

# Using opioids to treat dyspnea in advanced COPD

## *Attitudes and experiences of family physicians and respiratory therapists*

Joanne Young RRT Margaret Donahue MDiv Morag Farquhar PhD MSc Cathy Simpson MA MDiv Graeme Rocker DM MHSc FRCP FRCPC

### Abstract

**Objective** To explore the experiences of family physicians and respiratory therapists in treating advanced chronic obstructive pulmonary disease (COPD) and their attitudes to the use of opioids for dyspnea in this context.

**Design** Qualitative methodology using one-on-one semistructured interviews.

**Setting** Southern New Brunswick (St Stephen to Sussex).

**Participants** Ten family physicians and 8 respiratory therapists who worked in primary care settings.

**Methods** Participant interviews were audiorecorded, transcribed verbatim, coded conceptually, and thematically analyzed using interpretive description.

**Main findings** Participants reported that patients with advanced COPD often suffered from inadequate control of their dyspnea in advanced stages and that they saw the potential value of opioids in this context; however, family physicians described discomfort prescribing opioids. Barriers included insufficient knowledge, lack of education and guidelines, and fear of censure. Those with palliative care experience tended to be more comfortable with opioid prescribing.

**Conclusion** Findings suggest an important need to address barriers related to more effective treatment of refractory dyspnea in advanced COPD. Further, findings indicate these efforts should focus on effective palliation and innovative educational initiatives, as well as the development, promotion, and uptake of evidence-based practice guidelines related to prescribing opioids for these patients.

### EDITOR'S KEY POINTS

- The goal of this study was to increase the understanding of family physicians' and respiratory therapists' experience treating advanced chronic obstructive pulmonary disease (COPD) in primary care settings, as well as the barriers to the use of opioids for treating dyspnea.
- Participants acknowledged that opioid therapy might be beneficial in treating patients with advanced COPD, but they did not have the confidence to prescribe it, citing lack of appropriate training and guidelines.
- Palliative care education and experience appears to mitigate some of the discomfort that primary care clinicians have with prescribing opioids. This suggests the need to develop innovative educational initiatives for peers to address effective palliation, as well as the need for development, promotion, and uptake of evidence-based practice guidelines related to prescribing opioids for patients with advanced COPD.

This article has been peer reviewed.  
*Can Fam Physician* 2012;58:e401-7

# Utilisation d'opiacés pour traiter la dyspnée dans les cas de MPOC avancée

*Attitude et expérience de médecins de famille et d'inhalothérapeutes*

Joanne Young RRT Margaret Donahue MDiv Morag Farquhar PhD MSc Cathy Simpson MA MDiv Graeme Rocker DM MHSc FRCP FRCPC

## Résumé

**Objectif** Étudier l'expérience des médecins de famille et des inhalothérapeutes dans le traitement de la maladie pulmonaire obstructive chronique (MPOC) et l'attitude de ces intervenants à l'égard du recours aux opiacés pour traiter la dyspnée dans ce contexte.

**Type d'étude** Méthodologie qualitative à l'aide d'entrevues individuelles semi-structurées.

**Contexte** Le sud du Nouveau-Brunswick (entre St Stephen et Sussex).

**Participants** Dix médecins de famille et 8 inhalothérapeutes oeuvrant dans des contextes de soins primaires.

**Méthodes** Les entrevues des participants ont été enregistrées, transcrites mot à mot, codées par concepts et analysées par thèmes grâce à une description interprétative.

**Principales observations** Les participants ont déclaré que les patients souffrant de MPOC avancée avaient souvent un contrôle inadéquat de leur dyspnée aux stades avancés et qu'ils pensaient que les opiacés pouvaient être utiles dans ce contexte; toutefois, les médecins de famille ne se disaient pas à l'aise pour les prescrire. Comme obstacles, ils mentionnaient une connaissance insuffisante, un manque de formation et de directives, et la crainte d'être blâmés. Ceux qui avaient déjà fait des soins palliatifs avaient tendance à être plus à l'aise pour prescrire des opiacés.

