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CSRT Educational Forum 2005

The journal for respiratory health professionals in Canada
La revue des professionnels de la santé respiratoire au Canada
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New Valve Holding Chamber

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

Cover Photo
In keeping with the new CSRT strategic direction, the CSRT was pleased to invite Special Envoy to the United Nations, Stephen Lewis to address delegates at the Educational Forum in Edmonton. Mr. Lewis is flanked by CSRT Executive Director, Douglas Maynard (left) and CSRT President Brent Kitchen (right).

Photo by Colya Kaminiarz

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Welcome

Inside you will find a photo wrap of the CSRT Educational Forum. We had record attendance, with more than 250 daily registrants alone! The exhibit hall was sold out and the President’s Banquet was very well attended. Our keynote speaker at the banquet was Special UN Envoy Stephen Lewis. His compelling address to delegates was a reminder to us all — of who we are as a nation and as individuals in the world. The CSRT will strive to equal the caliber of his presentation at future functions.

A very big thank you goes out to our Forum Organizing Committee, chaired by Darcy Andres, who pulled it all together for us. Next year we will raise the bar as we head for Saint John, New Brunswick — May 25–28, 2006! If you have any thoughts on speakers or streams, please contact Head Office with your suggestions.

Welcome to our new CSRT President Sue Jones of Ontario and to Rob Leathley, of New Brunswick who becomes our President-Elect.

Don’t forget that RT week will soon be here — October 23–29, 2005. Check the RT Week catalogue on page 23 for our new CSRT royal blue scrubs. They are great with the new long-sleeved t-shirts that we have added to our catalogue.

Our science articles in this issue are Psychology of Compromise by Dr. David Aboussafy and from our CSRT Director of Professional Advocacy, Wrae Hill — Rapid Response Teams/Medical Emergency Teams.

Have a great and safe summer.

Doug Maynard BSc, RRT, MBA
Executive Director CSRT
dmaynard@csrt.com
Canadian Neonatal Network in China — Winners of this Years Medigas Award

Lynn Beaton, RRT

The Canadian Neonatal Network and Shanghai Children’s Hospital of Fudan University have together worked to develop a program in partnership to establish a National Neonatal Training Program for the People’s Republic of China (PRC). This two-year program will have students spend the first year in China and the second in a clinical placement in Canada.

Objectives
1. To establish a National Neonatal Training Program at Shanghai Children’s Hospital of Fudan University to serve the PRC
2. To establish standards for training and practice of neonatology in PRC
3. To upgrade standards of care and training at Shanghai Children's Hospital of Fudan University

Governance
This program is a partnership between the Shanghai Children’s Hospital of Fudan University and the Canadian Neonatal Network. A Joint Training Committee comprising 3 members from the Shanghai Children’s Hospital of Fudan University and 3 members from the Canadian Neonatal Network will oversee the program, including the establishment of a training curriculum and standards, and criteria for recruitment and graduation of trainees.

Program
Trainees from across the PRC will be enrolled in a 2-year training program. Admission is competitive and minimum criteria for admission (including fluency in the English language) will be established by the Joint Training Committee. During the first year, training will

Continued on pages 9
Highlights from

Jan Taylor, of Medigas (left) congratulates Lynn Beaton on being one of the recipients of the Medigas Award for Excellence. Information of the National Neonatal Training Program can be found on page 5.

Photos by Colya Kaminiarz, CSRT Director of Membership Services
Were you captured by a roving camera?
http://homepage.mac.com/colya/PhotoAlbum8.html

Rick Lascelle of British Columbia, Sputum Cup challenger waits for a signal from his mother ship.

CSRT President Sue Jones accepts the CSRT Chain of Office from Past-President Brent Kitchen.

Co-chairs of the Forum Social Committee, Cindy Bouw (left) and Maggi Quinon check Pursuing Trivia questions for a winner in the Sputum Cup Challenge.
CSRT Forum 2005

Jim Cosman, President of Summit Technologies (right) and Murray Beaton, display a cheque for $1,154.00 which will be given to the Canadian Red Cross Tsunami Relief Fund. Summit collected the funds on behalf of the CSRT at the President's Banquet Toonie Bar. Thank you Summit Technologies!

Sputum winners — The CHEO Chokers, chocked out the competition to win this years challenge (left to right) Ana Ramirez, Pierre Parent, Judy MacGregor and Deborah Willard.

Lyndsey McKiel of New Brunswick, accepts the CSRT Gold Medal from President Brent Kitchen.
be conducted at Shanghai Children’s Hospital of Fudan University by two faculty members on monthly rotation year round from the Canadian Neonatal Network. Faculty members from Canada may include neonatologists, pediatric sub-specialists, nurses, respiratory therapists, dieticians and other faculty as deemed appropriate by the Joint Training Committee. Training will be conducted in English and will include lectures, seminars, discussions, ward rounds, clinical training, clinical charting and other activities as determined by the Joint Training Committee. The aim is to bring trainees to a level where they can function as trainees in a Canadian neonatal training environment.

During the second year, successful trainees may be selected to attend further neonatal fellowship training in Canada. Candidates must provide an undertaking to return to the PRC upon completion of their training. Upon successful completion of the program, a Certificate will be awarded jointly by the Shanghai Children’s Hospital of Fudan University and the respective host hospital in Canada. Expenses for travel, accommodation and food (but not salary) for Canadian faculty will be provided by the PRC. Expenses of trainees are the responsibility of the PRC institutions sponsoring their training. Logistical support and other expenses for the program will be provided by the Shanghai Children’s Hospital of Fudan University.

Respiratory Therapists

In 2004-2005 a total of five Respiratory Therapists were sent to China to assist in teaching along with each neonatologist faculty for one month. The curriculum for the Respiratory Therapist was developed and approved by Dr Shoo Lee who was the lead Coordinator for the project. The Respiratory Therapists that travelled in 2004-2005 all had teaching experience and worked in a level 3 Neonatal Intensive care Unit.

The individuals that went in 2004–2005 were:

April — Lynn Beaton, Thompson Rivers University, BC Children’s Hospital, Vancouver, BC

Comments from Lynn:
This was my second time in China with Dr. Lee seeing his dedication to improving neonatal health care in China at work. Credit has to also go to the Fudan Children’s Hospital staff. They allowed strangers to come into their unit and change practice. It is always easier to be the so-called expert coming in to make changes. It was the willingness of the staff to change that earned my utmost respect. The second year of the program is just getting underway and the students from the program are starting their fellowship year in Canada.

May — Steve Wiens, Thompson Rivers University, BC Children’s Hospital, Vancouver, BC

Comments from Steve:
The China experience was a rich and rewarding one. I believe we learned as much as our colleagues did — as is the way when immersing oneself in another culture. I observed a very hard working team of doctors and nurses, eager to learn anything we could share with them. They had one of each ventilator which made things difficult for continuity and cost of separate circuits and parts.

The dynamics of the NICU were simply astounding. I witnessed babies being extubated and going home much quicker than our own lot. I attributed this to a much reduced level of sedation and pain control and in some cases, none. For example, a CDH term baby came out from surgery and was placed on moderate ventilation, no PPHN protocol was initiated. There was no sedation and he went on to CPAP the next day and discharged within two days. This is almost unheard of in Canada.

There were shocking incidents due to the families not being able to afford surfactant (very expensive there) so the child was sent home to their own demise. Cleanliness and sterility in the NICU was a mindset. This was one project I accepted with fervor, as infection was rampant. Teaching was another challenge as translation was needed with some salient points along the way. I found the country both inviting and friendly and the food was great. The biggest challenge was to find a soft bed! All in all, a great experience; not to be forgotten.

June — Rob Martel, Dalhousie University, IWK Health Centre, Halifax, NS

Comments from Rob:
It was a wonderful opportunity and experience to teach for the International Training Program in Neonatal/Perinatal medicine for Physicians in Shanghai, China. This unique partnership with the Children’s Hospital of Fudan University provided these students
with an opportunity for enhanced didactic and clinical skills development. Clinical Respiratory teaching focused on critical thinking and knowledge transfer of theory to practice utilizing case scenario instruction. Again, it was a pleasure to be part of this endeavor. The hospitality from our China hosts was memorable.

**July — Marilyn Hyndamn, Sunny Brook Women’s College Health Science Centre**

**October — Catherine Burk-Tremblay, Clinical Educator: Summit Technologies Inc.**  
**Staff Respiratory Therapist NICU: St. Joseph’s Health Care London**

**Comments from Catherine:**

During my stay in China for the month of October 2004, there was a unique opportunity to bring knowledge and clinical teaching together while sharing a common goal of care for fragile neonates. I worked with Dr. David Lee, staff neonatologist from St. Joseph’s Health Care in London. One afternoon, I was presenting a session and workshop on graphics in conventional mechanical ventilation and high frequency oscillatory ventilation. The two ventilators I used were not familiar to the NICU physicians and staff of Children’s Hospital Fudan University, but often common in Canadian NICU’s. As often happens, two critically ill 28-week gestational age newborns were admitted to the NICU with infant respiratory distress syndrome (IRDS).

They required urgent ventilatory support but there was a critical shortage of ventilators! I was asked if we could use both the AVEA and SensorMedics 3100A HFOV. The Medical Director of the NICU supported the decision and a crisis was avoided. I continued to provide intensive in-services for both physicians and nursing staff late into the night. It was dynamic and truly a teachable moment. Both babies were subsequently extubated to nasal CPAP and continued to do well. The experience was rewarding, energizing and humbling.

