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Airway Olympics — CSRT Forum
The Canadian Society of Respiratory Therapists wishes to THANK OUR SPONSORS for another successful forum.
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The CJRT acknowledges the financial support of the Government of Canada, through the Publications Assistance Program (PAP), toward our mailing costs.

Cover Photo
by Colya Kaminiarz
Rick Paradis gives delegates some hands-on experience during the Olympic Airways session. Participants raced the clock as they tried to intubate in various difficult positions.

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About This Issue

The CSRT Annual Education Forum has come and gone, and was once again a great success. A great lineup of speakers, some great entertainment, and an opportunity to see old friends and make some new ones. I would like to thank Katrina Madsen, and the rest of the local New Brunswick volunteers that helped us put on such a fantastic event.

In this issue of the CJRT you will see a some follow up information from the event, including the Summit Award winner, the winner of the poster presentations and of course the winners of the annual Sputum Cup.

Next year’s conference will be held in Montreal, Quebec and we expect it to be another great opportunity to see some more ground breaking research, network with your colleagues from across the country and experience some real French Canadian hospitality! Check the CSRT website for details.

This issue also has information for the upcoming RT Week on October 23 – 27. If you are looking for ideas for how to promote respiratory therapy in your area feel free to post something on the online discussion forums, or contact the CSRT Head Office for information and ideas. We have a new RT Catalogue also in this issue that has lots of clothing and other items that will help you demonstrate your pride in being a respiratory therapist.

We also have a number of new volunteers that have decided to accept the challenge and donate that much needed time and energy to your professional association. At the Annual General Meeting, held in Saint John, NB, the membership accepted a new slate of directors to help guide your association to a successful future.

Thanks again to all the volunteers that made the 2006 Forum a success, and to all the volunteers that help make the CSRT the organization that it has become.

Doug Maynard, BSc, RRT, MBA
Executive Director, CSRT
dmaynard@csrt.com
Saint John, New Brunswick Forum Highlights

President-Elect Colya Kaminiarz (centre) chaperones delegates at the Roxon Pub Crawl

Local Forum Chair, Katrina Madsen and CSRT President Rob Leathey attend the Wine and Cheese Reception

First year students from NBCC won the Sputum Cup Challenge. Winners receive free registration for Montreal 2007. From left to right Erin Bowne, Laura Duguay, Sabrina Tung-Shun and Jenn Deveau

CSRT Gold Medal Winner, Kelly Deslauriers

Thank You Saint John Forum Committee for a Fantastic Time in Your Great City
Saint John, New Brunswick Forum Highlights

Forum Chair Darcy Andres (left) shares a moment with an old friend Terry Boone.

Forum Committee members Stacie Field and David Arkeau take a well-deserved break.

Debbie Cain, the Clinical Coordinator at BC Children's Hospital, is this year's recipient of the Summit Award. She was nominated by her peers for her outstanding contribution to respiratory therapy — not just in Canada but around the world. Debbie's passion for respiratory therapy is manifested through the multitude of educational programs she has prepared and conducted over the years. Her educational programs have benefited many — from RTs to nurses to physicians to home care providers to parents and patients. Summit is proud to present her with this year's "Award of Excellence in Respiratory Therapy". Her former student, Alva Noel, gives her a congratulatory hug.


Photos: Colya Kaminiarz, Denise Picanco.
**On Air Nuggets**

**RT Week**

Promote your profession! October 22 to 28 is RT Week.

Dan McPhee, the new CSRT Treasurer and Director-at-Large, raised awareness in his community last year. In October 2005, in recognition of National Respiratory Therapy Week, RTs from the Huron/Perth area gathered in Goderich, to share thoughts and ideas about promoting their profession in rural healthcare environments.

Respiratory therapy is a growing profession of about 2000 registered members in the province. The profession is now over 40 years old, and continues to gain momentum in many areas of health care. This group of RRTs discussed issues surrounding their professional portfolios as part of their obligation to public protection in association with the College of Respiratory Therapists of Ontario.

Hospitals in our area that are fortunate enough to have respiratory therapists working within them include Stratford General Hospital, Alexandra Marine and General Hospital in Goderich, and South Bruce Grey Health Centre at Kincardine-Walkerton-Durham and Chesley.

The CSRT offers some reasonably priced options in our RT Catalogue. It can be found on page 15.

What are you doing to promote the profession? Share your activities with your peers by submitting an article to the 

**Forum Poster and Paper Winner**

Congratulations to Jeff Kobe, Anesthesia Assistant with the Department of Pediatric Anesthesia at BC’s Children’s Hospital Vancouver. He won for his presentation “Paediatric Deadspace Affects on RR and PIP Not Predicted by ETCO2”.

Jeff will receive complimentary registration for Forum 2007 in Montreal.

**Calendar of Events**

- **August 23 – 26, 2006**
  - New Zealand Society of Anaesthetists, 2006 Annual Scientific Meeting
  - Dunedin, New Zealand

- **August 27 – 30, 2006**
  - Cardiac and Vascular Anesthesia with Industrial Exhibits — 10th International Congress
  - Prague, Czech Republic

- **September 2 – 7, 2006**
  - Cardiology, 2006 World Congress
  - Barcelona, Spain
  - http://www.cardiologyonline.com/congresses.htm

- **September 2 – 6, 2006**
  - European Respiratory Society Congress
  - Munich, Germany
  - www.ersnet.org/ers/

- **September 8 – 9, 2006**
  - Florida West Coast Sleep Consortium 7th Annual Meeting
  - “Sleep 2006”: Current Concepts
  - St. Pete Beach, Florida
  - http://www.allkids.org/conferences/

- **September 22, 2006**
  - Respiratory Health Conference “New Strategies for Lung Health”
  - Crowne Plaza Fredericton-Lord Beaverbrook
  - Fredericton, NB
  - www.nb.lung.ca

- **September 27 – October 1, 2006**
  - 8th World Congress — Sleep Apnea 2006
  - Montreal, Quebec
  - http://www.wcsa2006.com

- **September 29 – 30, 2006**
  - GAPIA Primary Care Conference — Respiratory Care The Future is Now
  - Warwick, United Kingdom

**CSRT Forum 2007**

The 43rd CSRT Educational Forum is taking place at the Hilton Montréal Bonaventure Hotel, Montreal, Quebec, May 31 to June 3, 2007.