**Conclusion** Ces résultats suggèrent qu'il est grand temps de s'occuper des facteurs qui font obstacle à un traitement plus efficace de la dyspnée réfractaire dans la MPOC avancée. Ils indiquent aussi que les efforts devraient porter particulièrement sur une palliation efficace et sur la création de séances de formations innovatrices, mais aussi sur le développement, la promotion et l'adoption de directives de pratique fondées sur des preuves pour la prescription d'opiacés à ces patients

## POINTS DE REPÈRE DU RÉDACTEUR

- Cette étude avait pour but de mieux comprendre ce que les médecins de famille et les inhalothérapeutes ont comme expérience du traitement de la MPOC avancée dans un contexte de soins primaires, de même que les facteurs qui les empêchent d'utiliser des opiacés pour traiter la dyspnée.
- Les participants reconnaissaient que le traitement aux opiacés était utile pour traiter les patients souffrant de MPOC avancée, mais ils ne se sentaient pas à l'aise pour les prescrire, sous prétexte d'un manque de formation et de directives appropriées.
- Le fait d'avoir une formation et une expérience en soins palliatifs semble atténuer l'inconfort que ressentent les médecins de première ligne à prescrire des opiacés. Cela laisse voir le besoin de mettre au point des initiatives de formation innovatrices pour permettre aux intervenants de dispenser des soins palliatifs efficaces, et d'élaborer, de promouvoir et d'adopter des directives de pratique relatives à la prescription d'opiacés pour les patients souffrant de MPOC avancée.

Cet article a fait l'objet d'une révision par des pairs.  
*Can Fam Physician* 2012;58:e401-7

Chronic obstructive pulmonary disease (COPD) is unique among the leading causes of death in Western society; it is the only chronic condition for which the prevalence, associated morbidity, and attributable mortality continue to rise.<sup>1</sup> The final years of patients with advanced COPD are often characterized by unpredictable, frequent, and frightening exacerbations, progressive functional decline, poor quality of life, social isolation, and high symptom burden. Dyspnea remains the most prevalent and chronic symptom and is often poorly controlled, leaving up to 50% of patients without effective palliation.<sup>2</sup> While recent systematic<sup>3</sup> and narrative reviews<sup>4</sup> support the use of opioids for relieving dyspnea in advanced COPD, our survey of various clinicians (including respiratory therapists) attending COPD-related continuing medical education events in eastern Canada suggests there is continued reluctance to using opioids for other than terminal stages.<sup>5</sup>

Primary care clinicians with whom patients and families have long-standing therapeutic relationships play a pivotal role through the trajectory of COPD. In New Brunswick, where this study was conducted, family physicians and respiratory therapists often work in collaborative relationships and both play important roles, so they have particular perspectives regarding the provision of community-based care and symptom management for patients with advanced COPD. While palliative care is extending its traditional boundaries to address the needs of patients with advanced non-malignant disease,<sup>6</sup> the growing number of patients with COPD requiring symptom management and decision-making support will soon overwhelm an already-taxed health care system. In this context, it will be imperative that primary care clinicians receive the support they need to continue providing evidence-based, symptom-focused care to this population of patients.

Both the American Thoracic Society<sup>7</sup> and the American College of Chest Physicians<sup>8</sup> have published consensus statements regarding the care of patients with advanced lung disease, clearly stating that patients need good palliative and supportive care, as well as excellent disease-directed therapy,<sup>7</sup> and that opioids should be used for refractory dyspnea.<sup>8</sup> Recent studies into factors that affect uptake of professional practice guidelines have identified 3 primary barriers related to attitude, behaviour, and knowledge, all of which might be affected by environmental factors such as time or organizational constraints.<sup>9</sup> Thus, clinicians' implementation of these professional recommendations is likely to depend on their attitudes toward, experience of, and comfort with the use of opioids outside of purely terminal phases. To explore this issue, the main objective of our study was to increase our understanding of family physicians' and respiratory therapists' experiences with treating advanced COPD in primary care settings, as

well as the barriers (if any) to the use of opioids for treating dyspnea in this context.