**In 2005 and 2006:**

**April — Chris Grant, Royal University Hospital, Saskatoon, SK**

**May — Duane Wong**  
**Thompson Rivers University**  
**CB Children’s Hospital, Vancouver, BC**

**June — Seely Alder**  
**IWK/ Transport team Halifax, Halifax, NS**

**July — Jason Macartney**  
**Mount Sinai Hospital, Toronto, ON**

**October — Lynn Beaton**  
**Thompson Rivers University**  
**BC Children’s Hospital, Vancouver, BC**

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**Full House at the CSRT Educators’ Congress**

An Educators’ Congress was held this year in conjunction with the 2005 CSRT Annual Educational Forum. Education in Respiratory Therapy continues to evolve with new challenges and complexity. Graduate competencies plus employer’s expectation for new graduate capabilities and outcomes pushes on the educational programs to broaden its scope. The desire by educators to have a forum to discuss and share ideas was evident by the strong attendance at the congress.

The line up of speakers presented on topics from the use of high-fidelity simulation in respiratory care education presented by Karl Weiss (SAIT) and Allan Shemanko (NAIT) — to a discussion on developing effective and efficient competency assessment models by Dr. Craig Scanlan, a well know name in respiratory care. Bonnie Friesen and Leanne Wyrostok from the Faculty of Nursing at the University of Calgary presented on the power of partnership between students, peers, faculty, preceptors, patients and members of the health care team and the complex role required to successfully negotiate these partnerships within the context of our practice setting.

I am pleased to announce the Educator’s Congress was a great success based on the feedback from the 46 individuals who attended. Our desire is to carry forward the educator’s congress as an annual event with the CSRT Annual Educational Forum. To get organized, this fall a request will be sent to each school to provide a faculty representative. This Steering Committee will determine the future initiatives and design of the educator’s group in Canada. I would like to thank the CSRT and in particular Darcy Andres for his leadership and support for this event.

Ron Wyrostok, SAIT Academic Coordinator  
Health and Public Safety Department
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Ontario Ratifies RRT Designation
The Registration Regulation amendments, passed by the CRTO Council two years ago, under the Respiratory Therapy Act, have now been passed into law by the Government, effective May 31, 2005.

The RRT designation is now the legal mandatory designation for Respiratory Therapist Members of the College. Graduate Members will use GRT and Limited Members will use PRT. The provisions of the RT Mutual Recognition Agreement on labour mobility, signed by RT provincial regulators and the CSRT, have also been passed into law in the amendments.

For more information the new version of the Regulation please visit: www.rtso.org

Outstanding Job!
Our CSRT Forum Organizing Committee did a fantastic job. The compliments and notes of congratulations on our successful forum attest to the many hours put in by our Forum Chair Darcy Andres. Thank you Darcy!

Darcy organized an energetic and dedicated team who pulled it all together. Dallas Schroeder was in charge of the superb roster of Speakers. Cindy Bouw and Maggi Quirion were the Social conveners with flair. Leanne Grant and Janet Thomson ran the Registration Desk like a well-oiled clock. Linda Fontaine and Ann Hudson-Mason smoothed out wrinkles with the Exhibitors.

The CSRT is very grateful to the dedication of our Forum volunteers. We could not do it without your assistance!

Forum 2006 — Saint John, New Brunswick!
The CSRT Forum Committee has already begun to organize for next year’s Forum in Saint John, New Brunswick — May 28—30, 2006. Is there a topic, stream or speaker you would like us to consider? Send us an email at cjrt@csrt.com or call 1-800-267-3422.

New CSRT Scrub Sets
For the fashion-conscious RRT! The CSRT is pleased to offer members discounted prices on bulk-buys of regulation scrubs. The sets of scrubs, in royal blue, include the CSRT logo embroidered on the right sleeve cuff. They have one left-breast pocket and a built-in pocket on the sleeve for pens or mini-screwdrivers. The draw-string pants have two slash pockets and two cargo pockets. The scrubs are an easy-care cotton-polyester blend. They are available in a variety of sizes, designed for a comfortable fit — so sizing is slightly larger than normal.

A bulk-buy would consist of a pre-paid order of a minimum of 10 sets. The cost per set is $36.00.

The CSRT also offers long-sleeved t-shirts — ideal under the scrubs in air-conditioned environments. They are white with navy lettering down the right arm with the words “Respiratory Therapist”. The CSRT logo is on the left breast. They are 100% ultra cotton. A photo of the scrubs and t-shirt can be found in the RT Week Catalogue on page 21.

CSRT Forum 2005 Poster and Paper Winner
Congratulations to Paul Brousseau BEd. RRT, and his Halifax team — Orlando Hung FRCPC, Adam Law FRCPC, for their winning poster on Aryngoscope Light Comparison. Paul will get complimentary registration to Forum 2006 — being held in Saint John, New Brunswick.

Asthma Society of Canada launches New Website
The Asthma Society of Canada offers a unique reference that will help people with asthma and their families achieve an active, symptom-free life year-round by providing practical advice and information for dealing with seasonal asthma triggers. You can access this asthma resource at: www.4seasonsofasthma.ca.
CoARTE News

Josée Gagnon, Accreditation and Education Manager

CoARTE Membership with the Association of Accrediting Agencies of Canada

CoARTE is now a well-established program for the accreditation of 18 programs of Respiratory Therapy across Canada. CoARTE is very proud to announce its new membership with the Association of Accrediting Agencies of Canada (AAAC). The mission of the AAAC is to ensure the highest quality education of professionals by pursuing excellence in standards and processes of accreditation. AAAC provides a forum for information and exchange of ideas. It promotes the expertise of Canadian professional education accrediting agencies, within Canada and internationally, to monitor mobility of professionals internationally.

Major national organizations that represent professionals in Canada are sharing the benefits of the AAAC with access to a very dynamic group involved in the discussions of accreditation and with representation at the federal level. You will find more information at www.aaac.ca.

The Canadian Information Center for International Credentials (CICIC) is a very active member of the AAAC. An overview of the CICIC mandate is to provide information on Canadian postsecondary studies, diplomas and degrees in order to promote mobility and the recognition of Canadian qualifications internationally. CICIC will facilitate access to information on foreign credentials and foreign recognition activities to Canadian organizations. You will find more information at www.cicic.ca.

New Education Programs for Respiratory Therapists Through the CSRT

The CSRT will soon offer education programs to provide services contributing to a better professional practice for CSRT members. Professional development education is consistent with our mission and our commitment to accessibility to respiratory therapy educational materials. Ray Hubble, Director of Education and Clinical Standards has prepared a Strategic Plan for the CSRT to develop and provide continuing education offerings.

A new research project is also being developed. The CSRT is working on a project for the Foreign Credential Recognition Program offered in collaboration with Human Resources and Skills Development Canada (HRSDC). This program would offer educational programs to foreign students, immigrants and foreign-trained RTs. The CSRT will work with all stakeholders including the provincial regulatory bodies, provincial associations and schools with this initiative.

This program would verify the Prior Learning Assessment to establish the content of the Foreign Program and make a comparative evaluation with Canadian standards. In order to establish the equivalence of the academic and clinical experience, the program will compare certification and licensure for accreditation.

The program would offer enhanced language training and bridge-to-work, including labour market and job-specific language training and workplace literacy programs. This program would also offer and create web-access training courses and conference presentations and would promote labour mobility.

The opportunities these programs will offer, not only to CSRT members but to schools, foreign students, regulatory bodies and to future employers, will create a central, unified hub for education, information, support and promotion of the RT profession. At the same time, it will expand general awareness of the CSRT and its mission to develop and promote respiratory therapy and educational components.
Message from the President

I am pleased to fill the position of CSRT President for the upcoming year. As President-Elect I listened and learned about the political landscape; contributed to the development of the strategic plan; participated in the development of the new board structure; gained insight regarding the role of the CSRT in its involvement with the group of regulatory bodies known as the National Alliance.

The CSRT represents the voice for the profession with regards to how the federal government has mandated Agreement on Internal Trade (AIT), which has resulted in the Mutual Recognition Agreement (MRA) and how that affects the workings of the CSRT in conjunction with the regulated provinces.

Strategic planning sessions allowed for an excellent flow of ideas and the creation of a new direction for the CSRT. Focusing on how to work with the MRA, the CSRT created a new direction for the future of the organization. This planning is complete and the Strategic Plan 2005–2008 is now available for all members on the web site.

As for politics — it’s always interesting and will continue until the end of time. Politics is something one must deal with in the workplace, in the home and certainly in any organization. Enough said on that.

One of my first duties as the CSRT President was to attend a meeting in Vancouver with the Canadian Anaesthesiologist Society (CAS) Allied Health Committee. In attendance were five anaesthesiologists, four representatives including myself from the CSRT, the President of ORNAC (OR nurses Association of Canada) and the President of NAPAN (Post Anaesthetic Care Nurses Association). It was a productive meeting, resulting in ORNAC and the CSRT working together to develop a common document that describes the role of an anaesthesia assistant — that is inclusive to both nursing and respiratory. Jeff Kobe and Colya Kaminiarz are the leads on this project. We will provide the profession with a background knowledge document on anaesthesia assistants as well as a general job description.

The awareness of respiratory therapists and their ability to provide a valuable clinical service is growing steadily. Make a point of promoting yourself as respiratory therapists with all the skills to provide a variety of services including anaesthesia. Promote yourself as a respiratory therapist to your patients, their families, in meetings and to other healthcare professionals. While there are no financial implications in promoting yourself, the pride and professionalism will make a lasting impression.

Sue Jones, RRT
Mot de la présidente

Il me fait plaisir d’occuper le poste de présidente de la SCTR pour la prochaine année.
À titre de présidente désignée, j’ai pris connaissance du climat politique; contribué à l’élaboration du plan stratégique; participé au développement de la nouvelle structure du conseil d’administration; et pris un aperçu du rôle que joue la SCTR par son implication auprès du groupe d’organes de réglementation appelé l’Alliance nationale.

