



CJRT · RCTR

Spring 2005, Volume 41 (1)

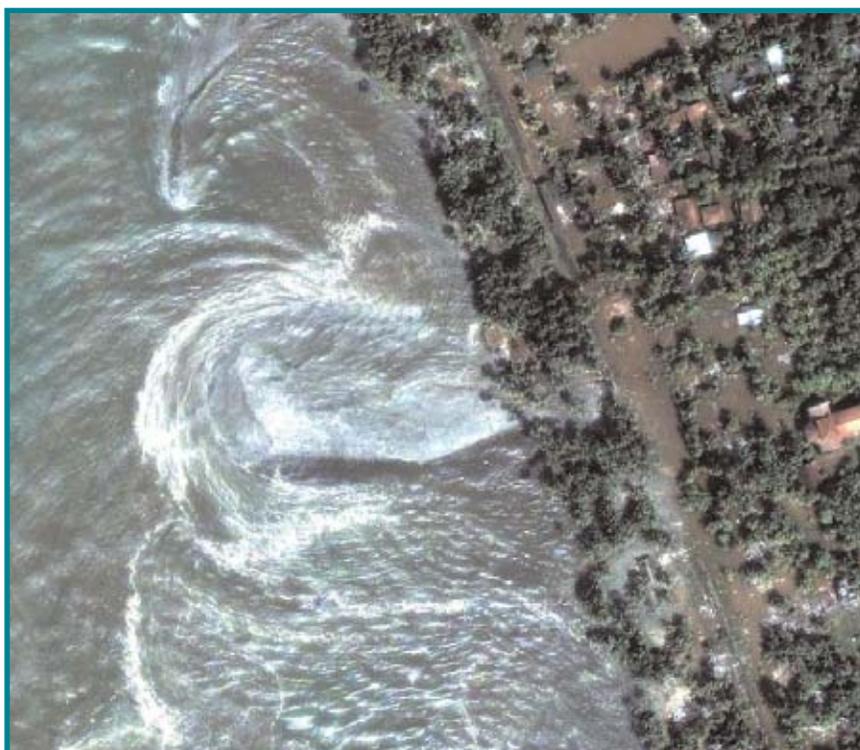


Photo Credit DigitalGlobe

Tsunami Relief

*The journal for respiratory
health professionals in Canada*

*La revue des professionnels de la
santé respiratoire au Canada*

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2005 — 8**



**Canadian Journal of
Respiratory Therapy**
**Revue canadienne de
la thérapie respiratoire**

**Official Journal of the CSRT
Revue officielle de la SCTR**

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Brent Kitchen, RRT

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Société canadienne des thérapeutes respiratoires (SCTR).



**CSRT membership inquiries /
Questions concernant l'adhésion
à la SCTR :**

102 – 1785 Alta Vista Dr.,
Ottawa, Ontario, K1G 3Y6
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csrt@csrt.com
www.csrt.com

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The *CJRT* acknowledges the financial support of the Government of Canada, through the Publications Assistance Program (PAP), toward our mailing costs.

Cover Photo

Photo by DigitalGlobe: Kalutara Sri Lanka, December 26, 2004 shows receding waters from tsunami.

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Gerald Ashford Memorial Award Winner

This year's winner of the Gerald Ashford Memorial Award, awarded to the graduating clinical student with the best overall clinical research paper, is Ms. Lyndsey McKiel.

Lyndsey McKiel is a recent graduate from the New Brunswick Community College, Saint John, Respiratory Therapy training program where she graduated at the top of her class.

Ms. McKiel had the opportunity to present her clinical research paper entitled: "Indirect Calorimetry: Are

equations accurately predicting metabolic expenditures of critically ill patients?" at the Department of Anaesthesia Rounds in the Atlantic Health Sciences Corporation, in November 2004.

Lyndsey is currently employed as a staff Respiratory Therapist at the Atlantic Health Sciences Corporation in Saint John, New Brunswick and is continuing her education at the University of New Brunswick, Saint John, hoping to complete her Bachelor of Health Sciences degree in Respiratory Therapy.



Lyndsey McKiel

Practitioner of the Year

Congratulations to Jennifer Slavich, RRT, and former CARTA and CSRT member, who was recently awarded the title of "Practitioner of the Year". Advance Magazine, an American respiratory care magazine conducted their fourth annual National Respiratory Achievement Awards competition and Jennifer was selected by a panel of three RC managers. She received a cash prize of \$500. Jennifer works at Lutheran Hospital in Cleveland Ohio and is a graduate of NAIT.

CSRT Would Like to Welcome Two new Additions to the Head Office

Danièle Fillion takes on the role of Administrative Assistant with the CSRT. She is an energetic and enthusiastic individual with a keen interest in communications and marketing as well as a passion for French Literature. She looks forward to working for the CSRT members, providing service in both official languages and being an integral part of the Head Office team.

Josee J. Gagnon will be working with the CSRT as the Accreditation and Education Manager covering the maternity leave of Michelle Kowlessar. Michelle has recently given birth to Sabrina Franziska Graham, weighing in at 6 pounds, 8 ounces.

Josée Gagnon is a graduate from the University of Montreal with degrees in Biochemistry (B.Sc.) and M.Sc. in Clinical Sciences. Her career includes being a Research assistant at the University of Ottawa and Health Canada. Josée pursued other studies in Human Resources Management. She worked as project manager with the University of Ottawa, coordinating the fundraising and the administrative functions at the Secretariat office for various Universities. She also worked on the coordination of several training workshops and most recently the ID Theft prevention workshop in collaboration with Communications and Information Technology Ontario (CITO).

Tsunami Assistance

Donna Gaidamak, Media Relations Manager
Cardinal Health, Medical Products and Services

As the leading provider of products and services supporting the health care industry, Cardinal Health was compelled to offer assistance after the earthquake and tsunami hit South Asia. Cardinal Health has pledged a minimum of \$20 million in cash, pharmaceuticals, medical products and supplies, along with technical expertise over the next three years. Cardinal Health also offered to help with logistics in setting up medical clinics and distribution of products.

Immediately after the disaster struck, Cardinal Health and its employees were helping out. The company's initial contributions totalled about \$2 million in both products and financial assistance.

Contributions included:

- Medical supplies — Within two hours of learning about the tragedy, Cardinal Health employees had contacted relief organizations and started to identify products for donation. More than 300,000 medical products, including gloves, suture kits, surgical gowns and drapes were donated within the first two weeks. Through an ongoing program that the company's Medical Products and Services group has to support AmeriCares and World Vision, Cardinal Health's donated supplies were included in some of the first deliveries that arrived hours after the tsunami struck.
- Personal Hygiene Products — Nearly 150,000 items such as soap and toothpaste have been donated.
- Pharmaceuticals — About 2.5 million erythromycin tablets were donated to help control the spread of disease in the region.
- Financial support — Cardinal Health has pledged millions of dollars to the effort and many of the company's employees have donated in excess of \$500,000. Employee contributions are matched dollar for dollar by the company's foundation.



Wide spread destruction in the wake of the Asian tsunami.
Photo Credit: Gospel for Asia (www.gfa.org)

The December 26, 2004 undersea earthquake generated a tsunami in the Indian Ocean that killed more than 200,000 people. Around the world, individuals and corporations immediately began to collect money, medicine and goods to aid victims. Cardinal Health, a CSRT Corporate Member, was one of those companies that quickly mobilized to ease the plight of those in the affected areas.

Inhalation Therapy Pioneer and Honorary CSRT Member Passes Away

Scott Beaton RRT

On November 5, 2004 a chapter in the history of the Calgary General Hospital (CGH) ended with the death of Dr. Masatatsu Ishii. He was 74.

Dr. Ishii practiced Medicine — Anesthesiology at CGH for 30 years. He was instrumental in starting the fledgling Inhalation Therapy Program in the Calgary Area. As the program developed, with colleagues from the Foothills Provincial Hospital and Holy Cross Hospital, he mentored, precepted, pushed and pulled for the 1970 opening of a formal Respiratory Technology Program at the Southern Alberta Institute of Technology.

Dr. Ishii had an unique style of training and supporting his staff. He once confided in me "I don't want you or anyone else to react to a situation, I want you to think." As word of his passing went around the world, there were many emails reminding me of Dr. Ishii's credo of "Think first. React later!" We, his pupils and staff, became much better care givers through his mentoring. He certainly did make us think, in just about everything we did.

His style may have been unconventional but his dedication to his patients was never in doubt. His patients were always first and always in very caring, capable hands. He trusted the RT students who successfully passed his way in their training. He encouraged for them to possess his personal, patient-centered attributes when they finished their rotation with him. Dr. Ishii was an Honorary Member of the CSRT in recognition of his foresight and support of our profession.

Dr. Ishii is survived by his loving wife Kathleen, daughter Melissa and his son Ken; two grandchildren Ashley and Tina. Dr. Ishii has two surviving brothers and their families, Ren Ishii and Toshi Hirose of Tokyo, Japan. He will be missed by his former students and staff members of The Respiratory Therapy Department, Calgary General Hospital.