## METHODS

### Participant recruitment

Following local Research Ethics Board approval, we sought to recruit family physicians and respiratory therapists with experience in providing care for patients with advanced COPD working in a southern New Brunswick primary care setting. These 2 groups of clinicians were selected because of the collaborative working relationships they have within the context of a provincial community-based multidisciplinary outreach service (ie, the New Brunswick Extra-Mural Program) that provides home-based support for patients living with chronic illness, including COPD, and with local outpatient respiratory clinics, in which patients are referred to respiratory therapists by family physicians for the purposes of COPD-related diagnostics, assessments, education, and support. Potential study participants were informed of the study via memos from their department administrators and then brief study information sheets and consent forms were distributed to potential participants for review. Willing participants were asked to contact the study interviewer (J.Y.) to arrange a convenient time and location for the interview.

### Data collection

We collected our data from a convenience sample of 10 family physicians and 8 respiratory therapists. Before the commencement of the qualitative interview, participants were asked to complete a brief status and demographic characteristics form that collected details such as their age, sex, years of experience, and practice setting (urban or rural; hospital or community). Subsequent data collection included a one-on-one, 30- to 45-minute interview with each clinician. A semistructured interview guide was developed to explore their clinical knowledge, experiences, and views related to caring for patients with advanced COPD, and their comfort with dyspnea management and with prescribing opioids for dyspnea.

### Data analysis

Following verbatim transcription of digitally audio-recorded interviews, a research assistant who was experienced with qualitative research and NVivo 7.0 software used an "interpretive description" approach to analyze the data. Interpretive description answers those "compelling, complex and contextually embedded questions" that are relevant to clinical practice settings.<sup>10</sup> The first step in the process of analysis was to describe the phenomenon of interest (the

experiences of family physicians and respiratory therapists with management of advanced COPD and specifically their attitudes to the use of low-dose opioids for the treatment of dyspnea). This was followed by an interpretive step in which the researchers grappled with possible meanings of the described observations from a clinical perspective. The value of this methodology lies in its capacity to capture practice-relevant particularities of individual experiences and broader commonalities across experiences.<sup>10</sup>

Interpretation is inevitably influenced by the investigators' diverse professional backgrounds (medical [G.R.], respiratory therapy [J.Y.], and psychospiritual [C.S. and M.D.]), which strengthens the process of analysis. In addition our consultant in the United Kingdom (M.F.), a postdoctoral fellow with more than 20 years of experience in health service research, independently listened to some early audio files (to ensure unbiased conduct of interviews), read subsequent transcriptions, and reviewed the derived themes, which served to further strengthen the credibility and trustworthiness of the analysis. Through an iterative process involving all members of the research team, we reached consensus after 18 interviews on content saturation, on the list and understanding of final themes, and on the selection of illustrative quotations, which are reported below.

## FINDINGS

Of family physicians reporting age and number of years of experience in practice, median (range) age was 48 (34 to 65) years, with a median (range) number of years of experience of 23.5 (1 to 32) years. Of the 10 family physicians, 7 worked in rural settings and 3 in urban settings. Of the respiratory therapists, median (range) age was 37.5 (29 to 54) years and median (range) number of years of experience was 16.5 (6 to 26) years. Five of the respiratory therapists worked in urban settings and 3 in rural settings.

## Themes

Analysis of the qualitative data collected from the participating family physicians and respiratory therapists revealed 3 main themes: 1) providing care to the COPD population had both positive and negative facets; 2) patients living with COPD often experienced inadequate symptom control; and 3) participants acknowledged opioid therapy might be beneficial, but they lacked confidence to prescribe it, citing lack of appropriate training and guidelines.

**1) Professional paradox: positive and negative facets of care.** When prompted to consider any challenges and

rewards, all participants readily described frustrating negative aspects and potential positive aspects of caring for patients living with advanced COPD. All participants strove to provide high-quality care and symptom relief for these patients. They explained that the lack of health system resources available to ensure the provision of adequate care was a challenge, and many participants used descriptors such as "overwhelming," "discouraging," and "time-consuming."