La SCTR constitue la voix de la profession à l’égard, d’une part, de l’Accord sur le commerce intérieur (ACI) autorisé par le gouvernement fédéral, qui a entraîné l’Entente de mobilité, et, d’autre part, de son impact sur le fonctionnement de la SCTR auprès des provinces réglementées.


La politique s’avère toujours intéressante, comme ce sera le cas jusqu’à la fin des temps. On doit en tenir compte dans le milieu de travail, à domicile et, évidemment, dans tout organisme. Assez parlé à ce sujet.

L’une de mes premières tâches à titre de présidente de la SCTR fut de participer à une réunion du Comité paramédical de la Société canadienne des anesthésiologistes (SCA), tenue à Vancouver. Elle rassemblait cinq anesthésiologistes, quatre représentants de la SCTR, y compris moi-même, la présidente de l’Association des infirmières et infirmiers de salles d’opération du Canada (AIISOC) ainsi que la présidente de la NAPAN (Post Anaesthetic Care Nurses Association). Lors de cette réunion fructueuse, l’AIISOC et la SCTR ont décidé de collaborer à la rédaction d’un document commun qui précisera le rôle des assistants d’anesthésie en tenant compte de la perspective des soins infirmiers et des soins respiratoires. Jeff Kobe et Colya Kaminiarz dirigent ce projet. Un document qui renferme les connaissances de base liées aux assistants d’anesthésie et une description de tâches générale seront produits et mis à la disposition des membres de la profession.

La sensibilisation à l’égard des thérapeutes respiratoires, et leur capacité à dispenser de précieux services cliniques, ne cessent de s’accroître. Que ce soit auprès de vos patients, leur famille, lors de réunions et auprès d’autres professionnels de la santé, assurez-vous de vous afficher à titre de thérapeute respiratoire qui possède les compétences nécessaires à dispenser une gamme de services, y compris l’anesthésie. Votre fierté et votre professionnalisme laisseront leur marque, sans entraîner de coût de votre part.

Sue Jones, TRA
As the CSRT undergoes changes to its structure, and a new mission statement and strategic plan is unveiled, the documents that support our occupation have been revised as well.

Along with the Standards of Practice, the Code of Ethics was also revised by the Board of Directors. As the project lead, I spent many hours researching the ethics documents of other healthcare professions and compared them to what the CSRT had as its current document.

Statements of ethics and professional conduct establish the framework for professional behaviour and responsibilities. They define what is considered acceptable behaviour and promote high standards of practice. Along with professional standards, a code of ethical and professional conduct can be used as a vehicle for occupational identity.

The new Code of Ethical and Professional Conduct outlines three principles to which all members of the CSRT must adhere. These principles address the responsibility of the Respiratory Therapist to the patient, the public, and the profession. Please review our code as follows.

**Code of Ethical and Professional Conduct**

While performing their professional activities, Respiratory Therapists shall uphold the vision of the Canadian Society of Respiratory Therapists by adhering to the following principles of ethical and professional conduct.

1. **Safe and Competent Care**
   - Respiratory Therapists shall perform their duties in a safe and competent manner, being guided at all times by their concern for the health and well-being of the patient.
   - Respiratory Therapists shall perform their duties within their own level of competence and authority assigned to them. Should the delivery of care extend beyond their level of competence, respiratory therapists must seek additional knowledge or assistance from another member of the healthcare team.
   - Respiratory Therapists shall perform their duties in accordance with the CSRT Standards of Practice for respiratory therapy and all other applicable laws and regulations.

2. **Dignity and Confidentiality**
   - Respiratory Therapists shall provide care without discrimination, with respect for the rights and dignity of all individuals.
   - Respiratory Therapists shall respect and protect the legal rights of the patient, including the right to informed consent and refusal or withdrawal of treatment.
   - Respiratory Therapists shall keep in confidence all privileged information concerning the patient in accordance with the Health Information Protection Act.

3. **Professional Integrity and Accountability**
   - Respiratory Therapists shall conduct themselves with honesty and integrity in all of their professional interactions.
   - Respiratory Therapists shall avoid any activity that creates a conflict of interest or violates any local, provincial or federal laws and regulations.
   - Respiratory Therapists shall advocate their role as leaders in the promotion of health and the delivery of quality respiratory care as outlined in the vision statement of the Canadian Society of Respiratory Therapists.
   - Respiratory Therapists shall be accountable for their practice, and will act in a manner that is consistent with the philosophy and Standards of Practice of the CSRT.
   - Respiratory Therapists shall strive to be a role model for other members of the healthcare team by demonstrating responsibility, cooperation, accountability and competence in meeting the healthcare needs of the public.
Code de déontologie et d’éthique professionnelle

Dans l’exercice de ses activités professionnelles, le thérapeute respiratoire doit soutenir la vision de la Société canadienne des thérapeutes respiratoires en se conformant aux principes d'éthique et de conduite professionnelles suivants.

1. Soins sécuritaires et compétents
■ Le thérapeute respiratoire doit exercer ses fonctions de façon sécuritaire et compétente, guidé en tout temps par sa préoccupation à l’égard de la santé et du bien-être du patient.
■ Le thérapeute respiratoire doit exercer ses fonctions dans le cadre de son propre niveau de compétence et de l’autorité qui lui est accordée. Advenant que la prestation des soins outrepasse son niveau de compétence, le thérapeute respiratoire doit rechercher des connaissances additionnelles ou de l’aide auprès d’un autre membre de l’équipe de soins de santé.
■ Le thérapeute respiratoire doit exercer ses fonctions conformément aux Normes de pratique de la SCTR en matière de thérapie respiratoire, de même qu’à toute loi et tout règlement qui s’applique.

2. Dignité et confidentialité
■ Le thérapeute respiratoire doit prodiguer les soins sans discrimination et en respectant les droits et la dignité de toute personne.
■ Le thérapeute respiratoire doit respecter et protéger les droits légaux du patient, y compris le droit au consentement éclairé et le droit de refuser le traitement.
■ Le thérapeute respiratoire doit respecter la nature confidentielle de tout renseignement privilégié relatif au patient, conformément à l’Acte de protection de l’information de santé.

3. Intégrité et responsabilité professionnelles
■ Le thérapeute respiratoire doit faire preuve d’honnêteté et d’intégrité dans toutes ses interactions professionnelles.
■ Le thérapeute respiratoire doit éviter de participer à toute activité qui crée un conflit d'intérêt ou qui enfreint à une loi ou à un règlement local, provincial ou fédéral.
■ Le thérapeute respiratoire doit défendre son rôle de leader dans les domaines de la promotion de la santé et la prestation de soins respiratoires de qualité, tel que défini dans l’énoncé de vision de la Société canadienne des thérapeutes respiratoires.
■ Le thérapeute respiratoire doit être tenu responsable de sa pratique et sa conduite doit se conformer à la philosophie et aux Normes de pratique de la SCTR.
■ Le thérapeute respiratoire doit s’efforcer d’être un modèle de comportement pour les autres membres de l’équipe de soins de santé en faisant preuve de responsabilité, de coopération et de compétence en combattant les besoins du public en matière de soins de santé.

N.B. Le masculin est utilisé aux fins d’alléger le texte et représente tous et toutes les thérapeutes respiratoires.

Last Review/Revision — March 2005, CSRT Board of Directors
CSRT Smoke-free Resolution

In 2003, the Canadian Medical Association (CMA) furthered their initiative to support communities that ensure a healthy, smoke free environment for their citizens by passing a number of resolutions.

At that meeting CMA resolved to urge governments at all levels to enact legislation to ban smoking in all public and workplaces within their jurisdictions by 2005. The CMA resolved to hold its annual meeting exclusively in jurisdictions where legislation ensures a 100% ban on smoking in indoor public places. Finally, the CMA resolved to support comprehensive Environmental Tobacco Smoke legislation in all Canadian jurisdictions by actively seeking the support of Canadian organizations, such as the CSRT, to hold their annual meetings only in jurisdictions where legislation ensures a 100% ban on smoking in indoor public places.

In the enactment of these resolutions the CMA contacted other organizations, such as the CSRT, to encourage them to take a similar stance on this issue. The CSRT has decided to accept this challenge. The CSRT Board of Directors drafted a resolution for the approval of the membership.

The draft resolution states that:

The CSRT Board of Directors will enact in policy the following resolution of the CSRT membership:

- The CSRT will support legislation at all levels of government that will lead to a ban on smoking in all indoor public places and workplaces.
- The CSRT will hold its annual meeting only in jurisdictions where legislation ensures a 100% ban on smoking in indoor public places.
- The CSRT will encourage other organizations to hold their annual meetings only in jurisdictions where legislation ensures a 100% ban on smoking in indoor public places.

This resolution was passed by the CSRT membership at the 2005 CSRT Annual General Meeting, in Edmonton, Alberta.

Eleanor Gets the Chocolates!

Congratulations to CSRT Past-President Eleanor Lord who was awarded with the CSRT’s Robert Merry Professional Achievement Award at the CSRT Educational Forum 2005 in Edmonton in June. Eleanor, an RT for more than thirty years, has devoted a great deal of her volunteer time to the profession and to the CSRT in particular.

As well as being President of the CSRT, Eleanor was instrumental in the implementation of the first CSRT Occupational Profile and Competency Templates. She also chaired the long-range planning task force and developed the framework for the new CSRT board structure.