*With all due respect and condolence,
J. Scotty Beaton RRT, Respiratory Therapy Class
President — S.A.I.T. 1970.*

Membership Renewals

Spring time is membership renewal time! CSRT Members are reminded that yearly memberships are due by March 31, 2005. As the national organization, representing the interests of the respiratory therapy profession, the CSRT is pleased to continue to supply support, information, funding and direction to RTs in their many areas of health care. Check our website www.csrt.com for details.

Live from Beirut CJRT 40.5

Credits for the article written by Dennis Hunter were inadvertently dropped from his article. Dennis Hunter is an RRT with a Bachelor of Education (Adult), Emergency Medical Care Assistant (EMCA), Province of Ontario, and is a graduate from Fanshawe College. He is currently on the faculty of Fanshawe College Respiratory Therapy Program, London Ont. From 1994 to 2004 he served as Program Coordinator. He was also a member of the CSRT Education Committee, on the CBRC Board of Directors and Chapter President South-Western Ontario Chapter of Respiratory Therapists (a division of the RTSO).

July Sitting of the CSRT National Exam

The deadline for registration of applications for the July 4, 2005 CSRT National Certification Exam is April 30, 2005. Please check the CBRC website www.cbrc.ca for details.

Practitioner of the Year

Congratulations to Jennifer Slavich, RRT, and former CARTA and CSRT member, who was recently awarded the title of "Practitioner of the Year". *Advance Magazine*, an American respiratory care magazine conducted their fourth annual National Respiratory Achievement Awards competition and Jennifer was selected by a panel of three RC managers. She received a cash prize of \$500. Jennifer works at Lutheran Hospital in Cleveland, Ohio and is a graduate of NAIT.



The Canadian Society of Respiratory Therapists Annual Educational Forum



"Compassion in Action"



Shaw Conference Centre,
Edmonton, Alberta
June 2-5, 2005

**Thank You to Our
Premier Sponsor**



**Thank You to Our
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**Thank You to Our
Gold Sponsor**



College and Association
of Respiratory Therapists
of Alberta CARTA

**Thank You to Our
Bronze Sponsors**



**Thank You to Our
Silver Sponsors**





CSRT Annual Educational Forum

Forum Highlights

Thursday June 2, 2005

Educator's Congress

- Clinical Simulations: What They Are and How We Use Them
- Competency Based Evaluation Strategies
- Assessing Competency: Knowledge vs. Skills vs. Competency
- The Future of the Educators Congress — group discussion on the formation of a special interest group within the CSRT.

Wine and Cheese Reception

Please plan to attend this informal get-together of delegates, exhibitors and presenters. It will also be the official opening of the Exhibit Hall and your first chance to check out what's new in the industry.

Friday June 3, 2005

The Exhibitor's Breakfast

Get a jump on the day with breakfast with the Exhibitors. Extra time has been allotted so delegates can have a continental breakfast with exhibitors. This event is generously sponsored by Brathwaites Olivier who are celebrating their 20th anniversary.

Free Fun Night at Reds

Get on the bus and join the crowd going to Reds in the West Edmonton Mall. The CSRT will provide a shuttle bus service to and from the event. There will be finger food and fun. All free! Please check the box at the bottom if you are planning to attend.

Saturday June 4, 2005

President's Banquet and Awards

Tickets are still available for this event. There will be a sit-down dinner. Wine and bar drinks will be supplied by Summit Technologies. Patrons are asked to make a \$2.00 per drink donation with proceeds going to tsunami relief operations in Asia. The guest speaker for the evening is renowned diplomat and UN Special Envoy for HIV/AIDS in Africa Stephen Lewis. Mr. Lewis is sponsored by CARTA as part of their Nelson Kennedy Lecture series.

Great Door Prizes!

We will be raffling some exciting prizes that include:

- All inclusive package to the 2006 Forum (airfare, accommodations and registration), compliments of the CSRT
- Electronics gift certificate, compliments of Respiratory Homecare Solutions
- Digital Camera, compliments of Pentax

Want to donate a gift? Contact Darcy Andres at Darcy.Andres@CalgaryHealthRegion.ca

■ Full Registration — Members 2005–2006	
*Pre-registration	325.00 <input type="checkbox"/>
After April 22, 2005	395.00 <input type="checkbox"/>
■ Full Registration — Non-members	
*Pre-registration	470.00 <input type="checkbox"/>
After April 22, 2005	540.00 <input type="checkbox"/>
■ Full Registration — CSRT Student Members	
Student Members**	50.00 <input type="checkbox"/>
■ Full Registration — Non-CSRT Student Members	
*Pre-registration	75.00 <input type="checkbox"/>
After April 22, 2005	100.00 <input type="checkbox"/>
■ Daily Registration <input type="checkbox"/> Fri. <input type="checkbox"/> Sat. <input type="checkbox"/> Sun.	
Members	150.00 <input type="checkbox"/>
Non-members	185.00 <input type="checkbox"/>
Student Members**	50.00 <input type="checkbox"/>
■ Options	
President's Banquet	50.00 <input type="checkbox"/>
Additional Exhibitor Representative	150.00 <input type="checkbox"/>

* Pre-registration deadline April 22, 2005

**Must be currently enrolled in a CSRT approved program to qualify for the student rate

Registration includes Exhibitors Breakfast, Sunday Continental Breakfast, two lunches and breaks, Fun Night, Wine and Cheese Reception, all lectures and workshops, entry to Exhibit Hall. GST is included in the total #119220010 RT

Refunds: Refunds are subject to a \$50.00 administration fee.

NAME _____

CSRT FILE # _____

EMPLOYER _____

POSITION (TITLE) _____

YOUR ADDRESS _____

CITY _____ PROVINCE _____ POSTAL CODE _____

HOME TEL. _____ WORK TEL. _____

E-MAIL _____

METHOD OF PAYMENT

TOTAL PAYMENT \$ _____

VISA MasterCard

CARD NUMBER _____ EXPIRY DATE _____

SIGNATURE _____

PRINT NAME _____

YES, I WILL BE ATTENDING THE FUN NIGHT AT REDS.

Send to: CSRT 102 - 1785 Alta Vista Drive. Ottawa, Ontario K1G 3Y6

For more information please contact the CSRT at 1-800-267-3422 or (613) 731-3164 Fax: (613) 521-4314 E-mail: csrt@csrt.com



Annual Educational Forum — Preliminary Program 2005

Thursday June 2

Friday June 3

Afternoon

EDUCATORS CONGRESS

1:00 – 2:00

Use of Simulation in RT Education

Karl Weiss and Allan Shemanko

2:00 – 3:00

The Power of Partnership

Bonnie Friesen and Leanne Wrostopk

3:00 – 4:00

Assessing Competency

Dr. Craig Scanlan

4:00 – 5:00

Getting Started; CARTE

Facilitated by Ron Wrostopk

Exhibit Hall Grand Opening

7:00 – 9:00

Wine and Cheese Reception

**Friday
June 3**

**Fun Night
at Red's
West
Edmonton
Mall**

**Please visit our
website for
updates to the
Forum Program at
www.csrt.com**

Morning

7:00 – 8:30

Exhibitors' Breakfast

Sponsored by Brathwaites Olivier

9:00 – 10:00

Keynote Speaker:

The Healing Power of Humour

Dr. Stuart Robertshaw

10:00 – 11:00

Keynote Speaker:

ARDS Treatment in Evolution

Dr. Peter Papadakos

Sponsored by CICF

11:00 – 12:30

LUNCH WITH EXHIBITORS

Afternoon Concurrent Sessions

Breakout Session 1 12:30 – 1:30

MODULE A

Lung

Transplantation

Dr. J. Weinkauff

MODULE B

Reducing Medical

Error Involving

Anaesthesia

Equipment

Dr. Rob Seal

MODULE C

Fostering

Leadership

Development via

Mentoring

Dr. Craig Scanlan

MODULE F

The Second Victim

Dr. Peter Norton

Breakout Session 2 1:20 – 2:30

MODULE A

Pulmonary

Hypertension

Dr. Dan Stollery

MODULE B

Sleep Apnea and

Cardiovascular

Disease —

Understand and

Treating Both

Dr. John Remmors

MODULE C

Driving Behavior

Change

Pat Mussieux

MODULE E

Nutritional

Support and the

Pulmonary Patient

Richard Branson

2:30 – 3:00

REFRESHMENT

BREAK

Breakout Session 3 3:00 – 4:00

MODULE A

Approaches to

Discontinuation of

Mechanical

Ventilation

Dr. Dean Hess

MODULE B

Expanding the

Role of the RT —

An Anaesthetist's

perspective

Dr. C. Guenther

MODULE C

Respiratory

Therapy Education

— Entry to

Practice Credential

Panel Discussion

Ted Yachemetz,

Cliff Seville,

Ray Hubble,

Bill DuPerron

MODULE D

NIDCAP (Newborn

Individualized

Development Care

Assessment Plan)

