



CRTC Twentieth Anniversary

2000 to 2014

It's hard to imagine that the turn of the century and new millennium was over 14 years ago! Sadly, many of our predictions for the new era have not yet come to pass – although flying cars and personal robots are likely just around the corner. This month's series will focus on the years of 2000 to 2014: five years of growth and transition, both in RT practice and the world at large. Below is a snapshot of Ontario, Canada and the world at the time, setting the stage for advancements in RT practice.

“The year 2000” – as everyone called it – was rung in with great excitement and anxiety. The ILOVEYOU virus and Y2K bug were great sources of fear going into the new millennium: a digital age where computers would reign over human beings! Although many things did change in technology, these fears were greatly over-exaggerated. Scientists mapped the human genome while the dot com bubble burst; the Summer Olympics took place in Sydney, while blockbusters *Castaway*, *Erin Brockovich* and *Gladiator* debuted on the big screen. In Canada, former Prime Minister and quirky character Pierre Elliot Trudeau died on September 28, drawing hundreds of thousands to his state funeral. In Ontario, a deadly E-Coli outbreak sadly claimed nine lives in Walkerton.

The following year, Wikipedia was launched and Apple introduced the first iPod – two technologies that are still very relevant today. On September 11, 2001 terrorist attacks targeted the World Trade Centre and Pentagon as the world watched on in horror. George W. Bush was elected president of the United States shortly after, marking the beginning of the “war on terrorism”. In Canada, Ernie Coombs (aka Mr. Dressup) died on September 18 and Chris Hadfield became the first Canadian to perform a spacewalk. The first *Harry Potter* and *Lord of the Rings* movies are released to massive audiences, along with *Oceans 11*, *Shrek* and *Bridget Jones' Diary*.

In 2002, scientists discovered Quaoar (a dwarf planet), and Apple unveiled the iMac G4. For Canadians this was a big celebrity year when George Stanley (author, historian, soldier, public servant and designer of the Canadian flag) died, Pope John Paul II visited Toronto for World Youth Day and it was Queen Elizabeth II's Golden Jubilee. The CBC celebrated 50 years while broadcasting the Winter Olympics in Salt Lake City, where we won double hockey gold and watched Jamie Salé and David Pelletier be denied theirs. It was also a great year for movies, featuring the second *Lord of the Rings* film, *Catch Me If You Can*, *The Pianist* and *The Minority Report*, to name a few.

The year 2003 was no exception in growing technology and shrinking of the globe. For example, MySpace was launched and a virus originating in China wreaked havoc in Canada. Severe Acute Respiratory Syndrome (SARS) was first brought to Canada in late February 2003. In the coming months, 44 people would die from SARS in Canada and 400 people would become ill. Ontario declared a public health emergency, saw two outbreak waves, a world travel advisory and faced international scrutiny – but more on that later. Jean Chretien was replaced by Paul Martin as Prime Minister of Canada amid the sponsorship scandal, while movies *Finding Nemo*, *Lord of the Rings: The Return of the King* and *Kill Bill Vol.1* dominated the entertainment industry.

In world news of 2004 George W. Bush was re-elected president, Web 2.0 began and a massive earthquake in the Indian Ocean was recorded, causing one of the worst tsunamis in history. Facebook ‘the social network’ was also officially launched in 2004, while the Summer Olympics returned to its historical roots in Athens, Greece. The Dalai Lama visits Canada, Tommy Douglas is voted the greatest Canadian and the Toronto Argos win the Grey Cup for the first time since 1997. At the movies, *Hotel Rwanda* screens on the tenth anniversary of the Rwandan Genocide; *Harry Potter*, *Million Dollar Baby* and *The Aviator* are also released. The Rick Mercer Report debuts on CBC television in early 2004 and has remained a Canadian favourite to this day.



RT Practice, SARS and the CRTO 2000 - 2004

In the five years since the millennium, the world saw huge leaps in technology and globalization. RT practice was affected through these global events and advancements in technology as well, most notably the SARS pandemic of 2003.

However, there were other changes in practice and technology prior to and outside this event as well:

Non-SARS:

In the early 2000's, observational studies showed a **47% - 66% survival rate** when extracorporeal membrane oxygenation (ECMO) was used as a mechanism for cardio-pulmonary resuscitation



In 2000/2001 a large clinical trial was conducted in the U.S. to investigate efficacy of using inhaled antibiotics to treat non-CF lower respiratory tract infections.

In 2003 the Canadian Thoracic Society released its guideline on the Recommendations for Management of COPD



Early to mid 2000s

saw Patient Ventilator synchrony enhanced through the increased use of new modes of ventilation such as Proportional Assist Ventilation (PAV) and Neurally Adjusted Ventilatory Assist (NAVA)

2003 paper published in Critical Care Medicine on the treatment of adults with acute respiratory distress syndrome (ARDS) by using inhaled nitric oxide combined with high frequency oscillation



SARS: facts, figures, timeline

November 2002 to July 2003

two waves of Severe Acute Respiratory Syndrome (SARS) leads to the death of **44** Canadians. **85%** of all indexed cases of SARS in Canada occurred in Ontario (approx. **400** confirmed cases)

March	5	First Canadian dies of SARS after returning from Hong Kong to Toronto
	17	Health Canada announces 17 suspected cases of SARS
	26	Ontario declares state of public health emergency
April	23	World Health Organization issues travel advisory against Toronto (controversy, great economic loss)
May	22	Second wave of SARS begins
	2003	A report of the National Advisory Committee on SARS and Public Health was released by Health Canada.