Her commitment to the Society and dedication to the respiratory therapy profession made her an obvious choice for the Robert Merry Award. Congratulations Eleanor and our heartfelt thanks!
New Chair of the CJRT Editorial Committee
Amy Reid, RRT

As Chair of the new CJRT Editorial Committee, I would like to briefly introduce myself. Following high school, in Leamington, Ontario, I began studies at the University of Western Ontario for Health Sciences. I changed career paths and continued my education at Fanshawe College, where I had the privilege of studying Respiratory Therapy. Following graduation, my husband and I moved west, where I worked at the Regina General Hospital in Saskatchewan. I still reside in Regina, where I continue to learn about my profession and thoroughly enjoying my job!

Recently I have been given the privilege of becoming Chair of the Editorial Committee for the CJRT. I am very dedicated to this position. I have previously published a few articles with the journal, which started me down this path — one that I am enjoying immensely. As Chair of the Editorial Committee I am excited to invite new authors to share their work with the journal! The CJRT is a great opportunity for new students, or anyone for that matter, to get their first opportunity to publish. Moreover, we are always looking for new and experienced authors to submit articles for publishing. There are many realms of submissions possible for the CJRT. Possibilities include: research, commentary, updates on the latest medical advances, refreshed didactic material, etc.

Furthermore, if writing is not what you were hoping for, but you would still like to contribute your skills to the CJRT, there is the possibility of joining the editorial committee. We are always looking for interested individuals to review papers that are being considered for submission. In this position you would be reviewing articles written by your peers regarding the various facets relating to the field of respiratory therapy.

It is my intent to inspire us as a profession. I feel that the CJRT is a valuable tool to all RRTs. It helps us to see what others are doing across the country; it keeps our medical knowledge updated, and allows us to look a little closer into other medical thoughts and practices.

Join me and become an active member of the CJRT!

CSRT President-Elect 2005–2006

Congratulations to Rob Leathley, R.R.T, B.Ed., who was elected President-Elect of the CSRT at the CSRT annual general meeting held in Edmonton, AB, June 4, 2005. Rob takes on the volunteer position with over 30 years of experience as an active member of the 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.
Federal Health Funding

The Federal Government has announced a 13-million dollar package of initiatives to promote team approach to health care. On May 27, 2005, Health Minister Ujjal Dosanjh announced the federal funding for 11 initiatives across the country designed to increase the use of interprofessional teams in providing health care to Canadians.

Health care delivery models of the future include teams of health care providers working together to meet patient needs. This will require the collective education and training of health care professionals from different disciplines.

“Well-functioning collaborative teams will allow more Canadians to receive care from the appropriate health care providers at the appropriate time and help to reduce wait times,” said Minister Dosanjh. “The 11 projects are also consistent with the commitment to renew the health care workforce which First Ministers made last September in the Ten-Year Plan to Strengthen Health Care.”

The projects, involving Canadian health sciences universities and practice settings, will advance efforts to train both students and licensed professionals to work in health care teams. The 11 projects will help lay the groundwork to accelerate reform in the way health care is delivered and in turn, will support the efforts of federal, provincial and territorial governments to increase the recruitment and retention of health care professionals and address current or looming shortages.

The projects are funded under the Interprofessional Education for Collaborative Patient-Centred Practice initiative. It is part of the Pan-Canadian Health Human Resources Strategy, which also includes initiatives to improve health human resource planning, and recruitment and retention. Enquiries can be made at 613-957-2991.

RT Week October 23–29, 2005

What are you doing to promote the profession this year? Here are six easy activities will that help profile respiratory therapy.

1. Make contact with local schools, health clubs, seniors centres to do a fall workshop on smoking or allergies. Have a peak flow contest to see who has the most “hot air”.
2. Contact your local government and ask for participation from city councillors in a public screening event (be sure the media is on hand!). Invite your local reporters to have a spirometry test.
3. Check with local media — newspapers, TV and magazines to see if they are doing any special editorial series in the field of healthcare. Pick a topic and focus on it. Generate a public interest story for the media. For example, what is SARS, or why is tuberculosis on the rise and is your city at risk?
4. Participate in career day with a local high school and promote the profession as a career choice. Offer to provide speakers and/or materials to teachers for their curriculums. Meet with school nurse and present information on asthma disease management so that they can better help their students with asthma.
5. Coordinate staff to do screenings and hand out information at a mall, health club or public event. Gather materials from other respiratory care support groups such as your vendors to include in a display. Give away inexpensive promotional items — like those featured in the CSRT RT Week catalogue.
6. Do spirometry screenings at a local senior centre or offer a free session on asthma triggers at the YMCA or community center.
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The Canadian Society of Respiratory Therapists
La Société Canadienne des Thérapeutes Respiratoires

What is a Respiratory Therapist?

Our lungs breathe in oxygen and breathe out carbon dioxide. Respiratory therapists make sure our lungs are doing their job.

■ They help babies, children and grown-ups who have trouble breathing.
■ They show people with asthma the right way to use inhalers.
■ They make sure patients stay sound asleep when they have operations.
■ They teach people who smoke cigarettes how to quit.
■ They help people sleep better by teaching them to stop snoring.

Respiratory therapists are breathing experts!

Can you get the air through the lungs?

Respiratory Therapists Inspire!

Respiratory Word Search

a s l w p n a s t h m a d t o a k t
gr ubr eat heel ysbi t r
kr nesgm i ysaanj t r ga
e l g xo ysrca tcru e w fc
nj s eaxt acnquht r aeh
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Abstracts

Treatment Adherence and Outcomes in Flexible vs Standard Continuous Positive Airway Pressure Therapy*
Mark S. Aloia, PhD; Michael Stanchina, MD; J. Todd Arnedt, PhD; Atul Malhotra, MD, FCCP and Richard P. Millman, MD, FCCP

* From the Department of Psychiatry and Human Behavior (Drs. Aloia and Arnedt), and the Division of Pulmonary, Critical Care, and Sleep Medicine (Drs. Stanchina and Millman), Department of Medicine, Brown Medical School, Providence, RI; and the Division of Sleep Medicine (Dr. Malhotra), Brigham and Women’s Hospital, Boston, MA.

Correspondence to: Mark S. Aloia, PhD, Assistant Professor of Psychiatry, Duncan Building, Butler Hospital, 700 Butler Dr, Providence, RI 02906; E-mail: Mark_Aloia@Brown.edu

Study objectives: To compare adherence and clinical outcomes between flexible positive airway pressure (PAP) [C-Flex; Respironics; Murraysville, PA] and standard PAP therapy (ie, continuous positive airway pressure [CPAP]).

Design and setting: A controlled clinical trial of CPAP therapy vs therapy using the C-Flex device in participants with moderate-to-severe obstructive sleep apnea. Participants were recruited from and followed up through an academic sleep disorders center.

Participants: Eighty-nine participants were recruited into the study after they had undergone complete in-laboratory polysomnography and before initiating therapy. Participants received either therapy with CPAP (n = 41) or with the C-Flex device (n = 48), depending on the available treatment at the time of recruitment, with those recruited earlier receiving CPAP therapy and those recruited later receiving therapy with the C-Flex device. Follow-up assessments were conducted at 3 months.

Measurements and results: The groups were similar demographically. The mean (± SD) treatment adherence over the 3-month follow-up period was higher in the C-Flex group compared to the CPAP group (weeks 2 to 4, 4.2 ± 2.4 vs 3.5 ± 2.8, respectively; weeks 9 to 12, 4.8 ± 2.4 vs 3.1 ± 2.8, respectively). Clinical outcomes and attitudes toward treatment (self-efficacy) were also measured. Change in subjective sleepiness and functional outcomes associated with sleep did not improve more in one group over the other. Self-efficacy showed a trend toward being higher at the follow-up in those patients who had been treated with the C-Flex device compared to CPAP treatment.

Conclusions: Therapy with the C-Flex device may improve overall adherence over 3 months compared to standard therapy with CPAP. Clinical outcomes do not improve consistently, but C-Flex users may be more confident about their ability to adhere to treatment. Randomized clinical trials are needed to replicate these findings.

Key Words: continuous positive airway pressure • outcomes • sleep apnea • treatment adherence (Chest. 2005;127:2085-2093 )

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Hypercapnic Acidosis Impairs Plasma Membrane Wound Resealing in Ventilator-injured Lungs
Clinton H. Doerr, Ognyen Gajic, Jorge C. Berrios, Sean Caples, Matthew Abdel, James F. Lymp and Rolf D. Hubmayr

Thoracic Diseases Research Unit, Division of Pulmonary and Critical Care Medicine, Department of Medicine; Department of Physiology and Biomedical Engineering; and Division of Biostatistics, Department of Health Sciences Research, Mayo Clinic, Rochester, Minnesota

Correspondence and requests for reprints should be addressed to Rolf Hubmayr, M.D., Stabile 8-18, Mayo Clinic, 200 First Street SW, Rochester, MN 55905. E-mail: rhubmayr@mayo.edu

The objective of this study was to assess the effects of hypercapnic acidosis on lung cell injury and repair by confocal microscopy in a model of ventilator-induced lung injury.

Three groups of normocapnic, hypocapnic, and hypercapnic rat lungs were perfused ex vivo, either during or after injurious ventilation, with a solution containing the membrane-impermeant label propidium iodide. In lungs labeled during injurious ventilation, propidium iodide fluorescence identifies all cells with plasma membrane wounds, both permanent and transient, whereas in lungs labeled after injurious ventilation propidium iodide fluorescence identifies only cells with permanent plasma membrane wounds. Hypercapnia minimized the adverse effects of high-volume ventilation on vascular barrier function, whereas hypocapnia had the opposite effect. Despite CO2-dependent differences in lung mechanics and edema the number of injured subpleural cells per alveolus was similar in the three groups (0.48 ± 0.34 versus 0.51 ± 0.19 versus 0.43 ± 0.20 for hypocapnia, normocapnia, and hypercapnia, respectively). However, compared with normocapnia the probability of wound repair was significantly reduced in hypercapnic lungs (63 versus 38%; p < 0.02). This finding was subsequently confirmed in alveolar epithelial cell scratch models. The potential relevance of these observations for lung inflammation and remodeling after mechanical injury is discussed.