Dr. Juzer Tyebkhan

Breakout Session 4 4:00 – 5:00

MODULE A

The Birds, The Pigs

and the Flu

Dr. Mark Joffe

MODULE B

The Role of the

Anesthesia

Assistant

Paul Brosseau

MODULE C

Business Meeting

Leadership Special

Interest Group

MODULE D

Bronchopulmonary

Dysplasia

Dr. Bernard Thebaud

5:00 – 5:30

DAILY WRAP UP

Annual Educational Forum — Preliminary Program 2005

Saturday June 4

Sunday June 5

Morning — Concurrent Sessions

7:00 – 8:30
Posters and Presentations and Breakfast

9:00 – 10:00
Keynote Speaker
Selection of an Aerosol Delivery Device
 Dr. Dean Hess

10:00 – 11:00
Panel Discussion: Respiratory Research Opportunities and Barriers
 Dean Hess, Richard Branson; Craig Scanlan

11:00 – 12:30
LUNCH WITH EXHIBITORS

Afternoon Concurrent Sessions

Breakout Session 1 12:30 – 1:30

MODULE A
Update on Sedation
 Dr. Peter Papadakos
Sponsored by CICF

MODULE B
The Role of Oral Appliances in the Treatment of Sleep Disordered Breathing
 Dr. Leslie Dort

MODULE D
Role of the RT in ECMO
 Dan Granoski

MODULE E
Intubation and the ICU Patient — Some Thoughts for RTs
 Cheryl Misak

Breakout Session 2 1:30 – 2:30

MODULE A
Regional Management of Respiratory Services
 Helen Clark
Sponsored by Boehringer Ingelheim/Pfizer

MODULE B
Sedation and Analgesia in Mechanical Ventilation
 Paul Oulette
Sponsored by Maquet Dynamed

MODULE D
Neonatal Ventilator Strategies
 Dr. Michael Narvey
Sponsored by Brathwaites Olivier

MODULE E
Community Based Pediatric Asthma Programs
 Dr. Kumar Ramlall

2:30 – 3:00
REFRESHMENT BREAK

3:30 – 4:30
CSRT ANNUAL GENERAL MEETING

PRESIDENT'S BANQUET AND DANCE

6:00 — Cocktails
6:30 — Dinner
8:00 — Keynote Speaker - Mr. Stephen Lewis, UN Special Envoy
Sponsored By CARTA

9:00 — Dance to the music of DJ Jack Layton.
 All drinks are free with a \$2/drink donation to the "Toonies for Tsunami Relief Fund" (proceeds will be donated to the Canadian Red Cross Tsunami Relief Fund)
Sponsored by Summit Technologies

7:00 – 9:00
Continental Breakfast

9:00 – 10:00
Keynote Speaker
Mechanical Ventilation: Past Present and Future
 Richard Branson

10:00 – 11:00
Keynote Speaker
Management of Massive Lung Trauma
 Dr. Peter Papadakos
Sponsored by CICF

11:00 – 12:00
Tips of Scoring Accuracy for Lytes & Gases: Analytic Coaches Corner
 Martha Lyon
Sponsored by Instrumentation Laboratories

12:00 – 12:30
Closing Remarks

Sputum Cup Challenge

Please visit our website for updates to the Forum Program at www.csrt.com

CSRT Educators Congress

The CSRT is pleased to offer an Educators Congress this year in conjunction with the annual Educational Forum. The CSRT strives to help in the development and promotion of continuing improvements in respiratory education. This half-day event will take place June 2, 2005 at the Shaw Conference Centre.

For RT educators these session will provide effective and innovative approaches to teaching. Lectures will focus on supplying information that will broaden the base in areas of teaching and learning.

Topics to be covered are:

■ The Power of Partnership

Bonnie Friesen and Leanne Wyrstok, University of Calgary Faculty of Nursing

■ Use of Simulation in RT Education

Karl Weiss, SAIT and Allan Shemanko, NAIT

■ Assessing Competency

Dr. Craig Scanlon

■ Getting Started: CARTE

Ron Wyrstok, SAIT

Register now. Don't be disappointed — seating is limited.

Registration Form

Name: _____

CSRT File Number: _____

Employer: _____

Position/Title: _____

Address: _____

City: _____

Province: _____ Postal Code: _____

Home Telephone: _____

Business Telephone: _____

E-mail: _____

Method of Payment

Card Number

Expiry Date

Signature

Print Name

This registration does not include access to the CSRT Educational Forum 2005.

Send to:
CSRT 102-1795 Alta Vista Drive, Ottawa
ON K1G 3Y6
FAX: (613)521-4314

GST is included in the total #119220010RT

Registration Fees

CSRT member: \$50.00

Non-member: \$75.00

Council on Accreditation for Respiratory Therapy Education (CoARTE)

Program Reviewer Workshop, Thursday, June 2, 2005, 09:00–3:30

Shaw Conference Centre, Edmonton AB

Purpose

- To provide a hands on session for individuals who wish to serve as program reviewers for CoARTE

Who is eligible to attend the workshop? Respiratory Therapists

- Member or associate member of the CSRT or member of a provincial regulatory body
- Involvement at didactic, clinical or administrative level with entry-level students
- In depth knowledge of the CSRT Occupational Profile
- Commitment to the CoARTE accreditation process
- Effective communication and problem-solving skills
- Ability to exercise objectivity, professionalism and good judgement

Educational Administrators

- Involvement at the administration level in an educational institution approved by the CSRT, which provides health care worker education programs
- Effective communication and problem solving skills
- Ability to exercise objectivity, professionalism and good judgement

Physicians

- Work with respiratory therapists
- Effective communication and problem-solving skills
- Ability to exercise objectivity, professionalism and good judgement

Regulatory Body Representative

- Registered member of the provincial regulatory body, other than an officer or member of the Executive
- In depth knowledge of provincial legislation and provincial specific requirements

- Involvement with respiratory therapy student education
- Effective communication and problem-solving skills
- Ability to exercise objectivity, professionalism and good judgement

Cost

The cost is \$95.00 per person plus GST (\$101.65). Please make your cheque payable to the Council on Accreditation for Respiratory Therapy Education.

Registration Form

Thursday, June 2, 2005, 09:00-3:30

Please note: Registration will be on a first-come, first-serve basis and spaces are limited.

Please complete this form and mail by April 30, 2005 to:

Josée Gagnon
Education and Accreditation Education Manager
Council on Accreditation for Respiratory Therapy Education (CoARTE)
102-1785 Alta Vista Drive
Ottawa ON K1G 3Y6

Name: _____

Title: _____

Work Address: _____

Telephone: _____

E-mail: _____

Cost: \$95.00 per person plus GST (\$101.65)
Cheque enclosed

Veillez noter que la documentation sera disponible en français.

Message from the President

In the past few years, the CSRT has gone through some dramatic changes to meet your current needs and to prepare for the future — and there are exciting changes ahead.



Brent Kitchen

Here is some of what the CSRT has accomplished on your behalf very recently:

- With the Mutual Recognition Agreement in place, all working RTs now have mobility to work in all provinces in Canada.
- The Mutual Recognition Agreement bylaw change made this January has provided an opportunity to unite all RTs in Canada under our organization. Since January, on average one RT per week who was previously unable to participate as a full member in our organization has become a CSRT member.
- We have worked with our regulatory partners to complete the new National Competency Profile which defines what RTs do in Canada and what students must be taught.
- The CSRT is in the final steps of completing the Anesthesia Assistant Profile. This profile is intended to define the role of Anesthesia Assistants in Canada and to create a common national curriculum for Anesthesia Assistant post-diploma training.
- The CSRT now has a new website to communicate with our members and to circulate information about the profession www.csrt.com.
- The CSRT has a new database to better track members, to improve electronic communication, for eventual on-line registration, to collect information and to provide the CSRT with more information about members and their needs.
- The size of the CSRT Annual Education Forum, the number and quality of education opportunities (and the fun) continues to grow. The forum in Edmonton this June is expected to be our largest forum to date. Planning is well underway for the 2006 Forum in St. John.
- Membership in the CSRT continues to grow every year.
- The quality and cost of the *Canadian Journal of Respiratory Therapy* continues to improve with every issue.
- The CSRT now has a Student Special Interest Group and expects to approve a Leadership Special Interest Group this summer.
- The CSRT Board of Directors has been restructured and is now elected by the entire membership. Each CSRT Director has a specific portfolio and workplan with specific objectives to better serve members.
- The CSRT is finalizing a new marketing plan and a national advocacy network.
- This spring the CSRT Board will complete a new strategic plan. The focus of the plan will be how the CSRT will serve, unite and advocate for RTs in Canada over the next five years.

The work that the CSRT Head Office staff and CSRT volunteers have accomplished recently demonstrates how the CSRT is serving you. If you believe that RTs in Canada want to receive benefits and services, need to be united and need an organization to advocate for them, you must believe in the CSRT. If you believe in it, you must support it. For most of us, the cost of being a member is less than one day's worth of pay per year. If you can't volunteer for the CSRT, at least work on behalf of the CSRT, and your profession, for one day per year.

These are some of the most exciting times for the profession and the CSRT that I have experienced in my 17 years as a Respiratory Therapist. The future will be even brighter if we are clear on what we want, if we work together and if we support each other.

A handwritten signature in black ink that reads "Brent Kitchen". The signature is written in a cursive, flowing style.