I think sometimes it's overwhelming to be out in the community alone, not having those resources, so that can weigh you down emotionally because sometimes you can feel helpless that you're going in and you're doing the best that you can but you don't have the resources available to help them .... So, going in to see them over and over again and not getting anywhere other than trying to do basic symptom control for each situation that they're in can be quite discouraging. (RT 07)\*

Severe dyspnea was highlighted as a factor central to patients' physical and psychosocial distress, and was described by all participants as a challenging symptom to manage.

The breathlessness I think would be the major one [symptom]. Well, they usually look to the medical community, either myself or the RTs [respiratory therapists] or the nurses, or somebody for some measures to relieve the breathlessness so that they can carry out their day's activities without being as uncomfortable as they otherwise would be. So that presents a bit of a challenge, especially if they're on industrial doses of everything known to man and still aren't able to do a reasonable level of activity in the run of a day. (FP 11)

Beyond the challenges that come with managing difficult symptoms and coping with inadequate resources, some professionals felt helpless and even "disheartened" by the disease process itself. "One of the worst aspects is that you usually don't see any improvement. It's just a gradual downhill progression. So, I guess that's kind of disheartening." (FP 11)

In the midst of these challenges, participants also identified positive aspects of professional caregiving for this population, including relationship building, making a difference, and feeling appreciated.

It's always rewarding to look after them, provided you're providing good care; and it's always rewarding

\*Interviewee pseudonyms indicate the following: family physician (FP) or respiratory therapist (RT), as well as an interview number.

to make sure that the patients, you know, are at least comfortable in dealing with their illness and trying to keep them out of difficulties. If you can keep these people independent and at home, they're happy, and if they're happy, that's rewarding. (FP 12)

**2) Inadequate symptom control: quality of life.** Study participants were acutely aware of the psychosocial effects of dyspnea on a patient's quality of life. They discussed the fear and anxiety that often accompanies dyspnea and how these symptoms are sometimes inadequately managed.

I think when people get anxious, I mean, they really seem to deteriorate quickly. The anxiety has to be treated because they get ... I mean, they just pant and pant and pant. You can't get a handle on them when their anxiety is over the top. (FP 17)

The lack of adequate strategies and system resources, when coupled with an uncertain disease trajectory, added to the complexity of providing what participants believed to be adequate care.

It can be a roller coaster at times because they get a cold or something and things go sour and you do your best to get them on track again and it can be hard sometimes to make a decision about what you need to do. You run out of tricks, run out of things to do to get them back, and every time they go sour it's harder to get them back and eventually they just don't make it. (FP 13)

Some respiratory therapists believed that their training had in some ways been inadequate and expressed feeling uncomfortable or lacking confidence in their ability to address broader psychosocial issues. One respiratory therapist explained the tension she experienced trying to provide care she thought was needed but that was beyond her scope of practice:

Mental health, I find it very challenging. I'd say at least 90% of my patients have huge anxiety and depression issues, naturally, but I find that very difficult .... I know it's not solely my responsibility but where I'm the only one involved often, I mean aside from the doctor that they [patients] don't get out to see. Yeah, I do find that a big part. Minimally, I feel that I know the adjuncts to use but I'm not by any means proficient in managing someone's mental health. (RT 03)

**3) Opioid therapy in COPD: positive potential versus uncertainty.** Most participants, whether or not they were familiar with the use of opioid therapy to treat

dyspnea in COPD, believed that it was, or could be, a viable treatment option.