Key Words: permissive hypercapnia • plasma membrane wounding and repair • ventilator-induced lung injury

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Canadian Patient Safety Initiatives
Developing Rapid Response Teams
Using Collaboratives

Wrae Hill, BSc., RRT
CSRT Director, Professional Advocacy

Over the last few years, the issues of patient safety and health care error have become increasingly important topics in health policy and healthcare practice. Studies in various countries have shown that serious adverse clinical events occur in approximately 3%–16% of acute care hospital admissions, and up to one third of these adverse events result in permanent disability or death. The report “To Err is Human” found that between 44,000 and 98,000 deaths per year in the US resulted from adverse events (the equivalent of a jumbo jet crashing every day with no survivors). Types of errors to include: diagnostic failures, treatment errors, errors in prevention, communication breakdown and equipment failure.

The Canadian Adverse Events Study released by R. Baker & P. Norton, et al. (2004) reveals that health care error in Canada is as big of a challenge as it is in the rest of the world. One important indicator of patient safety is the rate of adverse events (AE) among hospital patients. AEs are unintended injuries or complications that are caused by health care management, rather than by the patient’s underlying disease, and that lead to death, disability at the time of discharge or prolonged hospital stays. Adverse events lead to patient injuries, prolonged hospital stay, temporary disability, peri-operative infections, mortality, and increased health care costs. Some AEs are the unavoidable consequences of health care, such as an unanticipated allergic reaction to an antibiotic. However, 37%–51% of AEs have been judged in retrospect to have been potentially preventable.

Of the 2.5 million annual Canadian hospital admissions, 7.5% (185,000) result in an adverse event (AE) and 39–51% are preventable.

Renewed focus on Patient Safety
The following factors have converged, and have sharpened the focus of both health care providers and consumers, on patient safety;
1. Healthcare risks are made public, especially from 1998–2004, by reporting adverse events rates in USA /UK/Australia/New Zealand/Canada
2. Rising costs — a renewed focus on value
3. Patient activism — well informed patients
4. Consumerism — well informed patients choosing how and where their care is given
5. Regulation and Accreditation focus on Patient Safety Culture

Coordinated Efforts on Patient Safety
In December 2004, The Institute for Healthcare Improvement, IHI, from Boston, has spearheaded a coordinated effort to address some of the largest contributors to health care error for the patients/clients that we deliver care to 24 hours a day/7 days per week. The Canadian version of this is Safer Healthcare Now being supported by the Canadian Patient Safety Institute, CPSI and the Institute for Safe Medication Practice, ISMP-Canada. The first National and International Patient Safety Campaigns are underway. As a start, both the American (IHI) and Canadian (Safer Healthcare Now) initiatives are the following six strategies, or bundled therapies which have been proven to reduce hospital mortality.

Safer Healthcare Now
By now, your hospital system CEO will certainly have heard of this coordinated effort in Canada to initiate these six patient safety initiatives proven to reduce in-hospital mortality;
■ Deploy a rapid response team (RRT) with any member of the staff allowed to call a specialty team to examine a patient at the first sign of decline.
Deliver evidence-based care for acute myocardial infarction (AMI) by consistently following clinical guidelines (eg, aspirin and β-blockers) to prevent deaths.

Prevent adverse drug events (ADE) by compiling a list of all the medications, including dosages, prescribed for a patient at admission, discharge, and transfer to another unit.

Prevent central line infection (CLI) by using 5 steps collectively termed "the central line bundle" derived from research.

Prevent surgical site infections (SSI) by maintaining appropriate glucose levels, giving antibiotics at the time of surgery, and not shaving hair at the surgical site.

Prevent ventilator-associated pneumonia (VAP) by implementing the evidence-based nursing care practices known to minimize this complication (e.g., maintaining the head of the bed at 30 degrees).

Developing Rapid Response Teams using Collaboratives

Survival following cardiopulmonary resuscitation in hospital has not changed markedly in 40 years. Since the mid 1960s, traditional in-hospital "code" teams have reacted to calls by other health care providers for advanced life support. However, many codes are called too late, after the patient's condition has deteriorated too far. In a recent study done in Edmonton, researchers asked the question: "If an adult is admitted to a Canadian non-critical care bed and suffers a cardiac or respiratory arrest, how likely is the patient to survive to initial resuscitation and to hospital discharge, and what are the chances of returning to live at home versus receiving assisted living or long-term care?" The answers are predictably discouraging for un-witnessed arrests and are not encouraging for witnessed arrests.

Canadian data from witnessed in-hospital Cardiopulmonary Arrests

- 1 in 2 witnessed arrest patients were able to be resuscitated,
- 1 in 3 survived to 24 hours,
- 1 in 4 survived to discharge,
- 1 in 5 were able to return home
- Of all the discharged patients, about 1 in 7 did not return home because of decreased function

- Patients resuscitated between 2301 and 0700 were at a significantly higher risk of not being discharged home than were those resuscitated between 0701 and 1500
- Most cardiac arrests are preceded by the recognition of significant clinical deterioration for an average of 6–8 hours but there is usually delay in initiating appropriate resuscitative measures.

Since, survival following cardiopulmonary resuscitation in hospital has not changed markedly in 40 years, there is renewed international interest in the prevention of the these outcomes from; Acute care hospitals, Regional hospital systems and National Quality organizations. In an effort to prevent these poor outcomes, many hospitals in Australia, United Kingdom and the USA use Rapid Response Teams (RRT) or Medical Emergency Teams (MET). Many Canadian Hospitals are developing these teams.

Multidisciplinary Team Composition

Doctors, Critical Care Nurses and Registered Respiratory Therapists are important members of these multidisciplinary RRT or MET teams. Registered Respiratory Therapists already work closely with ICU Physicians, Nurses, Pharmacists and others on resuscitation teams, and are intensive and acute care specialists. They are trained in advanced airway skills, cardiopulmonary resuscitation and life support. The IHI — How to guides specifically recommends a multidisciplinary approach.

Rapid Response Team / Medical Emergency Team Mandate

The mandate of this multidisciplinary team is to provide earlier and more definitive management of unstable inpatients through direct and timely access to critical care specialists. Activation of the RRT / MET is made in response to a simple set of physiological criteria or (importantly) if the staff member is worried about the patient. This simple change results in the RRT/MET team seeing the patient within 5–15 minutes. It is expected that to prevent cardio-pulmonary arrests by the timely initiation of resuscitative measures or, in some instances, providing time for end-of-life discussions.

Getting Started using Collaboratives

"Collaboratives" are one method of quality improvement. The Collaborative model was developed by the IHI. This Collaborative methodology has been applied successfully in a variety of international
settings since 1995. Collaboratives consist of multiple teams (test or innovation teams), working toward a common aim (Collaborative goals) by adapting existing knowledge to local conditions and spreading change to multiple settings (spread teams). Collaboratives generally span anywhere from 9–12 months. The fundamental components of Collaboratives are three Learning Sessions (LS) and three Action Periods. Each Learning Session is comprised of a full day session where teams share and learn. Each Learning Session is designed to provide Collaborative Teams with the basic building blocks of Collaborative methodology and to understand the basic change concepts they could apply in their areas. Generally there are 2–4 months between each Learning Session — depending on the length of the Collaborative. Each Action Period allows the individual Teams to test change concepts in relation to their particular environment. This activity of testing changes is comprised of multiple Plan-Do-Study-Act “PDSA” cycles.

Preventing Avoidable Deaths with Rapid Response Teams

There are a series of web seminars available from IHI. In this series of three web-seminars, you will design and pilot test a rapid response team with the support and guidance from expert faculty.

www.ihi.org/IHI/Programs/ConferencesAndTraining/WebandActionRapidResponseTeams

One Canadian example, of many, is the University of Alberta Hospital in Edmonton\(^9\) which is running a successful pilot project of a Medical Emergency Team on selected inpatient medicine units, as part of the Canadian Intensive Care Collaboratives. These guidelines were developed by; Dr. N. Gibney, Dr. D. Chin, Tracy Tarapaski RN, Doug Hait, RRT and Cindy Scouten, RN.

The objectives are to:
1. Reduce re-admissions/admissions to ICU.
2. Reduce the time between a patient developing MET activation criteria and initiation of appropriate treatment.
3. To decrease the LOS of adult hematology/nephrology patients readmitted/admitted to ICU by 10–15%.
4. To learn from the other collaborative teams in Canada
5. To increase our understanding of adult patients’ end of life issues.
6. Reduce cardiac arrests by 30% on those services.

The major objectives of the UAH MET in the first 6 months were to:
1. Map out the current and “ideal” process;
2. Identify / revise selected MET triggers;
3. Develop roles & responsibilities of each MET member
4. Obtain special pagers and equipment necessary for MET members
5. Initial pilot unit was Hematology with planned expansion to other units
6. Reduce the number of readmissions/admissions to ICU from pilot units
7. Reduce the time between a patient developing MET activation criteria and initiation of appropriate treatment
8. Decrease the LOS of pilot unit patients readmitted/admitted to ICU

UAH MET Respiratory Therapy Member

A MET designated Respiratory Therapist (RT) is assigned from the Acute Care Group which already provides 24/7 ward coverage. The RRT’s role is to perform patient assessment, diagnostic and therapeutic measures related to respiratory care and to communicate the results as appropriate to the other members of the MET. The responsibilities are really no different that normal, except that nurses and others are empowered to get skilled people to the bedside quickly.
Responsibilities

1. Attend every MET call within 5–15 minutes.
2. Provides ongoing assessment and appropriate therapeutic interventions to improve the pulmonary status of the patient, blood gas sample procurement, analysis, and interpretation, when clinically indicated and appropriate, bedside spirometry testing, stat 12 lead ECG, care and management for patients with tracheostomies and nasopharyngeal tubes, ventilation assessment and management including intubation /manual ventilation and non-invasive ventilation, patient transport for patients with unstable airways/critically ill patients within the hospital and resuscitation and provision of life support measures.
3. Communicates the patient status as required to other team members, providing expertise and assistance to unit specific staff for the provision of safe, appropriate respiratory care for the patient.
4. Ensure that the patient is included in Respiratory Therapy change of shift report.