SARS RELATED PROFESSIONAL PRACTICE DEVELOPMENTS / INSIGHTS

POST-PANDEMIC RESULTS

- Government, officials, etc. began to realize the unique skill-set of RTs and how well-suited it was to deal with emerging/future SARS situations
- RTs would later become more involved in policy conversations on infection control and PPE; added to working groups and committees; expertise elevated within the province.

- C**
- Ministry asks CRTO to have representative on Infection Control Taskforce for future situations in Ontario
- R**
- As result of SARS outbreak, MOHLTC issued document "Preventing Respiratory Illness Protecting Patients and Staff" in an effort to update and establish standards, addressing SARS-related issues
- T**
- RTs during SARS 1st wave were not utilized to the best of their ability and not seen as the immense resources they were; second wave was different → SARS Commission asks CRTO and Members to provide views, opinions and recommendations on directives on "Emergency Management Act" and "Health Protection and Promotion Act"
- O**

SARS OPERATIONS CENTRE

- Interacted with the CRTO frequently on a number of issues. CRTO would ask for feedback from Members, compile answers and provide to the SARS Operations Centre to better inform their directives and guidelines
- Non-acute care directives (under outbreak & non-outbreak conditions)
- Directive to all Ontario acute care hospitals concerning discharge of non-SARS patients under outbreak conditions. Also high-risk Respiratory Procedure Directives

REPORTS/FEEDBACK AFTER THE FACT

- General sense that there was a much greater emphasis placed on PPE and infection control in employer environments
- Mask-fitting is now mandatory in many facilities
- Components now built-in to student curriculum for infection control best practices

CRTO



Twentieth Anniversary

2000 - 2004

- Observational studies show a 47 - 66% survival rate when extracorporeal membrane oxygenation (ECMO) is used as a mechanism for cardio-pulmonary resusciation
- Large clinical trial is conducted in the U.S. to investigate the efficacy of using inhaled antibiotics to treat non-CF lower respiratory tract infections
- In early to mid 2000s Patient Ventilator synchrony is enhanced through the increased use of new modes of ventilation such as Proportional Assist Ventilation (PAV) and Neurally Adjusted Ventilatory Assist (NAVA)
- First SARS case: November 2002
- Two waves of SARS hit Ontario from February 2003 to July 2003
- Paper published in *Critical Care Medicine* on treating adults with acute respiratory distress syndrome (ARDS) using inhaled nitric oxide combined with high frequency oscillation
- Report of National Advisory Committee on SARS and Public Health is released by Health Canada
- SARS Commission asks CRTO and Members to provide views, opinions and recommendations on *Emergency Management Act and Health Protection and Promotion Act* (June 30, 2004)

2000



Television: Malcolm in the Middle, Survivor, Big Brother, Gilmore Girls
Movies: Castaway, Gladiator, Erin Brockovich
Music: Faith Hill, Pink, Matchbox Twenty, Santana
Events: Millennium, mapping human genome, Summer Olympics in Sydney, Putin becomes Russian president, dot com bubble bursts, Pierre Elliot Trudeau dies, E-Coli outbreak in Walkerton, Ontario

2001



Television: My Wife & Kids, Six Feet Under, Fear Factor
Movies: Lord of the Rings, Harry Potter, Oceans 11, Bridget Jones' Diary
Music: Lifesthouse, Alicia Keys, Jennifer Lopez, Dido
Events: Wikipedia launched, George W. Bush elected president, 9/11, Apple introduces the iPod, Chris Hadfield becomes first Canadian to space-walk, Ernie Coombs (Mr. Dressup) dies.

2002



Television: The Wire, American Idol, Degraasi: The Next Generation
Movies: Lord of the Rings: The Two Towers, Catch Me If You Can, The Pianist
Music: Nickelback, Nelly, Avril Lavigne, Usher
Events: Dwarf planet discovered, Winter Olympics in Salt Lake City, George Stanley dies, Queen Elizabeth II's Golden Jubilee, Pope John Paul II in Toronto for World Youth Day

2003



Television: Mythbusters, The Ellen Degeneres Show, The O.C, Two & a Half Men
Movies: Finding Nemo, Lord of the Rings: The Return of the King, Kill Bill
Music: Beyoncé, Christina Aguilera, R. Kelly, 50 Cent
Events: SARS pandemic, Iraq invasion, MySpace launched, same-sex marriage legalized in Canada, Paul Martin replaces Jean Chrétien as Prime Minister

2004



Television: Entourage, The Apprentice, Lost, House Deadwood
Movies: Million Dollar Baby, Harry Potter, Hotel Rwanda
Music: Usher, Alicia Keys, Maroon 5, Hoobastank
Events: Web 2.0, George W. Bush re-elected, Summer Olympics in Athens, Indian Ocean earthquake & tsunami, Facebook launched, Dalai Lama visits, Toronto Argos win Grey Cup for first time since 1997