If you have any suggestions for speakers, or topics, we would be pleased to consider them. Email us at cjrt@cjrt.com or call 1-800-267-3422.
While talking to some of the Past-Presidents during the Forum in Saint John, I suggested that I will have a very easy and quiet term compared to them. It seemed that most of the really controversial issues that the CSRT has been presented with have, for the most part, been taken care of. After several of them recovered from their choking fit they proceeded to remind me that there is nothing more certain about the future than the uncertainty of it all. They were right of course. I was only lending some humor to the conversation, but it also got me reflecting on the many contributions made by those around me.

When I received the “Chain of Office”, I was humbled to read the many names on the chain of those who had preceded me. Most of those people I have known personally or known of their deeds during my career. Some are no longer with us. Countless others supported them and advised them along the way. Each one has contributed in their own way to make this the great profession we all know today.

During the Forum, the CSRT launched Mike Andrews’ new book The Early Years — A Reflective History of the Canadian Society of Respiratory Therapists. If you haven’t had a chance to see or read this book, you should. Buy a copy for yourself or get one for your department or business. This is not just a stuffy book of old, boring stories but rather a fascinating tale of who we are and how we got to be here. Many of the names in Mike’s book may not be familiar to you, however when you read how this profession and organization began, you will understand why so many people have come to rely upon us in their time of need.

Why reminisce? Why be so fixated on past events? Because they too remind me of how far we have come and help me determine my course for the future. The next year will be an exciting one for me. I will serve as the head of this organization. I will lead the new Board. The CSRT will be continuing its efforts to see the development of Anesthesia Assistants across Canada. We will continue to advocate for our members and for the profession wherever and whenever possible. We will continue to work on the many projects before us and do this while remaining fiscally sound.

The next Forum will be in Montreal. This will be a very meaningful one. Not just because it will bring us back to our origins, but that it has been far too long since we were back in Quebec. With less than 200 members coming from the more than 2500 therapists in that province, we have much work to do. The Head Office and the Board will be working hard to do its part.

You can have just a job if you want to. Do your shift and go home. Collect a pay cheque and do it all over again the next day, the next week, the next month. After all it is a pretty good living. But why not get involved? This profession is not only about the President or the Board. It is not about the Head Office either. It is about its members and their lives. It is what we do for those around us. It is about being at the bedside with that sick baby or becoming active in your community as an asthma educator or showing a student how to do a blood gas or volunteering on a committee. It is about following the direction that so many before have shown us. It is about being an advocate for the profession. As Winston Churchill said “…we make a life by what we give.”

What can you give to those who need you? What can you do to get involved?

Rob Leathley, B.Ed., RRT
CSRT President
Mot de la président

We make a living by what we get. We make a life by what we give.

— Sir Winston Churchill

Saint John, alors que je parlais à certains des anciens présidents, j’ai mentionné que j’aurais sans doute un mandat très facile et tranquille, par rapport à eux. Il semblait que la plupart des sujets prétendant à la controverse qui avaient été présentés à la SCTR avaient presque tous été traités. Après que plusieurs d’entre eux aient repris leur souffle, ils se sont empressés de me rappeler qu’il n’y avait rien de plus sûr à propos de l’avenir que son incertitude. Ils avaient bien évidemment raison. Je n’avais fait que plaisanter, mais cela m’a également amené à réfléchir aux nombreuses contributions faites par ceux qui m’entouraient.

Lorsque j’ai reçu la «charge du bureau», c’est avec humilité que j’ai lu les nombreux noms de mes prédécesseurs. La plupart d’entre eux sont des gens que j’ai connus personnellement ou dont les actions m’ont été familières au cours de ma carrière. Certains d’entre eux ne sont plus ici. Et bien d’autres les ont appuyé et les ont conseillé au fil du temps. Chacun d’entre eux a contribué, à sa façon, à rendre notre profession telle que nous la connaissons aujourd’hui.

Au cours du forum, la SCTR a lancé le nouveau livre de Mike Andrews qui s’intitule The Early Years — A Reflective History of the Canadian Society of Respiratory Therapists. Si vous n’avez pas encore eu l’occasion de voir ou de lire ce livre, vous devriez en acheter une copie pour vous ou pour votre service ou entreprise. Ce n’est pas un gros livre rempli de vieilles histoires ennuyeuses, mais plutôt une histoire fascinante sur nous et notre trajet. Il se peut que dans le livre de Mike ne vous soient pas familiers, mais lorsque vous lirez la façon dont notre profession et cet organisme ont vu le jour, vous comprendrez pourquoi tant de gens ont dépendu de nous lorsqu’ils en avaient besoin.


Le prochain forum aura lieu à Montréal. Il sera très important, pas seulement parce qu’il nous ramènera à nos origines, mais parce que cela fait bien trop longtemps que nous ne nous sommes pas retrouvés au Québec. Avec moins de 200 membres parmi les plus de 2500 thérapeutes de la province, nous avons beaucoup de travail à faire. Le bureau principal et le conseil travailleront fort pour faire leur part.

Si vous le souhaitez, vous pouvez simplement faire votre travail, votre quart, rentrer chez vous, et toucher votre chèque de paye, et faire cela jour après jour, semaine après semaine, mois après mois. Après tout, c’est une bonne vie. Mais pourquoi ne pas s’engager? Cette profession n’est pas qu’un président et un conseil ou encore un bureau principal. Ce sont des membres qui vivent. C’est ce que nous faisons pour celles et ceux qui nous entourent. C’est être présent au chevet d’un bébé malade, c’est être actif au sein de sa communauté en tant qu’éducatrice ou éducateur pour l’asthme ou montrer à une étudiante ou à un étudiant comment faire une gasométrie, ou encore devenir bénévole au sein d’un comité. C’est suivre les directives que tant d’autres ont suivies avant nous. C’est être le défenseur des intérêts de notre profession. Comme l’a dit Winston Churchill «…we make a life by what we give.»

Que pouvez-vous donner à celles et ceux qui ont besoin de vous? Que pouvez-vous faire pour vous engager?