Brent Kitchen, RRT
CSRT President

Message du président

Au cours des quelques dernières années, la SCTR a effectué des changements spectaculaires afin de combler vos besoins actuels et de se préparer pour l'avenir, et encore d'autres changements importants sont prévus. Voici un échantillon des réalisations très récentes exécutées par la SCTR au nom de ses membres :

- Grâce à la mise en œuvre de l'Entente de mobilité, tous les TR qui exercent la profession jouissent désormais de mobilité, leur permettant de travailler dans toutes les provinces au Canada.
- Le changement au règlement administratif concernant l'Entente de mobilité, effectué en janvier dernier, constitue une occasion d'unir tous les TR au Canada sous l'ombrelle de notre organisme. Depuis janvier, un TR par semaine, jadis incapable de participer pleinement à titre de membre de notre organisme, est devenu membre de la SCTR, en moyenne.
- Nous avons travaillé avec nos partenaires de réglementation et complété le nouveau Profil national des compétences, lequel définit l'œuvre des TR au Canada et la matière qui doit être enseignée aux étudiants.
- La SCTR est sur le point de finaliser le Profil d'adjoint en anesthésie, qui a pour but de définir le rôle des adjoints en anesthésie au Canada ainsi que d'élaborer un tronc commun national pour leur formation aux cycles supérieurs.
- La SCTR a maintenant un nouveau site Web pour communiquer avec ses membres et transmettre des renseignements liés à la profession www.csrt.com.
- La SCTR dispose d'une nouvelle banque de données, lui permettant de mieux repérer ses membres, d'améliorer les communications électroniques, d'envisager l'éventuelle inscription en ligne, de recueillir de l'information et d'outiller la SCTR avec davantage de renseignements au sujet des membres et de leurs besoins.
- L'ampleur du Forum d'éducation annuel de la SCTR, la quantité et la qualité des occasions d'apprentissage, ainsi que le plaisir qui y est associé, ne cessent de croître. Il est prévu que le forum de cette année, à Edmonton, sera le plus important jusqu'ici. La planification du Forum de 2006 à St. John va bon train.
- Les effectifs de la SCTR augmentent d'année en année.
- La qualité et le coût de la *Revue canadienne de la thérapie respiratoire* s'améliorent à chaque numéro.
- La SCTR compte désormais un Groupe d'intérêt spécial — Étudiants et elle prévoit approuver un Groupe d'intérêt spécial sur le leadership dès cet été.
- Le Conseil d'administration de la SCTR, ayant fait l'objet d'une restructuration, est désormais élu par l'ensemble des membres. Chacun des directeurs de la SCTR est responsable d'un dossier en particulier et d'un plan de travail qui comporte des objectifs précis visant à améliorer le service aux membres.
- La SCTR est sur le point de finaliser un nouveau plan de marketing ainsi qu'un réseau national de défense des intérêts.
- Au printemps, le Conseil d'administration de la SCTR terminera le nouveau plan stratégique, dont le point de mire sera les moyens par lesquels la SCTR servira, unira et défendra les intérêts de tous les TR au Canada au cours des cinq prochaines années.

Le travail accompli récemment par le personnel du siège social et les bénévoles de la SCTR témoigne de la qualité du service offert par la SCTR. Si vous êtes d'avis que les TR au Canada veulent jouir d'avantages et de services, qu'ils doivent être unis et qu'ils ont besoin d'un organisme qui défend leurs intérêts, vous devez croire à la SCTR. Si vous y croyez, vous devez de la soutenir. Pour la majorité d'entre nous, les frais d'adhésion sont inférieurs à l'équivalent du salaire d'une journée par année. Si vous n'êtes pas en mesure de faire du bénévolat pour la SCTR, travaillez au nom de la SCTR et de votre profession, du moins, une journée par année.

Il s'agit d'une période des plus stimulantes pour la profession et pour la SCTR, depuis mes 17 ans à titre de thérapeute respiratoire. L'avenir se promet encore meilleur, si nous articulons clairement ce que nous voulons, si nous travaillons ensemble et si nous nous soutenons mutuellement.



Brent Kitchen, TRA
Président de la SCTR



Neil Johnston RRT, Nominee for President-Elect, 2005



Neil Johnston

Why should you vote for me for President-Elect? Hopefully this short introduction will give you several reasons. I support the direction that the CSRT is taking through its reorganization and re-alignment within the RT community. I am a strong leader. My preferred leadership style utilizes consensus building but I am not afraid to push for the

right action, based on logical and pragmatic reasons. I am a dedicated RT and although my main responsibilities are as a community hospital RT manager. I still have contact with the front line staff and their issues and concerns and patient care as I also work as a casual staff RT in pediatrics and women's health at another site. I will bring perspectives from my experience as I work with the membership and board, should I be elected. I will address the issues facing the CSRT such as increasing membership and membership services, professional advocacy, and adapting the activities of the CSRT as its role changes with more RT's coming under provincial regulation.

I have been actively involved with the profession since graduating in 1986. I have served two terms as president of the MARRT and as such I was a CSRT board member for five years. I have participated in a number of CSRT and CBRC projects including the national occupational profile, forum committees as well as participating on the original MRA consortium, representing the MARRT and serving as the consortium treasurer. My activities as a MARRT board member have given me an appreciation and understanding of both the professional advocacy and regulatory aspects of health care occupations.

My background as a member of other organizations also contributes to my ability to lead effectively. I am a volunteer board member of the Manitoba Lung Association and I am its representative to the Alliance for the Prevention of Chronic Diseases of Manitoba. I am a member of the AARC and the Canadian Lung

Association, Respiratory Therapy Society. I am a "prairie sailor", holding the rank of Lieutenant-Commander in the Cadet Instructor Cadre (Sea) of the Canadian Forces Reserve. Although I am currently inactive in the military, I maintain involvement in this community youth organization as a volunteer board member of the Manitoba Division of the Navy League of Canada.

Enough about me, tell me about you. What are your issues and concerns? Contact me by email at neil.johnston@shaw.ca. I hope to meet as many of you as possible at the Edmonton Forum.

Vote for President-Elect

Two members of the Canadian Society of Respiratory Therapists have put their names forward for the position of President-Elect of the CSRT. A vote will be held at the Annual General Meeting to be held Saturday, June 4, 2005. Please review the included information on the two candidates. Current CSRT members are encouraged to attend and cast their vote.

Rob Leathley, RRT, B.Ed. Nominee for President-Elect, 2005



Rob Leathley

It is with honour that I seek your support as the President-Elect of the CSRT.

Just over 31 years ago I began my career as a Respiratory Technologist. As a member of the first graduating class of Algonquin College in 1973, we were filled with the excitement and enthusiasm of our new career and the hope and

aspirations of our new profession. Since that time I have only looked back to reflect on how far I have come and how much this field has grown.

In the early 70's we did things because they seemed to work. We carried a pocket full of connectors and a screwdriver. We also wore a stethoscope. We were the new generation to be taught the science of respiratory care in the schools. We were reminded that there was a patient at the other end of the tubing. We embraced new therapies as old ones were rebuked and we took on new roles as our skill set expanded. Slowly we changed from Respiratory Technologists into the Respiratory Therapists of today. Change is not new to us.

Throughout this time the CSRT and its provincial counterparts have been at the forefront. The future holds many new and exciting things; increases in respiratory care research, development of new therapies and skill sets, evidence-based practice and licensure to name a few. I have been an active member of both my national and provincial societies, serving as Treasurer and President of the RTSO, Auditor for the NBART, Site Reviewer for CoARTE and a member of the CBRC Exam Committee among others. I look forward to future challenges.

As a Respiratory Therapist I have volunteered my time as a lecturer to families of asthmatics and as a past President of the Lambton Lung Association. I have continually upgraded my skills by attending

both clinical and managerial seminars. Most recently I have, after 30 years, finally obtained my degree. I have been a therapist, manager and educator. This old dog can learn new tricks. I ask you not to think of me as an over-the-hill technologist but rather someone who for the past three decades has continuously learned and developed as the profession has transformed. I ask you for your support as one who is still as passionate for what he does today as when he applied his first oxygen mask. I ask you to share your vision for Respiratory Therapy with mine and allow me the opportunity to lead us through the challenges of tomorrow.

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Anaesthesia Assistant: A Natural Progression for OR Respiratory Therapists

By Barb Saunders

The saying goes: “Many hands make light work,” and in the case of hospital operating rooms, more hands could reduce patient waiting lists for surgery. OR Respiratory Therapists trained in anaesthesia assistance are poised to help make this happen. Shortages in the number of Anaesthesiologists can often delay or cancel surgeries. Anaesthesia Assistants work closely with the Anaesthesiologist during surgery, providing technical support for complex anaesthesia equipment and help maintain the patient’s airway. They also can monitor a patient’s hemodynamic status, give blood and fluid products and provide pharmacological therapy.

Why Respiratory Therapists?

Respiratory Therapy as a health care profession is a blend of clinical and technical skills. Respiratory Therapists (RTs) have the frontline clinical capacity to deal with patients in need of critical care and who can’t breathe. And they also have the technical skills to deal with the effective functioning of equipment.

“Respiratory Therapists are well suited to be trained as Anaesthesia Assistants (AA) because it is part of our critical care training and we are performing many of the procedures already. It’s just a natural progression,” said Rick Paradis, Operating Room Charge Respiratory Therapist for Mount Sinai Hospital in Toronto. The AA role is an extension of the Anaesthesiologist, following their orders.