Summary

Rapid Response Teams are one of six proven strategies to prevent in-hospital adverse events. Registered Respiratory Therapists are a natural fit for RRT/MET and VAP teams, in addition to many others. The IHI — How to guides include references and clearly defined simple performance measures. A Registered Respiratory Therapist who is committed to measuring effectiveness and who is armed with clinical experience and knowledge of these tools will be an effective leader in improving patient safety…our mandate has never been clearer.

References

1. To Err is Human: Building A Safer Health System Nov. 1, 1999 Institute of Medicine (IOM)
3. Institute for Healthcare Improvement (http://www.ihi.org/programs/campaign)
5. Canadian Patient Safety Institute (http://www.cpsi-icsp.ca)
6. Institute for safe medication practice (http://www.ismp-canada.org)
8. Canadian Society of Respiratory Therapists (http://www.csrt.com/about)
The nature and extent of unnecessary compromises made in daily life by many asthmatic people is troubling. These compromises, which can limit career choices, leisure activities, social networking and even family life, are the direct result of poor asthma control. Patients, even those who have been appropriately diagnosed and are receiving treatment, tolerate a degree of symptom control that is below Canadian Asthma Consensus Guidelines standards. These inadequately controlled patients go on to make compromises by adjusting their life to asthma instead of striving to eliminate symptoms of the disease to suit their lifestyle.

With the availability of effective treatments, as well as data from scientific studies that show asthma in most cases can be controlled, why do so many patients today still have such low expectations of symptom control, and readily accept compromises in their life?

Preface

Studies in Canada and around the world demonstrate a common misperception held by many asthma patients: that compromises in daily life are acceptable and inevitable because of their disease. The compromises they either consciously or unconsciously make are directly related to the management or mismanagement of their disease, their perceptions of the disease and their resulting behaviours. Common patient compromises can include nighttime wakenings, lack of participation in outdoor activities or physical exercise, and acceptance of poor symptom control, which not only affect overall quality of life, but can result in emergency room visits, hospital admissions, anxiety disorders and even death.

This compromise phenomenon, fed by low expectations of symptom control and manifested by common conscious or unconscious inability to manage their disease as a chronic condition, translates not only into reduced quality of life for the person with asthma, but places unnecessary limitations on their family, employers, and other social networks as well as puts pressure on Canada’s already strained health care system.

This report reviews the current scientific literature about conscious and unconscious compromises made by people living with asthma, and provides anecdotal evidence by some of Canada’s leading asthma experts to uncover the psychology behind the compromise phenomenon.

The report will show that compromises do not result from sheer negligence or ignorance, but from a complex set of behaviours. Since individual behaviour plays a key role in the successful treatment of asthma, it is imperative to describe the compromise phenomenon’s relevance to asthma patients and to their treating health care professionals.

The report concludes by providing an action plan to achieve control of asthma and allow patients to reduce or eliminate these compromises.

Living with Asthma

Experiencing asthma symptoms can be frightening. Characterized by breathlessness, wheezing, chest tightening and coughing, this chronic inflammatory condition of the airways is a serious public health
problem worldwide, affecting an estimated 300 million people.\textsuperscript{1} The prevalence of diagnosed asthma and asthma symptoms in Canada has increased markedly over recent decades and is now among the highest in the world, affecting three million Canadians.

Asthma is the number one cause of emergency room visits in Canada, the culprit behind nearly 150,000 ER visits each year.\textsuperscript{3} The Canadian Lung Association reports that more than 500 people die each year from asthma.\textsuperscript{2}

Asthma places a heavy burden on Canada’s health care expenses. In addition to direct medical costs, such as hospital admissions and medication, both of which cost the health care system approximately $600 million per year,\textsuperscript{3} indirect productivity costs such as those associated with illness-related time away from work seriously affect the quality of life for people with asthma and their families.

**Types of Asthma Patient Compromise**

Many asthma patients, even those who have been appropriately diagnosed and are receiving treatment, tolerate a degree of symptom control that is below the standards set by the current Canadian Asthma Consensus Guidelines\textsuperscript{*} for acceptable asthma control (see figures 2 and 3).\textsuperscript{4} Further, many asthma patients who do not have control of their symptoms go on to make compromises in their lifestyle to adjust to life with asthma instead of striving to eliminate symptoms.

“Asthma symptoms, such as coughing, wheezing, chest tightness and shortness of breath can markedly compromise an asthma patient’s quality of life,” said Dr. Meyer Balter, respirologist, Director, Asthma Education Clinic, Mount Sinai Hospital. “For example, as asthma symptoms are often the most severe at night, nocturnal symptoms resulting in sleep disruption — a common complaint among asthma patients with sub-optimal control — can seriously impair a patient’s functioning the following day. What that might mean for the person is perhaps diminished work performance, or not taking part in family activities because they are too tired from the previous night — compromises that are needless and yet far too common.”

According to the National Population Health Survey (NPHS) — Asthma Supplement, 56% of individuals with active asthma have had an asthma attack in the past 12 months. Over half of those surveyed either continuously or often have symptoms. Further, 35%

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**Figure 1**

(Written Questionaire: Self-reported wheezing in the previous 12 month period, in 24 to 44 year old adults)

![Graph showing the prevalence of asthma symptoms (%) by country](http://207.159.65.33/WADsetupnewsletter/April/BOA%20Report_embargo.pdf)

Source: Global Burden of Asthma Report
http://207.159.65.33/WADsetupnewsletter/April/BOA%20Report_embargo.pdf
Accessed May 24, 2004

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report being restricted in their daily activities,\textsuperscript{5} indicating that many people with asthma are needlessly tolerating symptoms.

Poor asthma control often results in time away from school, work, sports, outdoor activities, physical exercise, or other activities that affect overall quality of life. Even if the individual with asthma is able to attend work or school, ongoing symptoms or medication side effects may alter concentration and performance.
Scientific News

Ranking of the Prevalence of Current Asthma Symptoms in Adults by Country

**Figure 2**

<table>
<thead>
<tr>
<th>Indications of asthma control</th>
<th>Frequency or value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime symptoms</td>
<td>&lt; 4 days / week</td>
</tr>
<tr>
<td>Night-time symptoms</td>
<td>&lt; 1 night / week</td>
</tr>
<tr>
<td>Reduced physical activity</td>
<td>Normal</td>
</tr>
<tr>
<td>Exacerbations</td>
<td>Mild, infrequent</td>
</tr>
<tr>
<td>Absence from work or school</td>
<td>None</td>
</tr>
<tr>
<td>Need for short-acting β₂-agonist</td>
<td>4 doses / week*</td>
</tr>
<tr>
<td>FEV₁ or PEF</td>
<td>&gt; 85% of personal best, ideally 90%</td>
</tr>
<tr>
<td>PEF diurnal variation</td>
<td>&lt; 15% of diurnal variation</td>
</tr>
</tbody>
</table>

FEV₁ = forced expiratory volume in 1 second, PEF = expiratory flow obtained with a portable flow meter

* May use 1 dose/day for prevention of exercise-induced symptoms

**Figure 3**

<table>
<thead>
<tr>
<th>Poor Asthma Control in Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Daytime Symptoms</td>
</tr>
<tr>
<td>• Reduced Physical Activity</td>
</tr>
<tr>
<td>• Need for rescue medication (short-acting β₂-agonist)</td>
</tr>
<tr>
<td>• Night-time symptoms</td>
</tr>
<tr>
<td>• Absence from work or school</td>
</tr>
<tr>
<td>• Crises</td>
</tr>
</tbody>
</table>

**Janson et al. (2000)** assessed the perceived impact of chronic asthma-related breathing problems on daily living from the patient's perspective. The result of their work shows the disease has significant impact on patients' daily lives, coping behaviours, personal concerns, and general quality of life. Typical patients in the survey found that asthma compromised their ability to participate consistently in their usual daily activities. Of the 723 persons with a primary diagnosis of asthma surveyed, close to 60% perceived their condition to be 'completely' or 'well' controlled. Even patients who described themselves as 'controlled', typically reported experiencing symptoms (wheezing, shortness of breath), missing work because of asthma, or experiencing episodes that interfere with sleep or activity.

This finding suggests that many asthma patients, even those who described themselves as "controlled", report a variety of symptoms and limitations in their daily activities due to asthma. It is possible that this impaired quality of life could be improved if both patients and their treating physicians had more optimal asthma control as a target of their asthma care plan.

An Australian survey of 699 patients with asthma was published in a 2003 edition of the Journal of Asthma and reveals a worrisome disparity between patients' perception of asthma severity status and reported symptoms — almost one half of respondents who reported experiencing symptoms at least every two to three days described their asthma as 'mild'. Rather than enjoying a fully normal life, many respondents attributed frustration (61%), irritability (57%), fear (38%) and worry (43%) to their asthma which reflects on their personal and professional lives, as well as the choices they make on a day-to-day basis. The survey shows further evidence of suboptimal control of asthma in a high proportion of patients: close to 40% of adults reported using a reliever more than four times in the previous week. Further, 27% of adults with asthma reported that they do not socialize because of their asthma. This may include participating in sports activities, attending social functions or outdoor activities, or staying away from smoke-filled restaurants or bars.