Rob Leathley, B.Ed., TRA
Président de la SCTR
New Member on CoARTE

CoARTE is pleased to announce the appointment of Ms. Lindsay Cain in the position of National Public Representative on the Council on Accreditation for Respiratory Therapy Education (CoARTE).

Lindsay completed her Bachelor of Science degree at the University of Western Ontario in 1999. She then returned to Vancouver to complete an Advanced Specialty Certificate in Forensic Science at the British Columbia Institute of Technology (BCIT). In 2001, Lindsay moved to Glasgow, Scotland to obtain her Master of Science degree in Forensic Science at the University of Strathclyde. Once completed, she returned to Vancouver to teach at BCIT for both the Forensic Science and Clinical Genetics programs. In addition to her employment as an instructor, Lindsay is also a Molecular Diagnostic Specialist for MDS Metro Laboratory Services. She specializes in microbiological, hematological, and paternity DNA analysis.

Lindsay is elated to assume the responsibility of her role on the Council. CoARTE welcomes her wholeheartedly.

On Track — CSRT Board of Directors

2006 –2007

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Prince Edward Island
Across Canada a diverse assortment of medical emergency response teams are emerging. These interdisciplinary healthcare teams combine various practitioners with expertise in the delivery of critical care.

Respiratory therapists, who are continuously called upon to care for critically ill patients, epitomize critical care expertise.

The Canadian Society of Respiratory Therapists has issued a position statement to promote a consistent inclusion of respiratory therapists on medical emergency response teams (Position Statement on Medical Emergency Teams [MET]).

The Society has also produced a document that provides respiratory therapists with strong statements to defend and promote the profession’s full inclusion on medical emergency response teams. This document can be accessed through the CSRT’s website at www.csrt.com under About/Policies and Standards of Practice/Advocacy - MET.

All hospital-based respiratory therapists are encouraged research their respective institutions to identify if medical emergency response teams have been established. Should a team exist or be in the planning stages, respiratory therapists should not hesitate to promote our profession and demonstrate the vital role played by respiratory therapists in critical care.

Respiratory therapists should be fully recognized within and trained as part of medical emergency teams. Some sites apparently call upon respiratory therapists to perform duties within the teams, yet they are not acknowledged as official members — most likely due to the fact that RTs traditionally respond to critical care emergencies outside of the intensive care unit.

It is essential that team members train together to ensure cohesion and maximize efficiency. RTs critical care expertise must be recognized and promoted as a strategy to improve patient health outcomes. Respiratory therapists should not only be consistently included in medical emergency response teams, but should also be considered as ideal candidates for leadership roles within these teams.

CSRT/SCTR Guidelines
Position statement on Medical Emergency Teams

Medical Emergency Teams (MET), also known under various appellations such as Rapid Response Teams (RRT), Critical Care Response Teams (CCRT) and Rapid Assessment of Critical Events (RACE) teams — are interdisciplinary teams of healthcare practitioners that have expertise in the delivery of care to critically ill patients in pre-cardiac arrest.

Data gathered by the Safer Healthcare Now! Campaign and by the Institute for Health Information conclusively demonstrates that:

■ the implementation of METs results in a reduction in ICU admissions.

METs pool together the unique expertise of each team member. They allow team members to work together as a highly effective unit. By training as a unit and crossing traditional barriers between disciplines, the implementation of MET significantly improves health outcomes for critically ill patients.

Respiratory therapists are key components of METs. Respiratory deterioration has been identified as a main discriminator in recognizing high-risk patients. Seventy per cent of patients show evidence of respiratory deterioration within 8 hours of cardiac arrest. Respiratory therapists receive specific training in assessing, monitoring and treating patients that may be demonstrating respiratory compromise. Respiratory therapists are also frequently the first responders to evaluate critical, pre-arrest patients. This practice has allowed respiratory therapists to gain significant experience in applying critical care knowledge outside of the ICU.

The respiratory therapists’ skills and experience are therefore particularly conducive to having them to take on an essential role within all METs.

The Canadian Society of Respiratory Therapists (CSRT) supports the implementation of METs.

In relation to the implementation of METs, the CSRT recommends that:

■ Based on the critical care knowledge and on the experience of respiratory therapists, every MET should include a respiratory therapist.

■ Respiratory therapists have historically played a key role in critical care delivery within their regular duties. They are experienced in performing this role both in and outside of the ICU.
therapists should therefore be considered as ideal candidates to provide training to METs as well as to take on a leadership role.

■ METs should be adequately funded to ensure that team members are provided with training and support.

■ MET members should consistently be trained together as a unit.

■ METs’ responses should be monitored and assessed to allow for successful practices to be shared with other teams and for problems to be recorded and addressed.

In order to optimize the benefits of implementing medical rapid response teams, all team members must be equally recognized as such. Members should have the opportunity to train together in order to develop a cohesive response to critical care emergencies and to maximize the efficiency of the team.

The Safer Healthcare Now! Campaign (www.saferhealthcare-now.ca) states that multiple team models work well, including the following:

■ ICU RN and Respiratory Therapist (RT)
■ ICU RN, RT, Intensivist, Resident
■ ICU RN, RT, Intensivist or Hospitalist
■ ICU RN, RT, Physician Assistant

The very same four models are presented by the Institute for Healthcare Improvement (www.ihi.org).

### Alberta-Sask RT Training Program

It is now possible for a respiratory therapy student to attend school in Alberta while receiving a bursary from Saskatchewan. The Alberta-Saskatchewan Inter-provincial Respiratory Therapy Program will provide financial support to students for the two years of their RT course - in exchange for a four-year commitment to remain in Saskatchewan as a practicing respiratory therapist.

This agreement will go far to help revitalize the pool of RTs working in the province. With the shortage of trained workers and no respiratory therapy training program in Saskatchewan, this recently signed agreement will allow students to receive their schooling in Alberta and return to Saskatchewan for their practicum training.

Saskatchewan students attend the Southern Alberta Institute of Technology (SAIT) in Calgary, where they focus on didactic classroom instruction. Once the first two years of course study is completed they return to Saskatoon or Regina to complete a year-long practicum.