Paradis is referring to clinical and technical procedures such as: operating the anesthetic gas machine, mechanical ventilation, gas exchange, hemodynamic monitoring, providing airway management and pharmacology focused on the anaesthesia related drugs.

“We cannot practice medicine. We are not Anaesthesiologists. We are not there to replace the physician. Anaesthesia Assistants are just that—there to assist, facilitate and be an extension of the Anaesthesiologist,” said Paradis.

Recently, Anaesthesia Assistants work in conscious sedation cases every day in certain teaching centres in Toronto. These AAs were trained to provide sedation



“Airway Olympics” training session at Mount Sinai Hospital.

and monitor their patients and always be in touch with their covering Anaesthesiologist.

To date, over 12,000 cases have been performed by this group. The guidance and leadership provided by our Anaesthesiologists helps address the Ministry of Health and Long Term Care’s mandate to reduce waiting lists for surgery and meet the needs of our patients.

“Everyone is a patient advocate. Everyone in the hospital cares about the patient,” said Paradis.

As a result the Anaesthesia Assistant Program initiative, Mount Sinai Hospital, for example, has increased the number cataract eye surgeries performed in a day by almost 50%. Paradis receives calls from all across Canada asking to know more about the role of the AA. “We are pleased with the support from Anaesthesia and the success of the program. Many hospitals in Toronto are looking at implementing an Anaesthesia Assistant Program,” said Paradis.

Guideline Changed

In May 2004, the Canadian Anaesthesiologist's Society (CAS) changed their guidelines to allow an anaesthesiologist to temporarily leave the OR and delegate the care to an Anaesthesia Assistant.

Paradis said, "The key statement is "to an Anaesthesia Assistant," not to just anyone. The individual should have the skills, knowledge and judgement required to provide anaesthesia assistance. The guideline changes maintain our high standard of care and can lead to improved patient safety, improved OR efficiency and to a healthier work environment for anaesthesiologists."

"At Sinai we require that Anaesthesia Assistants work full-time in the OR and be enrolled in or have completed the Post Graduate Anaesthesia Technology Diploma Program," said Paradis. This program is offered at the Michener Institute in Toronto and the University College of the Cariboo in Kamloops, B.C. British Columbia.

The Anaesthesia Technology Program at the Michener is being redesigned in response to the challenge of providing didactic and hands-on clinical experience in a condensed time frame. Some Hospitals also provide extensive in house training programs in conscious sedation. At Sinai, the training program involves six weeks of instructional training followed by clinical practice.

In January 2004, Rick Paradis with the Respiratory Therapy Society of Ontario (RTSO), the College of Respiratory Therapists of Ontario (CRTO) and Dr. David Bevan, Anaesthetist-in-Chief, from Mount Sinai Hospital and University Health Network in Toronto, made a presentation to the Ministry of Health outlining the need for Anaesthesia Assistant Programs and asking for support. Discussions are still underway.

Side Bar Facts

- Inhalation therapists are expected to provide anaesthesia assistance in Quebec according to law
- In Halifax the OR RTs are providing conscious sedation for their ophthalmology cases
- The College of Respiratory Therapy of Ontario (CRTO) is committed to addressing health care issues that affect patient safety within the practice of Respiratory Therapy.
- The Respiratory Therapy Society (RTSO) represents, advocates and advances the professional interests of Respiratory Therapists in the province of Ontario.

Barb Saunders is the Co-ordinator of Communications and Member Services for the College of Respiratory Therapists of Ontario. As one of her duties in her position at the College, Barb co-ordinates a Communications Working Group made up of members from the Respiratory Therapy Association of Ontario (RTSO) and members from the College's Patient Relations Committee.

Doctor Shortage Jeopardizes Wait Plan — Anesthesiologists Called a Priority Province, OMA Urged to Tackle Problem

By Tanya Talaga, Health Policy Reporter, Toronto Star, reprinted December 2004

Ontario's new strategy to reduce long wait times for some surgeries will be jeopardized if an effort isn't made to fix the anesthesiologist shortage, warns the province's wait times czar, Dr. Alan Hudson.

Last month, Health Minister George Smitherman announced \$107 million to kick-start the Ontario Wait Times Strategy. The plan aims to shorten waits in five key health services: cataract surgery, cancer surgery, cardiac procedures, joint replacements and MRI/CT scans.

The money is flowing and things are going well, except the "one key piece that needs to be resolved immediately is the anesthesia situation," said Hudson, a prominent Toronto neurosurgeon and former head of Cancer Care Ontario who is in charge of creating the province's wait times strategy.

There were 929 anesthesiologists working in Ontario in 2003, said Dan Strasbourg, spokesperson for the Ontario Health Ministry. That is still short of what is needed.

Anesthesia is designated by the health ministry as a "priority specialty," Strasbourg said. Over the next two years, the government is working with the Council of Ontario Faculties of Medicine to create 160 new post-graduate positions in the specialty.

Anesthesiologists usually receive 12 years of training after high school and they can graduate tens of thousands of dollars in debt, as tuition fees at medical school range from about \$8,500 to \$14,000 a year. Hudson said the lack of anesthesiologists in operating

Continued on page 30

Canadian Intensive Care Foundation — A Year in Review



Cindy Hamielec, MD, FRCPC

The fiscal years 2004 and 2005 have been a period of challenges, growth and commitment for the Canadian Intensive Care Foundation (CICF). Challenges for the young organization — as it raises funds to provide for grants in critical care research and education — include creating awareness for what it is we do, fostering relationships with the health care community whose knowledge we seek to advance, and promoting these opportunities every chance we can.

We know the process can be slow to convince our audiences of the benefits of membership, to secure their donations, and to motivate support for fundraising activities. Ultimately this combination will create more knowledgeable care providers and assist in saving lives. We are anxious to advance this process since anyone of us — or our loved ones — may benefit as a result of the knowledge from research and education that the CICF initiates.

The Foundation is the only organization of its kind whose sole purpose is to support research and education in all areas of critical care, regardless of the discipline. What other funding organizations can make that claim in the area of intensive care? In some way or another — through donation of funds, volunteer time, or a fusion of both — we all find ways to support the communities from which we live and work. Does it not then make sense to want to directly participate in an organization where membership brings us knowledge that can make a difference in whether our patients live or die?

A few short years ago no money was available for critical care research. Only in the last two years the CICF has been able to also support education. For example, the Foundation agreed to respond to a funding request to support the CSRT conference in Edmonton in June 2004.

With funds of \$140,000 set aside for the 2004/05 fiscal year, CICF authorized six research grants of \$20,000 each, with a further \$20,000 available to support education opportunities such as the example above.

As the “Charity of Choice” for health care professionals in the field of intensive care, the potential exists to increase our ability to expand our grant programs dramatically. This commitment should pave the way to increase financial support beyond the critical care community. For example, industry is beginning to recognize that we are a good organization to partner with through unrestricted funding. Corporate contributions — and membership growth — allow us to broaden the scope of funding opportunities to respond to the education needs of respiratory therapists and similar disciplines in support of the profession’s continued progress.

CICF Membership Benefits

By becoming a member of the CICF you will join a nationwide network of about 1,000 members, which includes your peers. Career development opportunities take the form of networking events, volunteer positions and education grants. Professional relationships and lifelong friendships are an added bonus. CICF membership — at \$25 per year — provides exceptional value. The growing and active Foundation contributes to advancing the stature of your profession within your community and beyond.

Cindy Hamielec, MD, FRCPC, is the Chair of the Canadian Intensive Care Foundation



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West Nile Virus: A Look Inside

Amy L. Reid, RRT

Abstract

West Nile virus (WNV) is a disease that has only been around for a short period of time. It is with new diseases that comes a certain hysteria due to the limited knowledge and lack of resources required for complete understanding. However, it is the goal of this review article to clearly define West Nile virus, how it is contracted, and how it affects those once they are infected.

Introduction

WNV is defined by Health Canada as, belong[ing] to a family of viruses called Flaviviridae. It is spread by mosquitoes that have fed on the blood of infected birds. West Nile virus is closely related to the viruses that cause Dengue fever, Yellow fever and St. Louis encephalitis. The virus was first isolated in 1937 in the West Nile district of Uganda. Since then, there have been outbreaks in Egypt, Israel, South Africa, and in parts of Europe, Asia and North America. The first recorded outbreak in North America happened in New York City in 1999.¹

WNV is a mosquito-borne, single-stranded, RNA flavivirus, which was first identified in 1937 but introduced to North America in 1999.^{2,3}

It is not exactly known how WNV made its way into North America. However, there are many theories, the most accepted theory being that West Nile travelled to North America on either an infected migratory or imported bird, or via an infected mosquito. In either case, West Nile is here to stay.

WNV presents itself in various forms. The first is classified as being a neurological syndrome and is defined by Health Canada as having the following criteria: History of exposure in an area where WN virus activity is occurring, or history of exposure to an alternate mode of transmission and onset of fever, and at least one associated neurological syndrome consistent with a diagnosis of:

Figure 1: Human Results — 2003 Program: West Nile virus Neurological Syndromes, West Nile virus Fever and West Nile virus Asymptomatic Infection Diagnosis by Health Region, Canada as of February 25, 2004.