Actually, using the opiates was very beneficial, immediately gave them a sense of relief, relaxed their muscles. Oxygen levels were actually improved because they were more relaxed and didn't have that sensation that they couldn't get their breath. Even if they did look breathless they didn't have that sensation .... Very valuable, very valuable intervention, yes. There was never a situation that I didn't feel it was helpful. There were many situations that I felt it was started too late. It could have been introduced much earlier. (RT 07)

Despite the belief that opioids could be beneficial in the treatment of dyspnea in advanced COPD, there was hesitancy to prescribe or recommend them. Some participants were concerned about respiratory suppression unless the patient was "terminal." Other professionals believed it was reasonable to try opioid therapy in hospital settings where treatment could be "closely monitored," but stated they would not be "comfortable" with treatment in community settings. "You don't know until you try them and doing that in the community setting is, it's not without its problems, and I think a lot of physicians would be nervous about that." (FP 14)

Other participants thought they lacked the necessary knowledge to implement opioid therapy under any circumstances. The most frequently cited reason for not engaging in opioid therapy for dyspnea was lack of education and guidelines.

I guess the thing is I don't have enough experience in doing that yet [opioid use for advanced COPD] and there hasn't been enough studies out, enough physicians that are on board with it yet. (RT 05)

I think, you know, having a CME [continuing medical education] event where someone talked about that would be helpful. I think it would be very useful. I mean the thing is that right now, it feels to me like going out on a limb if I were to say, okay, my next patient is really in trouble, I'm going to start them on morphine, you know, but if I felt that ... if I went to such an event, I would feel more confident, I think, that that's acceptable treatment. (FP 16)

Some participants expressed concern about potential censure if they prescribed opioids for patients with advanced COPD. Distinctions were made between prescribing in cancer, for which clear guidelines are available, and prescribing for dyspnea in advanced COPD for which many thought few, if any, guidelines existed.



I don't think there's any guideline telling us to use morphine, so it may be more individual case for using morphine, but for quality treatment for cancer pain, it's almost a standard to use a narcotic, opioid, to treat pain. So, we're more ready to use opioids for cancer patients. For COPD patients maybe there's more reluctance in using it because it's not in the guidelines that tell us to do it. So then there needs to be guidelines that really show who should be on it, and who shouldn't be on it, and it shouldn't be left for everyone to decide on their own because then there may be some patient that doesn't really need to go on the opioid and end up using it. (FP 06)

You'd have to make sure that [acute episode] was all ruled out before you used that [opioid], I wouldn't just start it. So, I'd be looking and if it was, everything else was ruled out, then I'd be inclined to try it. It wouldn't look too good if you gave them morphine to deal with a bout of pneumonia: Sorry, doctor, your licence has just been revoked. (FP 13)

It was also interesting to note that respiratory therapists with palliative care education and experience were more comfortable with use of opioids to treat dyspnea. However, they believed they lacked sufficient knowledge and education to make recommendations to physicians, and also worried that physicians would not be receptive.

Depending on the physician, it's easier to take the pain route if they have pain and get it addressed with the opiates than it is to try to tackle and convince a physician that opiates would be beneficial for breathlessness. (RT 07)

Similarly, family physicians with previous education or experience in palliative medicine seemed more comfortable using opioids to treat dyspnea in COPD characterized as palliative or terminal. However, most expressed concerns about administering opioids before this stage.

Somebody who is in a terminal stage of COPD I would think would have a life expectancy measured in terms of months, whereas advanced could still go on for years depending on how well they're managed. So terminal certainly I have no problems using opiates in them and the advanced ones if that's the only thing that keeps them comfortable I wouldn't hold off in them either but you kind of wonder ... you have to be a little more careful I suppose if somebody's got years of disease in front of them versus a few months. (FP 11)

It's interesting and then you have to re-educate the morphine issue 'cause people do think that morphine accelerates death. I think that there's other clinicians that don't recognize that opioids are probably more first line for breathlessness than, say, Ativan. (FP 15)

## DISCUSSION

This qualitative study enables a better understanding of some New Brunswick family physicians' and respiratory therapists' attitudes toward using opioids for dyspnea in advanced COPD. Clinicians describe how difficult it is to effectively manage dyspnea in this context and acknowledge that current treatments provide little symptom relief in advanced stages. They want and need more effective treatment strategies, and they see the potential value of opioids in this context, but describe discomfort prescribing them owing to insufficient knowledge, lack of education and guidelines, and fear of censure. The paradox is that while systematic and narrative reviews,<sup>3,4</sup> recent abstracts,<sup>11,12</sup> and consensus statements from expert working groups<sup>8,13</sup> support the use of opioids for refractory dyspnea, they provide scant evidence to support their use over the longer term (for 3 to 6 months).<sup>4</sup>