Regina Qu’Appelle Health Region’s Manager of Respiratory Services, Brent Kitchen, describes the program as “hugely successful”. He notes that “The program has increased the availability of essential services and reduced waitlists for both urban and rural populations in the region”.

Twelve students have already completed the program, with five of them remaining in Regina.

### Saskatchewan Legislature Passes RT Act

The Saskatchewan Legislature passed Bill 42, “The Respiratory Therapist Act”. Following proclamation of this Act in the Legislature in the fall of 2006, the Saskatchewan College of Respiratory Therapists will ensure accountability, safe and competent practice and proper conduct of Respiratory Therapists for the citizens of Saskatchewan.

Respiratory therapists work closely with many members of the healthcare team: physicians, nurses, physiotherapists and others, to provide care for; persons who have sleep apnea and require CPAP; patients requiring ventilation; patients in the neonatal, pediatric or adult intensive care units; patients requiring diagnostic testing for their lung disease, such as asthma, COPD, Pulmonary Fibrosis, or Occupational Lung Disease; critically ill patients requiring transfer to other facilities for treatment; education of patients and their families regarding their lung disease; counselling in smoking cessation; as well as collaboration with the health care team in preparation for outbreaks of difficult-to-treat respiratory disorders such as SARS and Avian Flu. They also work with patients requiring Hyperbaric treatment at the only Hyperbaric chamber in Saskatchewan, situated in Moose Jaw.

Because the mandate of the Saskatchewan College of Respiratory Therapists is the protection of the public, the College will ensure high clinical standards of its members for patient care, and establish, maintain and enforce the standards of practice of the regulated profession.
Meta-Analysis: Effect of Long-Acting β-Agonists on Severe Asthma Exacerbations and Asthma-Related Deaths
Shelley R. Salpeter, MD; Nicholas S. Buckley; Thomas M. Ormiston, MD; and Edwin E. Salpeter, PhD

Background: Long-acting β-agonists may increase the risk for fatal and non-fatal asthma exacerbations.
Purpose: To assess the risk for severe, life-threatening, or fatal asthma exacerbations associated with long-acting β-agonists.

Data Sources: English- and non-English-language searches of MEDLINE, EMBASE, and Cochrane databases; the U.S. Food and Drug Administration Web site; and references of selected reviews through December 2005.

Study Selection: Randomized, placebo-controlled trials that lasted at least 3 months and evaluated long-acting β-agonist use in patients with asthma. All trials allowed the use of as-needed short-acting β-agonists.

Data Extraction: Outcomes measured were Peto odds ratio (OR) and risk difference of severe exacerbations requiring hospitalization, life-threatening exacerbations requiring intubation and ventilation, and asthma-related deaths. The OR for asthma-related deaths was obtained from the Salmeterol Multicenter Asthma Research Trial (SMART).

Data Synthesis: Pooled results from 19 trials with 33,826 participants found that long-acting β-agonists increased exacerbations requiring hospitalization (OR, 2.6 [95% CI, 1.6 to 4.3]) and life-threatening exacerbations requiring intubation and ventilation, and asthma-related deaths. The risk for asthma-related deaths was 0.7% (CI, 0.1% to 1.3%) over 6 months. The risk for asthma-related deaths was increased (OR, 3.5 [CI, 1.3 to 9.3]), with a pooled risk difference of 0.07% (CI, 0.01% to 0.1%).

Limitations: The small number of deaths limited the reliability in assessing this risk, and 28 studies did not report information on the outcomes of interest.

Conclusions: Long-acting β-agonists have been shown to increase severe and life-threatening asthma exacerbations, as well as asthma-related deaths.

Annals of Internal Medicine
20 June 2006 I Volume 144 Issue 12

Patient and Surgical Factors Influencing Air Leak After Lung Volume Reduction Surgery: Lessons Learned From the National Emphysema Treatment Trial
Malcolm M. DeCamp, MD a, *, *, Eugene H. Blackstone, MD b, c, Keith S. Naunheim, MD e, Mark J. Krasna, MD f, Douglas E. Wood, MD, PhD g, Yvonne M. Meli, RN d, Robert J. McKenna, Jr. MD h for the NETT Research Group

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Background: Although staple line buttressing is advocated to reduce air leak after lung volume reduction surgery (LVRS), its effectiveness is unknown. We sought to identify risk factors for air leak and its duration and to estimate its medical consequences for selecting optimal perioperative technique(s), such as buttressing technique, to preempt or treat post-LVRS air leak.

Methods: Detailed air leak data were available for 552 of 580 patients receiving bilateral stapled LVRS in the National Emphysema Treatment Trial. Risk factors for prevalence and duration of air leak were identified by logistic and hazard function analyses. Medical consequences were estimated in propensity-matched pairs with and without air leak.

Results: Within 30 days of LVRS, 90% of patients developed air leak (median duration = 7 days). Its occurrence was more common and duration prolonged in patients with lower diffusing capacity (p = 0.06), upper lobe disease (p = 0.04), and important pleural adhesions (p = 0.007). Duration was also prolonged in Caucasians (p < 0.0001), patients using inhaled steroids (p = 0.04), and those with lower 1-second forced expiratory volume (p = 0.0003). Surgical approach, buttressing, staple brand, and intraoperative adjunctive procedures were not associated with fewer or less prolonged air leaks (p = 0.2). Postoperative complications occurred more often in matched patients experiencing air leak (57% vs 30%, p = 0.0004), and postoperative stay was longer (11.8 ± 6.5 days vs 7.6 ± 4.4 days, p = 0.0005).

Conclusions: Air leak accompanies LVRS in 90% of patients, is often prolonged, and is associated with a more complicated and protracted hospital course. Its occurrence and duration are associated with characteristics of patients and their disease, not with a specific surgical technique.

Banning the Butt

Day by day, smoking is becoming a thing of the past in Canada. The number of smokers declines every year, going hand in hand with an increase in efforts by government and health activists to tighten up restrictions on the sale and use of tobacco.

Smoking has been banned from most offices for some time, but the bans are now extending to bars, restaurants and other public places. Some cities have banned smoking outright, shutting down separate smoking rooms altogether.