Legend — white, unknown; light grey, travel-related and dark grey, positive.



Source: Health Canada's West Nile virus Web site, Health Canada, <http://www.westnilevirus.gc.ca>. © Reproduced with the permission of the Minister of Public Works and Government Services Canada, 2004.

- encephalitis or meningoencephalitis, or
 - viral meningitis, or
 - acute flaccid paralysis (poliomyelitis-like syndrome or Guillain-Barré-like syndrome).
- and satisfies laboratory diagnostic test criteria.¹

Human Results by Province — 2003 Program

Province/Territory	Total Clinical Cases ¹	WN Virus Neurological syndromes (WNNS) ²		WN Virus Fever (WNF) ³		Unclassified/Unspecified ¹¹		WN Virus Asymptomatic Infection (WNAI) ⁴		Total Death
		Probable	Confirmed	Probable	Confirmed	Probable	Confirmed	Probable	Confirmed	
Newfoundland and Labrador (NL)	0	0	0	0	0	0	0	0	0	0
Prince Edward Island (PE)	0	0	0	0	0	0	0	0	0	0
Nova Scotia (NS)	2 ⁵	0	1 ⁵	0	1 ⁵	0	0	0	0	0
New Brunswick (NB)	1 ⁵	0	0	0	1 ⁵	0	0	0	0	0
Quebec (QC)	17	0	14	0	3	0	0	0	0	0
Ontario ⁹ (ON)	89 ⁶	-	-	-	-	0	0	-	-	2 ⁷
Manitoba (MB)	139	0	35	0	104	0	0	0	3	2
Saskatchewan (SK)	848	0	62	0	786	0	0	0	10	10 ⁸
Alberta ¹⁰ (AB)	272	0	48	0	223	0	1	0	3	0
British Columbia (BC)	19 ⁵	2 ⁵	6 ⁵	3 ⁵	8 ⁵	0	0	0	0	0
Yukon Territory (YT)	1 ⁵	0	0	0	1 ⁵	0	0	0	0	0
Northwest Territories (NT)	0	0	0	0	0	0	0	0	0	0
Nunavut (NU)	0	0	0	0	0	0	0	0	0	0
Canada — Total	1388	2	166	3	1127	0	1	0	16	14

Note: Evidence shows that most people infected with WN virus have mild symptoms or no symptoms at all.

¹Some provinces/territories provide case totals without further breakdown into WNNS or WNF. Total clinical cases is the sum of WNNS + WNF + Unclassified/Unspecified.

²WNNS Criteria:
History of exposure in an area where WN virus activity is occurring
OR
history of exposure to an alternate mode of transmission
AND
onset of fever
AND AT LEAST ONE associated neurological syndrome consistent with a diagnosis of:
• encephalitis or meningoencephalitis, or
• viral meningitis, or
• acute flaccid paralysis (poliomyelitis-like syndrome or Guillain-Barré-like syndrome).
AND
satisfies laboratory diagnostic test criteria.

³WNF Criteria:
History of exposure in an area where WN virus activity is occurring
OR
history of exposure to an alternate mode of transmission
AND
onset of fever
AND AT LEAST ONE of the following:
• myalgia, or
• arthralgia, or
• headache, or
• fatigue, or
• photophobia, or
• lymphadenopathy, or
• maculopapular rash
AND
satisfies laboratory diagnostic test criteria.

⁴WNAI — Satisfies West Nile virus diagnostic test criteria IN THE ABSENCE of clinical criteria. This category could include asymptomatic blood donors whose blood is screened using a Nucleic Acid Amplification Test (NAT), by Blood Operators (i.e. Canadian Blood Services or Hema-Quebec) and is subsequently brought to the attention of public health officials. The NAT that will be used by Blood Operators in Canada is designed to detect all viruses in the Japanese encephalitis (JE) serocomplex. The JE serocomplex includes WN virus and 9 other viruses, although from this group only WN virus and St Louis encephalitis virus are currently endemic to parts of North America. Further testing will be necessary to identify the specific virus from a blood donor with a reported positive donor screening test.

⁵Likely related to travel outside the province or territory.

⁶One case is likely related to travel outside the province or territory.

⁷A patient died from a stroke on September 3, 2003. The patient had secondary associated WNV encephalitis. A patient died from aspiration pneumonia on September 5, 2003. Both patients were listed as probable WNV cases.

⁸West Nile virus is reported as having been a contributing factor in two deaths.

⁹As of October 6, 2003, the Ministry of Health and Long-Term Care (MOHLTC) received the five requisite Plaque Reduction Neutralization Test (PRNT) confirmations of WNV cases in Ontario confirmed by Ontario Central Public Health Laboratory and the National Microbiological Laboratory (Winnipeg). As per MOHLTC policy, all positive immunoglobulin M (IgM) ELISA tests for WNV will now be classified as WNV cases and will no longer be reported separately as 'confirmed' or 'probable' cases.

¹⁰Since 6 IgM ELISA test results were confirmed positive using PRNT, all IgM ELISA positive results are now considered to be confirmed.

¹¹Further information on clinical signs and symptoms is required to classify these laboratory positive cases.

The second classification is that of West Nile virus Fever. West Nile virus Fever is defined as: History of exposure in an area where WN virus activity is occurring, or history of exposure to an alternate mode of transmission, and onset of fever, and at least one of the following:

- myalgia, or
- arthralgia, or
- headache, or
- fatigue, or
- photophobia, or
- lymphadenopathy, or
- maculopapular rash

and satisfies laboratory diagnostic test criteria.¹ The third and last classification is that of West Nile virus Asymptomatic Infection, and is defined as: Satisfies West Nile virus diagnostic test criteria IN THE ABSENCE of clinical criteria. This category could include asymptomatic blood donors whose blood is screened using a Nucleic Acid Amplification Test (NAT), by Blood Operators (i.e. Canadian Blood Services or Hema-Quebec) and is subsequently brought to the attention of public health officials. The NAT that will be used by Blood Operators in Canada is designed to detect all viruses in the Japanese encephalitis (JE) serocomplex. The JE serocomplex includes WN virus and 9 other viruses, although from this group only WN virus and St Louis encephalitis virus are currently endemic to parts of North America. Further testing will be necessary to identify the specific virus from a blood donor with a reported positive donor screening test.¹

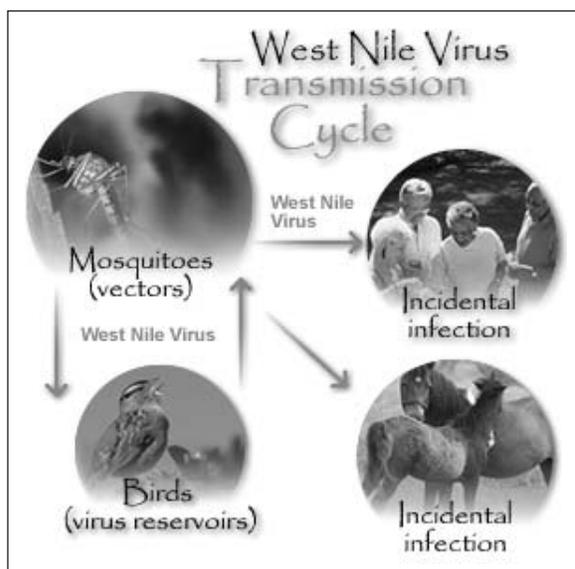
Since its North American discovery in 1999, WNV has infiltrated Canada making its way across the provinces. In 2003 alone, research has shown that over 1300 people in Canada were affected by West Nile in some proportion. See Fig. 1.¹

Transmission

The most well known mode of transmission is that of the infected mosquito. Data collected in the United States identified 43-mosquito species positive for WNV since 1999. As listed on the CDC website, these species belong to the follow-

ing genera: Aedes, Anopheles, Coquillettidia, Culiseta, Culex, Deinocerites, Ochlerotatus, Orthopodomyia, Psorophora, and Uranotaenia.⁴ There are multiple other modes of transmission, however, which may not be as well known. One can be infected with WNV following: mosquito bites, blood transfusions, organ transplants, mother-fetus, breast milk, needle stick injuries, or infected blood entering an open wound. See Fig. 2.¹

Figure 2



Source: Health Canada's West Nile virus Web site, Health Canada, <http://www.westnilevirus.gc.ca>. © Reproduced with the permission of the Minister of Public Works and Government Services Canada, 2004.

Susceptibility

Everyone is susceptible to becoming infected with WNV. It is the severity of the reaction that differs between each person. Many people who become infected with WNV show minimal to no symptoms at all, while others become severely ill. It is more likely that immunocompromised people or people with chronic diseases will incur the more serious effects of WNV. However, anyone at any age may be at risk of developing the serious effects of WNV.