In recognition of this knowledge gap, trials of longer-term use of opioids for patients with advanced COPD are now under way in both Canada and Australia, and early results are promising. For example, when balancing benefits and side effects, 51% of patients in the Australian trial had sufficient dyspnea relief that they chose to continue the opioid on a long-term basis,<sup>14</sup> and there was no evidence of respiratory suppression in these patients.<sup>14</sup> In an ongoing trial in Canada, funded by the Canadian Institutes of Health Research, of approximately 40 patients with advanced COPD and refractory dyspnea enrolled to date in a 6-month trial of low-dose opioids (trial registration number NCT00982891; [ClinicalTrials.gov](http://ClinicalTrials.gov)), about 75% reported substantial, and sometimes remarkable, short- and long-term benefit.<sup>15</sup> As well, the Canadian Thoracic Society has recently released a clinical practice guideline recommending a cautious titration schedule for the use of opioids when dyspnea is refractory to conventional treatment for patients with advanced COPD.<sup>13</sup>

Development and distribution of evidence-based practice guidelines might help to overcome the reluctance of those citing lack of professional guidance as a barrier to prescribing opioids in this clinical context. Innovative educational efforts related to this topic are needed to help overcome long-held misconceptions about opioid effects and to engender more widespread support for effective palliation.

## Limitations

Our study participants were from a single geographic and practice setting (southern New Brunswick). Our findings from a predominantly rural, multidisciplinary practice setting might not be replicated elsewhere. Nevertheless, these findings support earlier survey data obtained from clinicians working in more diverse clinical settings<sup>5</sup> and will inform the construct of an international survey of attitudes toward the use of opioids for dyspnea in COPD and other non-malignant diseases. Prompts in our interview guide to promote discussion might inevitably relate to subsequent findings and interpretation, if a prompt was followed by some detailed reflection. In reality, specific prompts were rarely needed and participants usually spontaneously covered most facets of caring for patients with COPD. While we did not set out to make any comparison between the 2 groups of clinicians, our findings related to palliative care experiences suggest that extending our research to include perspectives of various specialists could be a fruitful area for further research.

## Conclusion

The findings from this qualitative study suggest that primary care clinicians (family physicians and respiratory therapists) remain uncertain about or averse to the use of opioids for the treatment of refractory dyspnea in patients with advanced COPD. Further, the finding that palliative care education and experience appears to mitigate some of this discomfort indicates a potential option for addressing the current problem. This potential option, along with the reasons for aversion to prescribing opioids, suggests the need to develop innovative educational initiatives for peers to address effective palliation, as well as the need for development, promotion, and uptake of evidence-based practice guidelines related to prescribing opioids for these patients. 

**Ms Young** is Project Coordinator and **Ms Donahue** is Data Analyst, both in the Division of Respiriology at the Queen Elizabeth II Health Sciences Centre in Halifax, NS. **Dr Farquhar** is Macmillan Postdoctoral Research Fellow in the Department of Public Health and Primary Care at the University of Cambridge in England. **Ms Simpson** is a doctoral candidate in the Department of Graduate Studies at Dalhousie University in Halifax. **Dr Rocker** is Head of the Division of Respiriology at the Queen Elizabeth II Health Sciences Centre and Professor in the Department of Medicine at Dalhousie University.

## Acknowledgment

Funding for this study was granted to **Ms Young** and **Dr Rocker** by the Health Promotion and Research Fund (Tier I Seed Grant) at the Atlantic Health

Sciences Corporation (now known as Horizon Health Network—Zone 2) in Saint John, NB.

## Contributors

**Ms Young** conducted the interviews for this study. All authors contributed to the analysis of the study and writing of the manuscript, and all agreed with the contents of the final manuscript.