Canada is considered to be among those countries at the forefront of anti-smoking legislation, but the rest of the world is beginning to catch up. Here’s a sampler of home-grown and global anti-smoking measures:

Efforts in Canada

- Quebec, a province with one of the highest smoking rates in Canada, will prohibit smoking in all enclosed public spaces as of May 31, 2006. Once Quebec’s Bill 112 comes into effect, smoking will not be allowed in restaurants, bars, private clubs, bingo halls, casinos, school grounds, shelters or other facilities open to the public. In addition, smoking will be forbidden within nine metres of any doorway leading to a health or social services institution, college, university or child-care facility. Bill 112 bans designated smoking rooms in bars, restaurants and other businesses, but allows hotels to assign up to 40 per cent of their rooms for smokers and allows some exceptions for long-term care institutions.

- Ontario has passed a province-wide ban on smoking in workplaces and all indoor public areas, including designated smoking rooms. The ban would effectively prohibit smoking in all indoor areas except people’s homes or temporary accommodations such as hotel rooms. It would also ban smoking in work vehicles, and prominent displays of tobacco products in stores. It is scheduled to come into effect in June 2006.

- As of June 1, 2004, Toronto requires all bars, pool halls, bingo halls, casinos and racetracks to be smoke-free. Fines range from $205 to $5,000. A 2001 bylaw banned smoking in all restaurants, dinner theatres and bowling centres, except in designated smoking rooms. A plan to outlaw designated smoking rooms in Toronto by 2005 was sent back to city council for review.

- On May 1, 2004, the Worker’s Compensation Board for the Northwest Territories and Nunavut bans smoking in all enclosed businesses and work sites in both territories. The ban includes bars. It takes precedence over and goes further than the law passed by Nunavut’s legislature six months earlier, which banned smoking in all public places — and would have been extended to bars, within two years. The ban hits a region with the highest smoking rates in the country.

QUICK FACTS

- In 2000–2001, just over 6 million Canadians over 15, or 24 per cent, were smokers compared to 31 per cent in 1994, and 38 per cent two decades ago.


- Among Canadian men over age 12, 23.5 per cent were smokers. That’s down from 32 per cent in 1994.

Continued on page 19
RT WEEK POSTER  
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$4.00/ea Member  
$5.50/ea Non-Member  
Available in French only.  
Poster “Semaine de la Thérapie Respiratoire”  
Perfect to display in your department, facility or in the community.  
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Poster “Thank you for not smoking”

MERCI DE NE PAS FUMER  
#1506  
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A powerful message. Display it everywhere.  
Poster “Merci de ne pas fumer”

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25 per pkg
Personalize activities using CSRT table tents.

ACTIVITY PADS
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$3.00 each Members
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Help promote your profession to children! Consider adding a few RT Activity Pads to your waiting room — it will keep the little ones occupied while they work on an RT puzzle sheet and a word-search sheet. A gummed pad of 50 sheets.

WATER BOTTLES
#3006
$6.00 Members
$8.00 Non-Members
New Royal blue polycarbonate bottles with CSRT logo in white, hinged cap, small-mouthed opening with internal filter, includes blue carabineer

CARABEENERS
#2106
$2.50 Member
$5.00 Non-Member
Bold blue with laser engraved CSRT on the side

CLIP PENS BY BIC
#8006
(PKG of 10)
$10.50 Member
$13.50 Non-Member
An economical way of promoting your professional association. White barrel with blue trim and blue text “CSRT/SCTR — www.csrt.com”

MOUSE PAD
#1906
$4.00 Member
$5.00 Non-Member
While you are on the internet highway — you will always remember the CSRT web address — foam mouse pad with teal and white text. Priced to sell. Limited quantities.

SALE

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#1206
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SALE

SALE

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SALE

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SALE

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DEPARTMENT

ADDRESS

POSTAL CODE

CONTACT PERSON

MEMBER NUMBER

TELEPHONE

FAX

PURCHASE ORDER

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<th>Color</th>
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Deadline for RT Week orders: October 15, 2006

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- □ [Card types] □ [Credit card type used]

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- Card number
- Expiry date

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Banning the Butt continued from page 14

On Sept. 1, 2003, authorities in Winnipeg begin enforcing a smoking ban in all public places, starting on Sept. 1, 2003. The ban was to have gone into effect July 1, 2003, but the city agreed to a two-month grace period to get inspectors ready to enforce the ban in provincial casinos.

A provincewide smoking ban goes into effect in P.E.I. on June 1, 2003, banning smoking in any public place or workplace, except in specially ventilated smoking rooms.

On April 1, 2003, a law goes into effect in Alberta in which people under age 18 who are caught smoking or in possession of tobacco products can not only have their cigarettes seized by police, but also can be fined up to $100.

On Jan. 1, 2003, the Northwestern (Ontario) Health Unit bans smoking in all public places and private busi-

Efforts Around the World

On Feb. 7, 2005, Cuba banned smoking in public places, except for designated smoking areas in restaurants. It also banned sales of cigarettes to children under 16 and at stores within 100 metres of a school. Four in 10 Cubans smoke.

Italia introduced legislation on Jan. 10, 2005, to ban smoking in public places. It was originally expected to take effect Dec. 31, 2004, but legislators decided to allow smokers to light up on New Year’s. Restaurant and bar owners are upset that they will be required to report their customers if they break the law.

The Himalayan kingdom of Bhutan in December 2004 became the first country in the world to ban all tobacco sales and smoking in public.

In March 2004, Ireland becomes the first country to institute a total ban on smoking in all workplaces, including the country’s more than 10,000 pubs.

On March 1, 2003, a new ban in New York City goes into effect that bans smoking in bars and restaurants with few exceptions, such as small outdoor cafes, existing cigar bars, and private clubs.

In May 2001, the European Union gives its final approval to legislation that would ban the use of the term “light” and “mild” for advertising cigarettes, and allow for graphic pictures of diseased lungs and hearts on cigarette packs.

In March 2001, Israel bans smoking in all public places including hospitals, shopping malls and restaurants. Separate smoking rooms with ventilation may be permitted in some cases.

In April 2001, Egypt enacts a ban on cigarette advertising on state-run

Continued on page 26

QUICK FACTS

Nunavut has a higher smoking rate than any other province or territory. There, 48 per cent of the population smokes, which is more than double the national average of 21.5 per cent. About two-thirds of territory’s aboriginal children aged 15–17 smoke, while almost one of four children aged 10–14 smoke.