Table 1: Characteristics of 64 patients admitted to hospital because of West Nile virus (WNV) infection

Characteristic	No. (and%) of patients
Age group, yr	
20–29	2 (3)
30–39	6 (9)
40–49	7(11)
50–59	14(22)
60–69	11(17)
70–79	17(27)
80	7(11)
Sex	
Male	36(56)
Female	28(44)
Immunocompromising condition	
Solid organ transplant recipient	3 (5)
Bone marrow transplant recipient	1 (2)
Cancer	1 (2)
Congenital myelodysplasia	1 (2)
Systemic vasculitis	1 (2)
Underlying condition	
Alcoholism	9(14)
Diabetes mellitus	9(14)
Heart disease	9(14)
History of cancer	6 (9)
Cerebrovascular disease	5 (8)
Liver disease	1 (2)
Lung disease	1 (2)
Psychiatric illness	1 (2)
Renal failure	1 (2)

An example of WNV susceptibility can be found on Table 1, which recognizes patients 20 and older. This table also identifies the increased incidence of WNV in patients with underlying/immunocompromising conditions.⁵

Signs and Symptoms

Signs and symptoms of WNV include: fever, altered mental status, anorexia, nausea, vomiting, headache, neck stiffness, diarrhea, myalgia, arthralgia, rash, lymphadenopathy, meningitis, encephalitis, acute flaccid paralysis, dysphagia, drowsiness, loss of consciousness, lack of

co-ordination, movement disorders, parkinsonism, poliomyelitis-like syndrome, and muscle degeneration.

Effects of West Nile Virus

A study conducted in southcentral Ontario reported 64 patients who had been infected with WNV in August and September of 2002. Each patient suffered the effects of WNV in different capacities, and was followed through to the end of their hospital stay. Highlights of the study are as follows:

In all, 64 patients met the inclusion criteria; 57 had encephalitis or neuromuscular weakness or both, 5 had aseptic meningitis, and 2 had WNV fever. The mean age was 61 years (range 26-87). The patients were predominantly active, middle-aged or elderly people living independently in the community. Seven patients were immunocompromised. A febrile prodromal illness preceded the neurological symptoms in almost all cases. The most common neurological abnormality was decreased level of consciousness; this frequently evolved to severe lower motor neuron neuromuscular weakness. Ataxia and swallowing disorders were frequent and important problems. Sixteen patients (25%) required intubation and mechanical ventilation because of a decreased level of consciousness, inability to clear secretions or respiratory muscle weakness; 9 others had disabling muscle weakness of one or more limbs. Ten patients died. The study patients were in hospital a total of 1856 patient-days, including 532 patient-days in an intensive care unit. Only 28% (13/47) of the patients who survived encephalitis or neuromuscular weakness, or both, were discharged home without additional support. Slow turn-around time for serological test results resulted in delayed diagnosis.⁵ See Table 2.⁵

Sequelae of West Nile Virus

It is becoming known that there are long-lasting effects, following infection of West Nile. There is minimal research to document the sequelae of WNV, however, of the research available to date, the following is known.

Sequelae are listed into the following categories: physical, cognitive, and functional.

Table 2: Neurological manifestations of WNV infection in 64 patients

Symptom or sign	No. (and%) of patients
Decreased level of consciousness	48(75)
Neuromuscular weakness	26(41)
Dysphagia	22(34)
Ataxia	20(31)
Dysarthria	11(17)
Vertigo	9(14)
Intention tremor	8(13)
Diplopia or ophthalmoplegia	8(13)
Facial weakness	7(11)
Blurred vision	6 (9)
Dysdiadokinesis	5 (8)
Meningitis	5 (8)
Seizure	4 (6)
Incontinence	3 (5)
Tongue weakness	3 (5)
Myelopathy	2 (3)
Nystagmus	2 (3)
Parkinsonism	2 (3)
None	2 (3)

Physical sequelae include: difficulty walking, muscle weakness, fatigue, insomnia, muscle pain, headache, and joint pain.

Cognitive sequelae include: memory loss, loss of concentration, depression, irritability, light-headedness, and confusion.

Lastly, functional sequelae include difficulty with: shopping, meal preparation, laundry, light housekeeping, heavy chores, and transportation.

A study conducted in New York City documented follow-up studies with patients diagnosed with WNV, 18 months following the acute illness/infection. The study identified each patients' baseline level of functioning prior to becoming infected with WNV, and then tracked their progress 6, 12, and 18 months following illness onset. The study also linked underlying patient conditions with the ability to recover from West Nile virus. Results are as shown in Tables 3, 4, and 5.⁶

Immunity

It is believed that most Canadians who have been bitten by an infected mosquito have developed some antibodies to WNV. However, their ability to fight off the virus depends on their overall health, and the ability to fight off the disease does decrease with age.¹

Respiratory Compromise

At present there is minimal evidence to document patients who have required mechanical ventilation due to WNV.

In a study produced by Pepperell et al, Sixteen patients (25%) required mechanical ventilation because of a decreased level of consciousness, an inability to handle secretions or respiratory muscle paralysis.⁵

In the New York outbreak of 1999, 27% of patients showed signs of muscle weakness, 10% had flaccid paresis, 32% had respiratory symptoms, and 17% required mechanical ventilation.^{7,8} Examples of diseases caused by West Nile, which ultimately lead to respiratory compromise include: bilateral diaphragmatic paralysis, asymmetrical flaccid weakness due to anterior horn cell disease (a poliomyelitis-like syndrome), axonal polyradiculopathy, and Guillain-Barré syndrome.⁹⁻¹²

Further research must be conducted in order to investigate the percentage of West Nile patients incurring respiratory compromise. Moreover, of those patients requiring mechanical ventilation, what is the time frame required for weaning and respiratory rehabilitation?

Is respiratory compromise, due to West Nile virus, a reversible disease?

Treatment

There is no documented treatment at present for WNV. Patients are purely given supportive care in order to minimize symptoms and prevent secondary infections (pneumonia, urinary tract, etc).

Examples of supportive care include: intravenous

Table 3. Prevalence of signs and symptoms at intervals of follow-up in patients with clinical West Nile virus infection, New York City, 1999

Sign or symptom	Before illness onset ^a (baseline), n/N (%)	Interview 1 (6 months), n/N (%)	Interview 2 (12 months) n/N (%)	Interview 3 (18 months) n/N (%)	p value for 12 months vs. baseline ^b
Physical sequelae					
Difficulty walking	7/35 (20.0)	30/38 (78.9)	17/35 (48.6)	15/36 (41.6)	0.002
Muscle weakness	4/35 (11.5)	25/38 (65.8)	15/34 (44.1)	20/36 (55.5)	< 0.001
Fatigue	12/35 (34.3)	20/37 (54.1)	22/33 (66.7)	23/36 (63.8)	0.002
Insomnia	7/35 (20.0)	17/38 (44.7)	16/34 (47.1)	17/36 (47.2)	0.007
Muscle pain	12/35 (34.3)	14/37 (37.8)	19/34 (55.9)	14/36 (38.8)	0.035
Headache	9/35 (25.7)	13/37 (35.1)	15/34 (44.1)	13/36 (36.1)	0.014
Joint pain	7/35 (20.0)	12/38 (31.6)	11/34 (32.3)	11/36 (30.6)	0.157
Cognitive symptoms					
Memory loss	7/35 (20.0)	21/38 (55.3)	17/34 (50.0)	16/36 (44.5)	0.002
Loss of concentration	3/35 (8.6)	16/37 (42.2)	14/34 (41.2)	12/36 (33.3)	0.001
Depressed	5/35 (14.3)	15/38 (39.5)	13/34 (38.2)	16/36 (44.4)	0.005
Irritable	8/35 (22.9)	14/38 (36.8)	14/34 (41.2)	14/36 (38.9)	0.008
Lightheaded	4/35 (11.5)	13/38 (34.2)	17/33 (51.5)	13/35 (37.1)	0.001
Confusion	2/35 (5.7)	17/38 (44.8)	9/34 (26.5)	11/36 (30.6)	0.008
Functional sequelae					
Shopping	4/33 (12.1)	17/36 (47.2)	14/33 (42.4)	14/35 (40.0)	0.002
Meal preparation	2/32 (6.3)	22/31 (71.0)	12/32 (37.5)	12/34 (35.3)	0.001
Laundry	1/25 (4.0)	14/29 (48.3)	10/25 (40.0)	10/33 (30.3)	0.003
Light housekeeping	1/28 (3.6)	19/35 (54.3)	12/28 (42.9)	12/35 (34.3)	0.001
Heavy chores	5/30 (11.9)	19/33 (57.6)	19/30 (63.3)	19/34 (55.9)	0.003
Transportation	3/29 (10.3)	23/37 (62.2)	10/28 (35.7)	14/36 (38.9)	0.008

^aAssessed by recall at the 12 month follow-up interview.

