is in the process of expanding on VIANurse and developing its own program for emergency deployment. VIANurse will be active until the end of June 2005, at which time its functions will be taken up by the ministry.

RNAO also chairs the Emergency Nursing Advisory Committee (ENAC), another invaluable resource. Originally called the SARS Nursing Advisory Committee (SNAC), the group – comprised of representatives from nursing organizations from all service sectors and academia – is a vital link and formal reference group between government and nursing professionals in times of emergency. With the release in October 2004 of *Emergency Preparation: A Working Document of Guidelines for Nursing Action*, the multi-organizational group has set out specific steps the nursing community must take in the event of a national or provincial emergency.

Individual nurses must stay informed about pandemic planning activities, and about the role they are expected to play in the event of an emergency. SARS taught nurses the value of communication during a crisis. It also taught nurses the importance of education and the power of knowledge when planning for the expected – and the unexpected.

SARS has been described as the dress rehearsal for something bigger, Ontario's wake-up call to the dangers of a pandemic flu outbreak. It gave us a glimpse of the potential power and impact of a pandemic, and precipitated some overdue progress in improving our health-care system. We can't forget, however, that even though we're more prepared for a pandemic today than we were yesterday, we still have to work on a solid plan for tomorrow. **RN**

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