Quebec is the only province in Canada that completely subsidizes nicotine replacement therapy (NRT) for all citizens.
Scientific news

COPD Study — Spirometry

Spirometry Use in Clinical Practice Following Diagnosis of COPD*

Todd A. Lee, PharmD, PhD; Brian Bortol, MPH; and Kevin B. Weiss, MD, MPH

Background. Little is known about current use of pulmonary function testing in clinical practice. This study evaluated spirometry use in persons with COPD receiving care from the Veterans Health Administration health-care system.

Methods. Administrative data were used to identify a cohort of patients who were ≥ 40 years of age with recently diagnosed COPD. Spirometry was identified using administrative data. Spirometry use was characterized over a 12-month period, and the use of spirometry around acute exacerbations and surgical procedures was examined.

Results. A total of 197,616 patients met the inclusion criteria in 1999. The average age was 67.5 years (SD, 10.0), and 95.2% of patients were male. A total of 66,744 patients (33.7%) underwent spirometry. The use of spirometry for newly diagnosed COPD patients decreased with age and was 3.3 times higher for those visiting pulmonologists.

Conclusions. This study suggests that spirometry is inconsistently used in the diagnosis of COPD or the care of patients with COPD. This inconsistent pattern of use is seen even with the endorsement of spirometry use for patients with COPD by two national guidelines; however, the data predate the most recent version of the guidelines. It is unclear whether it is lack of physician knowledge of, attitude about, or belief in the utility of spirometry that underlies the current pattern of physician use of this clinical tool. (CHEST 2006; 129:609-616)

Key words: COPD; pulmonary epidemiology; spirometry

Abbreviations: ATS = American Thoracic Society; CI = confidence interval; ED = emergency department; ERS = European Respiratory Society; ICD-9 = International Classification of Disease, ninth revision; OR = odds ratio; VA = Veterans Health Administration

A joint document sponsored by two international pulmonary medicine organizations, both the American Thoracic Society (ATS) and the European Respiratory Society (ERS),1,2 as well as the Global Initiative for Chronic Obstructive Lung Disease3 guidelines indicate that spirometry is necessary for the diagnosis of COPD. The ATS/ERS standards4 advocate performing spirometry in all persons with a history of exposure to cigarette smoke and/or environmental pollutants, a family history of COPD, or the presence of a chronic cough, sputum production, or shortness of breath. Additionally, the National Committee for Quality Assurance has recently adopted spirometry as a performance measure for the Health Plan Employer Data and Information Set in patients with a new diagnosis of COPD.5

The classification of disease severity relies heavily on spirometry measures and is an important measure as it has been associated with other outcomes in patients with COPD. Outcomes associated with severity based on lung function include health status, health-care utilization, and exacerbations, with worsening severity related to worsened health status and increased health-care utilization and exacerbations.6-10 Severity is also an important component when predicting mortality in patients with COPD.11 However, the role of spirometry in the routine care
COPD Study — Spirometry continued

A 12-month period included those who had undergone surgical procedures on multiple days, only their first procedure was used in the analysis. Procedures were stratified to surgeries involving the cardiovascular or respiratory systems and those that did not.

Statistical Analysis

To characterize care, patients included in the analysis were stratified by the use of smoking cessation during the year. The smoking cessation was categorized as hospitalizations, ED visits, outpatient visits, and pulmonary medication use. Patient characteristics (e.g., age and comorbidities), health system characteristics (e.g., geographic location of the facility), and type of physician (e.g., primary care and pulmonologist) were used to examine the variation in smoking cessation.

Comparisons between the groups with and without smoking were made with χ² tests for categorical variables and t tests for continuous variables. The association between having smoking cessation and patient characteristics was evaluated in unadjusted models. Logistic regression was used to estimate the odds of receiving smoking cessation for patients with the condition, age, health system utilization, comorbidities, and use of respiratory medications. Adjusted models included all of the patient characteristics.

The proportion of acute exacerbations for which smoking was performed within 3 months following the onset of the exacerbation was determined. The cumulative proportion of patients having undergone smoking cessation following an exacerbation was calculated at fixed time points of 14, 30, 60, and 90 days. For surgical procedures, the proportion of patients with the condition was determined. For surgical procedures, the proportion of patients with the condition was determined.

Sensitivity Analysis

Since veterans were not limited to the VHA health-care system for their care, it is important to consider the non-VHA use of...
Scientific news

COPD Study — Spirometry continued

spirometry. To understand the potential impact of this use, a sensitivity analysis was conducted examining spirometry in a random sample of 6,000 patients who were ≥65 years of age using Medicare data. From the analysis, the proportion of patients that would be misclassified as not having received spirometry was estimated.

RESULTS

A total of 197,873 patients with newly diagnosed COPD were included in the analysis. Of these patients, 96.8% were male, and 66,744 (33.7%) had undergone at least one spirometry session during the 12-month period (Table 1). Those patients in the spirometry group were slightly younger (mean age, 66.6 years) than those who had not undergone spirometry (mean age, 68.0 years; p < 0.001).

In the adjusted analysis, as expected, a pulmonary clinic visit was the factor that had the highest association with having undergone spirometry (Table 2). Patients who had a pulmonary clinic visit were 3.29 times more likely (95% confidence interval [CI], 3.21 to 3.37) to have undergone spirometry compared to those with no pulmonary clinic visit. Younger age was also significantly associated with the likelihood of having spirometry performed. Compared to patients who were <50 years old, the

<p>| Table 1—Patient Characteristics Stratified by Whether or Not a Spirometry Was Performed During the Analysis Year* |
|-------------------------------------|-------|-------|-------|-------|-------|</p>
<table>
<thead>
<tr>
<th>Patient Characteristics</th>
<th>Spire</th>
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<th>No Spirometry</th>
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<td>26.1</td>
<td>181,192</td>
<td>34.0</td>
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<td>70–79</td>
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<td>32,012</td>
<td>40.4</td>
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<td>4,024</td>
<td>0.5</td>
<td>12,001</td>
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<tr>
<td>Average age (SD)</td>
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<td>(8.6)</td>
<td>66.0</td>
<td>(10.0)</td>
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<tr>
<td>Hypertension</td>
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<td>79,057</td>
<td>55.9</td>
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<td>62,000</td>
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<td>14.4</td>
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<td>Outpatient visit</td>
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<td>11.6</td>
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<td>Theophylline</td>
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<td>20,062</td>
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</table>

*CHF is chronic heart failure.
†Recurrent cancer.
‡Depression mental health diagnosis.