The fact that many patients experience a symptom burden below accepted levels of control despite stating contentment with the way their asthma is treated, shows that patients may be leading compromised lives because they are not aware of appropriate asthma management targets or how to achieve the targets that are set for them. They are not confident that their symptoms can be managed any differently.

From the asthma patient perspective, it may mean they are used to the symptoms and impairment they currently experience and simply do not expect them to improve. This may lead to complacency about attempts at symptom control, as there is the belief that this is ‘as good as it gets’. On the other hand, they may not be aware of treatment options and/or asthma care strategies that could help them achieve better control of their asthma. Their quality of life is much poorer than it need be, often resulting in time away from school, work, sports or other activities.
Other recent research, including the findings from a University of British Columbia study of near fatal asthma, also bears this out. Comparing non near-fatal asthma patients to patients with near-fatal asthma, the study authors found that asthma patients most at risk for experiencing an episode of life threatening asthma characteristically used more avoidant coping strategies - including denial of symptoms and limitations — and this may contribute to inadequate care programs and delays in seeking help.9

A Patient’s Perspective

Loving sports and outdoor activities from as young as she can remember, Marie-Josée Morin of Longueuil, Quebec, started to make compromises because of asthma early in her childhood. The worsening of her condition interrupted physical activities, some of them dear to her. A long stretch of summers taking care of animals on a relative's farm ended because asthma crises became too frequent. Physical training courses at school were regularly skipped because she could not perform to her satisfaction and withstand the duration of a volleyball game or other team sports.

Diagnosed early on with allergies, then with "a little asthma" and later on with asthmatic bronchitis, Marie-Josée would not be properly diagnosed with asthma until her early thirties. But having "a little asthma" meant to her that she could not enjoy what she naturally liked and Marie-Josée went through her teenage and young adult life compromising physical exercise because she perceived it as a threat to her well being. There is one activity however, that she tried for a longer period of time not to compromise on - by gathering all of her strength she made every possible effort to maintain her dancing lessons and competitions.

Professional dancing was her dream career. "I wanted to become a dance teacher and saw nothing more enthralling than to take my passion into my working life." For years, Marie-Josée studied ballet, jazz, salsa and merengue - hiding to take reliever medication during breaks. In her late twenties, she was ready to compete, but finally her poorly controlled asthma caught up with her. "I realized that I just couldn't make it and decided to give up my dream."

Now, 34 years old, and with her asthma finally under control, Marie-Josée knows that most, if not all, of the compromises she made were not necessary. For a better part of her life, compromise impacted heavily on her quality of life and, in the end, put an end to her career ambitions.

Patient Case Study

Based on medical information obtained with permission from Susan Koley, RRT, CAE

A medical history review reveals a 48-year-old male had visited the ER at least ten times in the past year presenting each time with severe asthma symptoms. The patient is repeatedly admitted to hospital and is referred to an asthma education program prior to discharge. The patient chooses not to continue with the program after an initial visit.

The patient continues to smoke, despite suffering repeated asthma exacerbations. He returns to the ER very short of breath with an oxygen saturation of only 90% that desaturates to low-to-mid 80’s when talking. During this emergency room visit the patient indicates he stopped using his inhaled steroid two weeks prior to the incident although he could not clearly explain the reasons why did not take it as prescribed. He is given oxygen, prescribed rescue medications and his maintenance therapy regime is reviewed with the hope he would better adhere to the routine.

Although the patient has visited the hospital almost a dozen times in the past year because of asthma-related symptoms, further probing reveals he does not believe his life could be any different. In his opinion, his breathing problems are just something he is forced to live with and he doesn’t see that he is actually unconsciously compromising both his quality of life and his lung health.

He is admitted to the hospital for four days and, on the fourth day, his case is referred to a Community Asthma Care Centre (CACC) and reviewed by a Certified Asthma Educator. The patient is informed of the risks associated with smoking and is plainly told that another severe asthma attack could result in an ICU stay if he does not better manage his disease. The patient promises, that although challenging, he will continue to attempt to quit smoking and would definitely adhere to his medication regime.

Two weeks later the patient reports he is feeling much better. A review reveals he is sticking to his medication regime, has not had a cigarette and avoids triggers such as second hand smoke and moulds as much as possible. A personalized “Four Zone Action Plan” is developed for the patient so he can manage his disease between visits with the asthma educator.

Since the last visit to the CACC, two telephone consultations have taken place with the patient. He reports he is living smoke-free, adheres to his
Scientific News

The Psychology of Compromise

Why does compromise happen? Research into the psychology behind these compromises indicates the reasons behind patient compromise are complex and often intertwined. What’s more, the phenomenon is not confined to asthma patients. Studies in a range of illnesses, including hypertension and diabetes, show that the rate for appropriate disease management goes down when the condition is chronic, requires long-term medication, has a range of symptoms and a complex care plan.10 Asthma meets all these criteria.

Katz et al11 undertook a longitudinal analysis of the effect of perceived control of asthma on asthma outcomes such as the frequency, severity or interpretation of symptoms. The authors define perceived control as an individual’s perception of their ability to deal with asthma and its exacerbations and, in a sense, the extent to which an individual assigns control to internal sources. They hypothesized that ‘learned helplessness’ (i.e., when people are repeatedly exposed to aversive events that they cannot predict or control) may lead people to become helpless, which can be viewed as a result of a lack of control.

This behavior is common in asthmatics because the great majority of patients are diagnosed as children — a time when they are truly helpless to control their disease.

The investigators studied the relationship between patients' own appreciation of their condition versus the actual level of control. Findings suggest that if perceived control could be modified, better outcomes, particularly psychological, might be achieved for individuals with asthma, leading to improvements in quality of life.

The Health Belief Model, a psychological model developed as part of an effort by social psychologists in the United States Public Health Service, attempts to explain and predict health behaviors by focusing on the attitudes and beliefs of individuals.

It is instructive with respect to understanding compromise in asthma control and states that for someone to make and maintain health behaviour changes they must:

1. Possess required information (e.g., knowledge of appropriate treatment);
2. Feel that it is personally relevant to them (e.g., feel at risk if they don’t follow through and maintain treatment); and
3. Feel self-efficacious to make the required change. (e.g., they must know what to do, believe it will work, and believe they can do it).

While many asthma patients are being provided with adequate asthma education and their knowledge may even be assessed in asthma education programs as high, the other main determinants of asthma health behaviour are not addressed. This situation may contribute to low or compromised expectations for asthma control which may in turn reduce the likelihood of engaging in appropriate health behaviour.

Similarly, Canadian Research Chair on Health and Behaviour, Gaston Godin. Ph.D., believes information about a treatment protocol is not enough to convince someone to adopt a given behaviour in the absence of expectation of improved asthma symptoms or quality of life. “Information is not enough to convince a person to change his/her behaviour,” claims Dr. Godin. “Health professionals should not believe that what is evident to them will also be evident to the patient.” In addition, being treated for a chronic disease like asthma might carry a stigma for the patient. The treatment can create anxiety within the family circle and be a painful reminder that he/she is not in good health.

Changing any behaviour is difficult. In practice, many examples exist of patients who — despite having received asthma education, and having demonstrated an understanding of the role of medications and the implications of symptom mismanagement — stopped taking their medications as prescribed after a certain amount of time. The Health Belief Model would suggest that although they possess adequate information about their illness and know how to manage it, the management behaviour dropped off because the perception of the benefits (such as low expectations of further control or symptom improvement) did not outweigh their perceived costs (e.g., time to fill prescriptions, the cost of the prescriptions, effort required to take medication, effort to avoid certain triggers, etc.).

In short, many asthma patients accept a much lower degree of symptom control than could be achieved through appropriate medical treatment and disciplined asthma care management. They therefore accept a much lower asthma quality of life than they need to and do not meet Canadian or International Consensus Guideline standards for acceptable asthma control.
Why Patients Compromise

Asthma patient compromises can be the result of multiple factors. These include:

- Disease misconceptions
- Anxiety about the disease or treatments
- Misunderstanding of the role of medications
- False expectations
- The hurdles associated with managing a chronic disease
- Poor physician/patient communication
- Lack of education or understanding about the disease

Each of these factors will be explored for a better understanding of the psychology and reasons behind the compromises asthma patients make and, more often than not, come to accept.

Disease Misconceptions

One study of asthma patients suggests that some patients don’t follow instructions because of serious misconceptions about their disease. They don’t understand the severity of the disease, its likely duration, the causes and consequences of not following treatment instructions, and the relative risks and benefits of treatment. Study results show that patients thought asthma was similar to pneumonia or bronchitis in that it could be cured although there was a risk that they could “get it again.” Without a complete understanding of asthma as a chronic disease, controlling asthma would be difficult at best.

Anxiety

Asthma patients suffer with direct anxiety about their disease. They live in constant fear of triggers, mismanagement of their condition or even the side-effects that may be associated with the continued use of their medications. It is the anxiety about aspects of the disease that may actually lead to more asthma-related symptoms and feed into a seemingly unending cycle of poor disease management, fear, and symptoms. A Hôpital du Sacré-Coeur de Montréal Research Centre study, led by Kim Lavoie, Ph.D., shows that more than one third of asthmatics enrolled in the study suffer from anxiety disorders.

According to Dr. Lavoie, reasons for this phenomenon may include the possibility that asthmatics mistakenly appropriate their anxiety symptoms to asthma symptoms, resulting in an overuse of their rescue medication and health services (emergency visits, hospitalization, medical consultations). This anxiety may also translate itself into poor living habits (smoking, alcoholism, physical inactivity) and a low self-esteem associated with their inability to control their asthma.