## Competing interests

None declared

## Correspondence

**Dr Graeme Rocker**, 4457 Halifax Infirmary, 1796 Summer St, Halifax, NS B3H 3A7; telephone 902 473-6611; fax 902 473-6202; e-mail [graeme.rocker@dal.ca](mailto:graeme.rocker@dal.ca)

## References

1. Mannino DM, Buist AS. Global burden of COPD: risk factors, prevalence, and future trends. *Lancet* 2007;370(9589):765-73.
2. Elkington H, White P, Addington-Hall J, Higgs R, Edmonds P. The healthcare needs of chronic obstructive pulmonary disease patients in the last year of life. *Palliat Med* 2005;19(6):485-91.
3. Jennings AL, Davies AN, Higgins JP, Gibbs JS, Broadley KE. A systematic review of the use of opioids in the management of dyspnoea. *Thorax* 2002;57(11):939-44.
4. Rocker G, Horton R, Currow D, Goodridge D, Young J, Booth S. Palliation of dyspnoea in advanced COPD: revisiting a role for opioids. *Thorax* 2009;64(10):910-5.
5. Rocker GM, Young J, Horton R. Using opioids to treat dyspnea in advanced COPD: a survey of Canadian clinicians. *Chest* 2008 Oct 28. Available from: <http://meeting.chestpubs.org/cgi/content/abstract/134/4/s29001>. Accessed 2012 Jun 4.
6. Rocker G. Palliative care for the next decade: moving beyond cancer. *J Palliat Care* 2005;21(3):140-1.
7. Lanken PN, Terry PB, Delisser HM, Fahy BF, Hansen-Flaschen J, Heffner JE, et al. An official American Thoracic Society clinical policy statement: palliative care for patients with respiratory diseases and critical illnesses. *Am J Respir Crit Care Med* 2008;177(8):912-27.
8. Mahler DA, Selecky PA, Harrod CG, Benditt JO, Carrieri-Kohlman V, Curtis JR, et al. American College of Chest Physicians consensus statement on the management of dyspnea in patients with advanced lung or heart disease. *Chest* 2010;137(3):674-91.
9. Lugtenberg M, Burgers JS, Besters CF, Han D, Westert GP. Perceived barriers to guideline adherence: a survey among general practitioners. *BMC Fam Pract* 2011;12:98.
10. Thorne S, Reimer Kirkham S, O'Flynn-Magee K. The analytic challenge in interpretive description. *Int J Qual Methods* 2004;3(1):1-11.
11. Currow DC, Kenny B, McDonald C, Clark K, Abernethy AP. Multi-site open label dose ranging study to determine the minimum effective dose of sustained release morphine (SRM) for reducing refractory breathlessness. Abstract presented at: 11th Congress of the European Association for Palliative Care; 2009 May 7-10; Vienna, Austria. Available from: [www.eapcnet.eu/Vienna2009/download/Vienna\\_Abstracts\\_2009.pdf](http://www.eapcnet.eu/Vienna2009/download/Vienna_Abstracts_2009.pdf). Accessed 2012 Jun 4.
12. Young J, Donahue M, Rocker G. Treating refractory dyspnea in advanced COPD: patient and caregiver experiences of opioid therapy. *Chest* 2010;138:463A. DOI:10.1378/chest.10413.
13. Marciniuk DD, Goodridge D, Hernandez P, Rocker G, Balter M, Bailey P, et al. Managing dyspnea in patients with advanced chronic obstructive pulmonary disease: a Canadian Thoracic Society clinical practice guideline. *Can Respir J* 2011;18(2):69-78.
14. Currow DC, McDonald C, Oaten S, Kenny B, Allcroft P, Frith P, et al. Once-daily opioids for chronic dyspnea: a dose increment and pharmacovigilance study. *J Pain Symptom Manage* 2011;42(3):388-99. Epub 2011 Mar 31.
15. Rocker G, Demmons J, Donahue M, Young J, Simpson C, Horton R, et al. Using opioids to treat refractory dyspnea in advanced COPD: preliminary insights from a clinical trial. *Am J Respir Crit Care Med* 2012;185:A3728.

— \* \* \* —