^bBased on McNemar's test for agreement in a matched analysis.

fluids, oxygen therapy, treatment of seizures, pain management, ventilatory support, treatment of cerebral edema, and prevention and treatment of bacterial superinfection, venous thromboembolism, gastric ulcerations, and decubitus ulcers.¹³⁻¹⁵

Currently, research is being carried out in order to determine both the possible treatments and vaccines to combat WNV. In vitro studies have shown activity of ribavirin, interferon alfa, and pyrazidine nucleosides against WNV, but no clinical data support the use of these agents at present.¹³

Furthermore,

Several human case reports indicate that treatment with intravenous immunoglobulin (IVIG) may aid in recovery from infection.¹⁶⁻¹⁹ A number of questions must be resolved to determine the efficacy of IVIG as therapy in humans. Of critical importance is the window in which passive therapy is effective. In animal models, the use of IVIG appears effective before or immediately after viral challenge; however, once cerebral infection occurs, use is limited.^{16,20}

Moreover, in the case of respiratory compromise,

Theophylline can potentially increase diaphragmatic strength, and recent animal studies have

Table 4. Recovery at 12 months post-onset by health status domain and clinical syndrome at diagnosis in patients with clinical West Nile virus infection, New York City, 1999.

Recovery	Total	Recovered, n (%) ^a	Not recovered, n (%) ^a	Risk ratio	95% confidence interval
Physical recovery					
Meningitis or mild illness	16	8 (50.0)	8 (50.0)	0.86	0.46-1.6
Encephalitis	19	11 (57.9)	8 (42.1)	Referent	
Total	35	19 (54.3)	16 (45.7)		
Cognitive recovery					
Meningitis or mild illness	16	10 (62.5)	6 (37.5)	1.1	0.64-2.0
Encephalitis	18	10 (55.5)	8 (44.4)	Referent	
Total	34	20 (58.8)	14 (41.2)		
Functional recovery					
Meningitis or mild illness	16	10 (62.6)	6 (37.5)	1.2	0.67-2.1
Encephalitis	19	10 (52.6)	9 (47.4)	Referent	
Total	35	20 (57.1)	15 (42.9)		
Total recovery					
Meningitis or mild illness	16	7 (43.8)	9 (56.3)	1.4	0.58-3.3
Encephalitis	19	6 (31.6)	13 (68.4)	Referent	
Total	35	13 (37.1)	22 (62.9)		

^aDue to rounding, not all values add up to 100%.

Source: *Emerging Infectious Diseases Journal*, <http://www.cdc.gov/eid>

Table 5. Recovery at 12 months postonset by health status domain and underlying health condition in patients with clinical West Nile virus infection, New York City, 1999

Recovery	Total	Recovered, n (%) ^a	Not recovered, n (%) ^a	Risk ratio	95% confidence interval
Physical recovery					
No underlying condition	18	11 (61.1)	7 (38.9)	1.3	0.70-2.4
Hypertension or diabetes	17	8 (47.1)	9 (52.9)	Referent	
Total	35	19 (54.3)	16 (45.7)		
Cognitive recovery					
No underlying condition	17	11 (64.7)	6 (35.3)	1.2	0.70-2.2
Hypertension or diabetes	17	9 (52.9)	8 (47.1)	Referent	
Total	34	20 (58.8)	14 (41.2)		
Functional recovery					
No underlying condition	18	12 (66.7)	6 (33.3)	1.4	0.78-2.6
Hypertension or diabetes	17	8 (47.1)	9 (52.9)	Referent	
Total	35	20 (57.1)	15 (42.9)		
Total recovery					
No underlying condition	18	9 (50.0)	9 (50.0)	2.1	0.80-5.6
Hypertension or diabetes	17	4 (23.5)	13 (76.5)	Referent	
Total	35	13 (37.1)	22 (62.9)		

^aDue to rounding, not all values add up to 100%.

Source: *Emerging Infectious Diseases Journal*, <http://www.cdc.gov/eid>

shown improvement in diaphragmatic strength with theophylline after spinal cord hemisection.⁷

Vaccine prospects include: equine vaccine (a formalin-inactivated WNV), live attenuated WNV/dengue virus serotype 4 chimera, E protein, recombinant DNA vaccines expressing the premembrane and E or capsid proteins, and a recombinant E protein subunit vaccine.^{16, 21-29}

Lastly,

Several studies have assessed the efficacy of heterologous Flavivirus vaccines against WNV. Partial cross-protective immunity has been generated in hamsters and mice using JEV, Yellow Fever virus, Saint Louis Encephalitis virus (SLEV), and dengue virus vaccines^{16, 30, 31}; however, a study of human volunteers showed no WNV-neutralizing antibodies after vaccination against either JEV or a dengue virus.^{16, 32}

Conclusion

West Nile virus has had a recent emergence into North America. It is a vector-borne disease, which has many modes of transmission. The most prevalent mode of transmission being that of the mosquito. 43 species of mosquitos have been found to carry West Nile virus.

Once infected with WNV, one presents with one of three classifications: neurologic syndrome, fever, or asymptomatic infection. The most serious form of these classifications being that of West Nile virus neurologic syndrome. Serious complications of WNV include: encephalitis, meningitis, polio-like syndrome, acute flaccid paralysis and bilateral diaphragmatic paralysis. Of those patients who incurred any form of respiratory compromise, there has not been sufficient documentation to show length of ventilation, effective weaning techniques, or ability to wean successfully off of mechanical ventilation.

Moreover, to date there are no treatments for West Nile virus, only supportive therapy. However, research is being done in order to find both effective treatments and vaccines to combat this disease.

Further research needs to be conducted in order to determine definite answers with regards to recovery time, reversibility of disease, and effective treatments/vaccines. Until that time, it is our responsibility to protect ourselves and to provide the best level of care for our patients.

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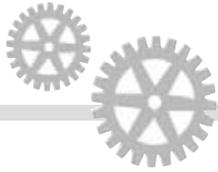
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Continued from page 19

rooms is “sticking out like a sore thumb” in the new plan to reduce wait times. The specialists need to receive financial incentives to spend more of their time in the operating room and less time running things like pain clinics, he added. “We need them in the operating rooms putting people asleep,” he said. “You can’t have patients, nurses and money and no anesthetists.”

He urges the Ontario Medical Association and the government to get back to the bargaining table to address the problem. “The OMA needs to bubble this up to the top of their renegotiations or we’ll be in big trouble,” he said. Dr. John Rapin, president of the OMA, the bargaining agent for the province’s 22,000 physicians, said many of the medical specialties are losing people and this is just one example of how serious the doctor shortage is in Ontario. “In terms of dealing with the government’s wait list agenda... I don’t know where they expect the human resources to come from,” he said, adding general surgeons and orthopedic surgeons are also dwindling in ranks. The anesthesiologist crunch has been a “big problem” for several years now, Rapin said.



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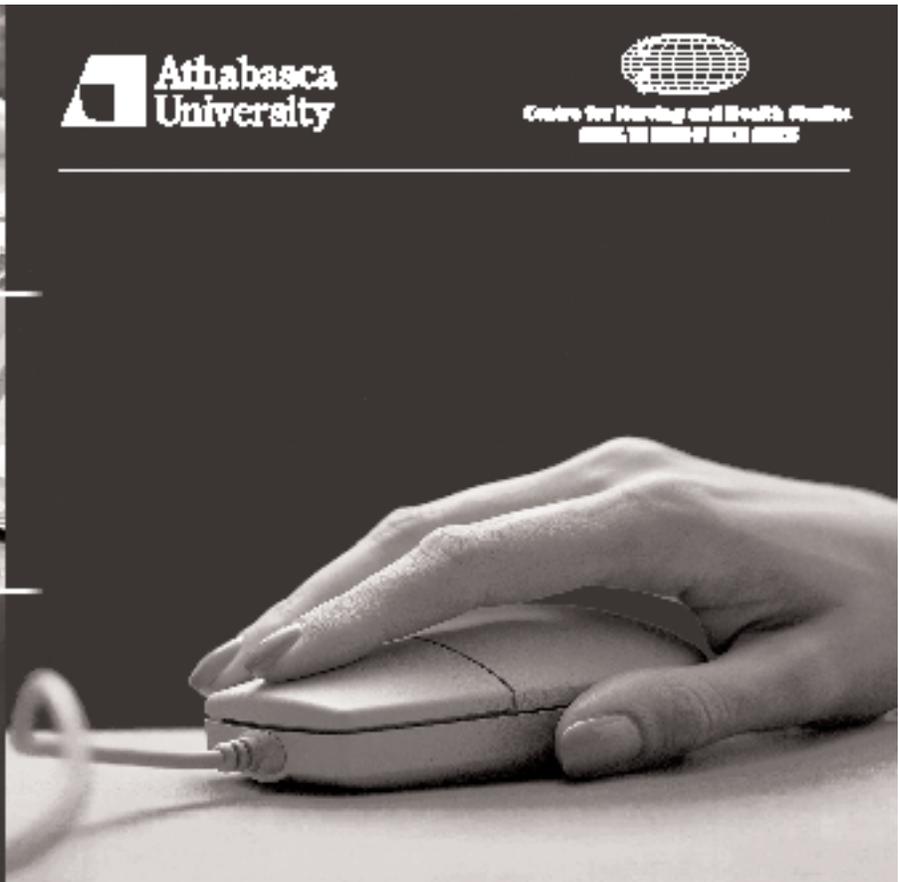
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**American Academy of Allergy,
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60th Annual Meeting
San Antonio, Texas
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March 20 – 23, 2005

**7th Annual European
Conference
Society for Research on
Nicotine and Tobacco**
Prague, Czech Republic
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April 21 – 25, 2005

**37th Annual Meeting of the
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Palm Desert, California
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