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Scientific news

COPD Study — Spirometry continued

Table 2—Association Between Spirometry and Patient Characteristics

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<th>Characteristics</th>
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<th>95% CI</th>
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<td>0.89-0.91</td>
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<td>0.79-0.80</td>
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<td>1.09-1.11</td>
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<td>Age, yr</td>
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<td>50-59</td>
<td>1.05</td>
<td>1.03-1.08</td>
<td>1.05</td>
<td>1.03-1.08</td>
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<td>60-69</td>
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<td>80+</td>
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<td>0.51</td>
<td>0.49-0.54</td>
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<tr>
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<td>0.93-0.96</td>
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<td>1.22-1.27</td>
<td>1.24</td>
<td>1.22-1.27</td>
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<td>0.87-0.91</td>
<td>0.89</td>
<td>0.87-0.91</td>
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<td>0.90</td>
<td>0.88-0.93</td>
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<td>1.19-1.23</td>
<td>1.21</td>
<td>1.19-1.23</td>
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<td>0.95-0.99</td>
<td>0.97</td>
<td>0.95-0.99</td>
</tr>
<tr>
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<td>1.00-1.05</td>
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<td>1.00-1.05</td>
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<td>0.89-0.92</td>
<td>0.90</td>
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<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Short-acting β-agonist</td>
<td>1.45</td>
<td>1.42-1.49</td>
<td>1.45</td>
<td>1.42-1.49</td>
</tr>
<tr>
<td>Ipratropium</td>
<td>1.25</td>
<td>1.21-1.29</td>
<td>1.25</td>
<td>1.21-1.29</td>
</tr>
<tr>
<td>Inhaled corticosteroid</td>
<td>1.52</td>
<td>1.46-1.58</td>
<td>1.52</td>
<td>1.46-1.58</td>
</tr>
<tr>
<td>Long-acting β-agonist</td>
<td>1.75</td>
<td>1.71-1.80</td>
<td>1.75</td>
<td>1.71-1.80</td>
</tr>
<tr>
<td>Theophylline</td>
<td>1.15</td>
<td>1.12-1.18</td>
<td>1.15</td>
<td>1.12-1.18</td>
</tr>
</tbody>
</table>

*See Table 1 for abbreviation not used in the test.
*All variables listed were included in the adjusted model

The likelihood of undergoing spirometry was 1.8% lower in those patients who were 60 to 69 years of age, 32% lower in those who were 70 to 79 years old, and 43% lower in those who were ≥ 80 years old.

Generally, respiratory medication use was associated with the increasing probability of having spirometry performed. Theophylline was the exception to this, as a dispensing of theophylline was associated with a 10% decrease in the odds of undergoing spirometry (adjusted odds ratio [0.90; 95% CI, 0.83 to 0.93]. Mental health and substance abuse diagnoses were also associated with a lower likelihood of having spirometry performed.

Exacerbations

A total of 449,800 acute exacerbations of COPD were identified in this cohort. Of those, there was a lung function test identified for 15,556 of the exacerbations (34.6%) at some point during the 12-month period. Postexacerbation spirometry was performed 21.4% of the time (Table 3). Of the spirometry sessions occurring after the exacerbation, 32.5% occurred within 14 days of the beginning of the exacerbation and 60.4% occurred within 60 days.

Presurgical Use of Spirometry

There were 9,302 patients with surgical procedures included in the analysis, of which 3,793 procedures (38.7%) were cardiac or respiratory. For 78.6% of patients, spirometry was performed between 0 and 14 days before the surgery, and for 35.5% of which were performed between 0 to 30 days prior to patients undergoing surgery (Table 4). The rates of the presurgical use of spirometry were similar for the two surgery categories used in the analysis.

Non-VHA (Medicare) Use of Spirometry Services

A small proportion of patients ≥ 65 years of age underwent spirometry outside the VHA health-care
Scientific news

COPD Study — Spirometry continued

system. Of the random sample of 6,000 patients, 344 (5.7%) had spirometry identified in the Medicare data. Of these 344 patients, there were 260 who did not have any spirometry performed in the VHA system during the analysis period. An estimated total of 4.8% of patients ≥ 65 years of age were misclassified as not having spirometry based on VHA data alone. The proportion did not vary by age.

**DISCUSSION**

The objective of this study was to examine spirometry use in routine clinical practice in patients with a new diagnosis of COPD. Overall, the presence of spirometry in patients with a new diagnosis of COPD was low, with only 33.7% of patients having spirometry performed during the analysis period. The patients who were more likely to undergo spirometry were those who had been to a pulmonary clinic and those in younger age groups. The use of spirometry to assess lung function after an acute exacerbation was low, with only 15.5% of acute exacerbations undergoing spirometry within 90 days of the onset of the exacerbation. Spirometry was used most frequently around surgical procedures that required general anesthesia, with 35.5% of patients undergoing spirometry ≤ 30 days before their procedure.

There are advocates for the use of spirometry by providers in general medicine clinics for the diagnosis of COPD. However, some research suggests that the quality of spirometry in this setting may be suboptimal. Within the VHA health-care system, spirometry is almost always performed in pulmonary function laboratories and not in general medicine clinics, a situation that may differ from that in many health-care systems. Regardless, for patients with a new diagnosis of COPD in the VHA system during a 1-year period, a minority had spirometry performed that same year. Low rates of spirometry were also reported by Anthonisen et al in patients in whom COPD had been diagnosed relative to those with asthma in a Canadian population. This raises questions about how COPD is being diagnosed in patients who are treated in general medicine clinics and whether patients who are identified with only a diagnostic code actually have the disease. COPD is frequently identified as an undiagnosed and undertreated disease, but it would be difficult to be certain whether patients have the disease without measuring their lung function. Not surprisingly, those patients who were seen in pulmonary clinics had a higher likelihood of having spirometry performed, but these patients are also probably more likely to have more severe COPD if they require referral and treatment in pulmonary clinics.