Role of Medications Misunderstood

The role of inhaled steroids or “preventer” medication is commonly misunderstood. Many patients think that preventer medication is used to treat asthma symptoms after they occur, rather than to prevent them from occurring in the first place. In an Australian study that surveyed 699 patients with asthma, 45% didn’t understand they had a chronic disease and said they didn’t use their preventer medication as instructed, preferring to deal with their asthma only when symptoms became acute. By dealing incorrectly with symptoms, and failing to proactively manage the disease, asthma patients never achieve control but, instead, react to attacks or a constant prevalence of symptoms.

False Expectations of Asthma Therapy

It is now recognized that patients’ expectations of their asthma therapy also plays a significant role in whether or not they follow doctors’ orders, how satisfied they are with the care they are receiving and, indirectly, to whether or not they believe their symptoms are severe, can be managed and their disease controlled.

In a U.S. study of 230 patients in a primary care practice in New York City, more than one-third of patients — mostly female — expected treatment to cure their asthma even though they were all diagnosed with persistent asthma and were ordered to use a daily medication. Researchers also learned that 25% of patients expected medication would work faster and last longer than it actually did, and that there would be no side effects.

When patients have unrealistic expectations, and when what a patient falsely believes can be achieved is not, preventive strategies tend to be ignored. Patients who think asthma can be cured, for instance, are less likely to be vigilant about reducing environmental triggers such as eliminating carpets, or the pet cat. Instead, say Mancuso et al., they are more apt to rely completely on rescue medication to control their asthma.

Chronic Disease Management — ‘Psychological Fatigue’

Coping with a long-term illness, and taking medications over a long period of time for sustained health, is challenging, mentally taxing, and requires a
significant amount of time and effort. Often, chronic patients suffer from ‘psychological fatigue’ because of the tremendous amount of time and energy they must devote to their condition and its care program. The rates of acceptance of the disease and control parameters, and the need for the continual use of medications, may actually be lower than many physicians believe.

Managing any disease becomes even more challenging when the disease is chronic and medication must be taken over a long period of time in a preventive capacity. Generally, asthma patients are good at taking medications when they experience an acute exacerbation. However, they are much less dedicated to taking medications to prevent symptoms. Ironically it is the successful management of a chronic disease that leads to complacency, or the belief that medications no longer need to be used regularly because control has been achieved. Unfortunately, it is only with the absence of medications that symptoms resurface and the cycle to re-gain control begins again.

**Poor Physician-Patient Communication / Lack of Education and Understanding**

Poor physician-patient communication appears to play a significant role in the understanding of the disease, asthma prevention, symptom management and treatment regimens. Results from the ‘Living with Asthma Survey’ reveal that a significant proportion of patients feel they don't get a chance to properly discuss their concerns during a doctor visit and, therefore, leave without a full understanding of their disease and the complications associated with it. Many patients minimize symptoms, and others may simply not have the time during the examination to describe their current symptoms and limitations accurately.

A UK survey shows that when patients don't discuss concerns with their physician, it leads to major misunderstandings, unwanted prescriptions, and not following prescribed treatment regimens. This leads, then, to patients who do not believe their disease can be better managed than what they have come to accept.

Lack of proper asthma education is not always to blame in compromised asthma control. Studies show that even when asthma patients know what they are supposed to do, they don't always follow through. Patients may ask 'why take medications when I feel fine.' They are more likely to follow treatment advice if they think it is a common sense approach to maintaining their health and if they have a clear understanding of their illness and of the risks and benefits of treatment. Taking medicine when feeling symptom-free, for example, is not common sense to many patients.

**Recommendations for Change**

Sawyer et al. suggest that by more closely aligning patients' and doctors' expectations of asthma management, the pattern of compromise in a patient's everyday life can be improved. Focusing on understanding patient accounts of behaviours and responses to asthma experiences and integrating them into the care plan will help bridge the gap.

It is also essential to include practical skills training in every asthma care program. A Belgian study shows that an asthma education program that includes interventions to change the way patients think about their asthma and how they manage it, can result in:

- Decreased asthma morbidity;
- Improved quality of life;
- Better compliance with asthma care program directions;
- Better knowledge of asthma and self-care;
- A more positive attitude towards asthma; and
- A more positive attitude generally.

Increasing the expected degree of asthma control is a change in the mindset of asthma patients that likely plays a significant role in treatment adherence and outcome. According to the National Asthma Control Task Force, the effective management of asthma requires a partnership between the health care team, the individual with asthma and his or her family. It also requires the creation of a supportive environment that allows the individual as well as the family to make the adjustments necessary to have a good quality of life.

Asthma patients also have to learn to use their preventive medication every day. Regular use improves a patient’s ability to function and reduces the risk of an emergency room visit, hospitalization and death from asthma. When asthma is well-controlled, people shouldn't experience any nighttime or early morning symptoms. They should be able to participate fully in sports and other activities, including sex, and require reliever medication less than three times a week.

Last but not least, a 1996 Canadian survey of physicians found significant differences in the use of medications for the treatment of asthma. The most important finding was that 40% of physicians in Canada consider the regular use of short-acting
bronchodilators to be the first-line therapy for adults and children over the age of six years. However, the Consensus Recommendations\(^4\) stipulate that these drugs should be used on an as-needed basis rather than regularly. Instead, anti-inflammatory medication is the first choice for preventive, maintenance therapy.\(^5\)

These findings suggest that there is room for improvement on the part of Canadian physicians regarding the most effective use of medicine to control asthma.

**Conclusion**

It is evident from the research outlined above that many asthma patients settle for, or compromise, the degree of asthma control they expect and that this impacts their ability to manage their asthma effectively. Compromise should not be viewed as acceptable, and sub-standard asthma control should no longer be seen as inevitable.

We now know that asthma can be managed effectively, and it is time to put our knowledge into action. In fact, according to world-renowned asthma researcher Dr. Eric D. Bateman, patients with asthma and their physicians should be aiming for overall disease control with minimal or no impact on quality of life. His research to determine the association between the achievement of asthma control, as defined by the Global Initiative for Asthma (GINA) guidelines, and sub-standard asthma control should no longer be seen as inevitable.

**References**


**Call to Action**

- The physician should treat asthma as a chronic disease, with a care plan to avoid or control even breakthrough symptoms.
- Asthma educators and allied health professionals should help identify and work with asthma patients that have compromised expectations of control.
- Finally, asthma patients should not settle for a lower level of control and should work with their treatment team to follow an asthma care program designed to aim for a symptom-free life.
BirdSong Medical has announced the availability of its unique FDA-approved valved holding chamber for use with metered dose inhalers (MDIs).

The LeverHaler is an innovative device that encompasses a "lever-actuator" to help users more easily administer their Spacer/MDI combinations.

“We are extremely pleased to have developed a product that addresses such a long awaited need.” stated Eric Fugelsang, CEO of BirdSong Medical. “Our goal with this product is to make lives easier at a competitive price. The LeverHaler does not only address the obvious needs of MDI users with manual dexterity issues like the elderly or very young, but it also provides caregivers the opportunity to take advantage of the easy-to-use lever.”

The LeverHaler is approved by Health Canada and will be available in Canada in August 2005. Benson Medical of Markham Ontario will distribute to the hospital market and MPD of Pointe-Claire Quebec will distribute to the pharmacy market.

For more information on the LeverHaler and BirdSong Medical visit www.birdsongmedical.net or call (845) 940-1570.
August 26, 2005
Congress of Societies of Intensive & CC Medicine/American Thoracic Society
Aires, Argentina
iccm2005@anajuan.com

September 11, 2005
International Conference on Endothelin/American Thoracic Society
Park City, Utah
martha.israelsen@hsc.utah.edu

September 17–19, 2005
ISC-CAP Conference
Montreal, QC
www.isc-cap.org

September 17–21, 2005
European Respiratory Society Congress
Copenhagen, Denmark
www.ersnet.org/ers/

September 24–27, 2005
64th National Scientific Congress of the Australian Society of Anaesthetists
Gold Coast Australia

September 25, 2005
Histiocyte Society 21st. Annual Meeting
Vancouver, Canada
HistiSociety@aol.com

October 29–November 3, 2005
CHEST 2005
Montreal, Canada
www.chestnet.org/

November 3–5, 2005
15th Annual Canadian Home Care Association’s National Conference
Banff, Alberta
www.cdnhomecare.ca/main.php

November 12, 2005
Pediatric Assembly of the European Respiratory Society
Prague, Czech Republic
ers- eaaci2005@guarant.cz

November 26, 2005
Asian-Pacific Bronchology & Interventional Pneumology
Makuhari Messe, Chiba, Japan
www.apcgb2005.com

December 3–6, 2005
51st International Respiratory Congress AARC
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www.aarc.org/

December 11–14, 2005
17th Annual National Forum on Quality Improvement in Health Care
Orlando, Florida
www.ihi.org/ihi

2006
January 21–25, 2006
35th Critical Care Conference
New Orleans, Louisiana
www.sccm.org/education/index.asp

February 16–18, 2006
Pediatric Anesthesiology 2006
Fort Myers, Florida
www.pedsanesthesia.org

March 23–26, 2006
The Fourth European Respiratory Society Lung Science Conference
Taormina, Sicily
www.ersnet.org/ers/

March 24–28, 2006
80th Clinical and Scientific Congress of the International Anesthesia Research Society
San Francisco, California
www.iars.org

May 19–24, 2006
The American Thoracic Society International Conference
San Diego, California
www.thoracic.org/ic/ic2005/conference.asp
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