There were several factors related to the lower rates of spirometry. Increasing age had the most pronounced impact on decreasing the likelihood of undergoing spirometry. However, data do not appear to be any studies in the literature suggesting that age alone should exclude patients with a new diagnosis of COPD from undergoing spirometry. For example, Pezzoli et al have shown that age is not a risk factor for 'bad' spirometry independent of other factors. Alternatively, the finding that nondepressive mental health diagnoses were associated with a lower

### Table 3 — Spirometry Use Following Acute Exacerbations of COPD

<table>
<thead>
<tr>
<th>Exacerbation</th>
<th>Spirometry Performed After</th>
<th>All Exacerbations</th>
<th>Exacerbations With Spirometry</th>
<th>Exacerbations With Spirometry 90 d, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 14 d after</td>
<td>3,193</td>
<td>70</td>
<td>158</td>
<td>44.9</td>
</tr>
<tr>
<td>≤ 30 d after</td>
<td>4,222</td>
<td>35</td>
<td>42.7</td>
<td>60.2</td>
</tr>
<tr>
<td>≤ 60 d after</td>
<td>3,660</td>
<td>12.9</td>
<td>60.4</td>
<td>63.1</td>
</tr>
<tr>
<td>≤ 90 d after</td>
<td>5,283</td>
<td>15.5</td>
<td>72.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Ever</td>
<td>3,009</td>
<td>21.4</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Table 4 — Spirometry Use Prior to Surgical Procedures

<table>
<thead>
<tr>
<th>Surgery</th>
<th>A.B. Procedures</th>
<th>No.</th>
<th>%</th>
<th>M.S. Procedures</th>
<th>No.</th>
<th>%</th>
<th>Cardiovascular Procedures</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 14 d</td>
<td>7,004</td>
<td>78.5</td>
<td></td>
<td>4,050</td>
<td>77.9</td>
<td></td>
<td>3,001</td>
<td>79.7</td>
<td></td>
</tr>
<tr>
<td>≤ 30 d</td>
<td>5,078</td>
<td>85.6</td>
<td></td>
<td>5,050</td>
<td>84.3</td>
<td></td>
<td>2,865</td>
<td>88.6</td>
<td></td>
</tr>
<tr>
<td>Ever</td>
<td>2,182</td>
<td>60.7</td>
<td></td>
<td>5,004</td>
<td>80.0</td>
<td></td>
<td>2,775</td>
<td>94.9</td>
<td></td>
</tr>
</tbody>
</table>

www.chestjournal.org
lihood of spirometry use may be explained by physicians anticipating difficulties with certain patients during a procedure that requires a high degree of patient cooperation. Also, the use of theophylline was associated with decreased rates of spirometry, and may be an indicator of the lack of awareness of contemporary treatment guidelines and diagnostic criteria in caring for patients with COPD.

The Global Initiative for Chronic Obstructive Lung Disease guidelines recommend that spirometry be performed at follow-up assessment 4 to 6 weeks after an exacerbation. These recommendations seem to be based on clinical experience as there is no evidence concerning the role of spirometry following an acute exacerbation. In this study, follow-up spirometry was performed in only 13% of patients who had experienced exacerbations by 6 weeks following the onset of the event. This raises questions about the perception by physicians of the utility of spirometry following exacerbations, as spirometry is not being used in routine clinical practice in the VHA health-care system. Whether the lack of use is a result of physician knowledge, attitudes, or beliefs is an important question. The setting in which spirometry was consistently used in this analysis was around surgical procedures. Prior to surgical procedures, physicians are interested in knowing about patient lung function, presumably in order to determine whether the COPD patient is capable of tolerating general anesthesia and the surgical procedure, and whether extra precautions with the patient may be necessary. In this study, there was equal use of spirometry prior to surgery regardless of the type of surgery, suggesting that patients with COPD are routinely screened prior to surgery regardless of the type of procedure.

There are limitations to this study. First, the patients in this analysis may not have had truly incident cases of COPD as a period of only a single year was used in which they were defined as being disease free. The use of a longer lead-in period would have likely reduced the size of the cohort and may have increased the rates of spirometry in the newly diagnosed patients. However, because the rates in this cohort were around 30%, it is unlikely that the majority of patients underwent spirometry. The addition of non-VHA utilization indicates that about 4% of the patients may have been misclassified as not having undergone spirometry. This low rate of misclassification would likely not have a notable impact on the overall low rate of spirometry in these newly diagnosed patients. Finally, the use of the clinic stop code to identify spirometry may have resulted in the misclassification of patients undergoing spirometry when they only performed a 6-min walk test or had arterial blood gas measurements made. If this were the case, the number of patients with spirometry performed would be even lower.

This study suggests that much of the current COPD diagnosis and management is based solely on symptoms, rather than a combination of symptoms and objective lung function assessment. Spirometry also does not appear to be used routine to assess the impact of acute exacerbations on lung function. However, spirometry was used routinely in patients undergoing surgical procedures. Thus, the role of spirometry in routine clinical practice remains unclear, and providers may benefit from better guidance on the use of spirometry in patients with COPD.

REFERENCES
television. At the time, the government already restricted smoking in government buildings and airports.

■ Also in April, 2001, health officials from eight Asian countries — Indonesia, Thailand, India, Bangla-desh, Myanmar, Nepal, Bhutan and Sri Lanka — agree to support a proposal to totally ban cigarette advertising.

■ In February 2001, Russia’s Duma gives preliminary approval to bills banning tobacco ads in print media, on street billboards and in public transportation. They were already banned from television.

Restaurants and bars invariably predict sales will plummet once a smoking ban is put in place. In Ireland, a month after the ban went into effect, the government’s Office of Tobacco Control reported that 97 per cent of inspected pubs and restaurants were complying with the law. It also cited two studies which suggested that the number of non-smokers visiting pubs and bars had increased, while the number of smokers doing so had remained the same.

A day later, the main bar owners’ association cited a study of its own. It suggested sales had fallen 12 to 15 per cent. But Ireland’s restaurant association reported sales were about the same as they were a year earlier.
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