

one of many situations in prehospital care in which the principle of paramedic safety is paramount. For example, paramedics will not enter a building that has collapsed, is on fire or has sustained chemical or biological contamination until the building has been declared safe for entry, even if large numbers of patients requiring urgent care may be present within the building. In these situations, determining safety is not the paramedic's role. Likewise, patients with SARS-like symptoms should not be intubated until it is safe to do so, and this cannot be rapidly and reliably achieved in a prehospital setting.

Therefore, our recommendation is 2-fold: that paramedics should not intubate patients with SARS-like symptoms in the prehospital setting, even if a PPS were available, and that these patients should be rapidly transported to the nearest emergency department for definitive airway management according to current guidelines. If some form of ventilatory support is needed (e.g., for patients who are significantly obtunded or have respiratory compromise), a bag valve mask outfitted with a submicron filter could be used. Proper application of a bag valve mask is an essential skill in airway management and is a core feature of paramedic training, according to the National Occupational Competency Profile for paramedic practitioners.⁵

Developing solutions to the extraordinary problems created by SARS necessitates careful and complete consideration of the risks and benefits for paramedics and patients alike. We believe that the use of a PPS to accomplish prehospital intubation of patients with SARS-like symptoms is

the wrong solution from the perspectives of both paramedic and patient safety.

From the Division of Prehospital Care, Sunnybrook and Women's College Health Sciences Centre, University of Toronto, Toronto, Ont.

Competing interests: None declared.

Contributors: Dr. Verbeek was the principal author and contributed substantially to the concept of the article. Dr. Schwartz provided critical commentary and contributed to the concept of the article. Mr. Burgess, a paramedic, contributed to the concept of the article, provided critical commentary and assisted with the second draft of the article.

References

1. Cluster of severe acute respiratory syndrome cases among protected health-care workers Toronto, Canada, April 2003. *MMWR Morbid Mortal Wkly Rep* 2003;52:432-6.
2. Directive 03-11. Directive to all Ontario acute care hospitals for high-risk procedures. Toronto: Ontario Ministry of Health and Long-Term Care; 2003 Jun 16. Available: www.health.gov.on.ca/english/providers/program/pubhealth/sars/docs/docs2/dir_acutecare_grtoronto_061603.pdf (accessed 2003 Jul 13).
3. Severe acute respiratory syndrome (SARS) case definitions. Ottawa: Health Canada; 2003 Jun 9 (updated 2003 Jul 8). Available: www.hc-sc.gc.ca/pphb-dgsp/sars-sras/sarscasedef-0604_e.html (accessed 2003 Jul 13).
4. Infection control guidance for health care workers in health care facilities and other institutional settings: severe acute respiratory syndrome (SARS). Ottawa: Health Canada; rev 2003 Jun 3. Available: www.hc-sc.gc.ca/pphb-dgsp/sars-sras/pdf/sarsfactsheetinstitutions06-03-03_3.pdf (accessed 2003 Jul 13).
5. *National occupational competency profiles*. Ottawa: Paramedic Association of Canada; 2000. Available: www.paramedic.ca (accessed 2003 Jul 13).

Correspondence to: Dr. P. Richard Verbeek, Sunnybrook and Women's Base Hospital, 1120 Finch Ave. W, Toronto ON M3J 3H7; fax 416 667-9776; rverbeek@basehospital.on.ca

New research initiatives in Canada for end-of-life and palliative care

Graeme Rocker, Daren Heyland

Almost 2000 years after the Roman philosopher Seneca told us that "the wise man will live as long as he ought, not as long as he can," the Canadian Senate Subcommittee's report on palliative care has stated that quality end-of-life care is the right of every Canadian.¹ Despite this laudable notion, there is a paucity of data to help determine what constitutes quality care at the end of life, particularly from the perspectives of patients with life-threatening illnesses and their family members. In addition, we lack performance indicators to determine whether the estimated \$3 billion spent annually on dying patients is optimally allocated. In response to the research void, the Institute of Cancer Research recently announced that end-of-life and palliative care was its top strategic research theme.

Although we welcome this initiative because it will further strengthen palliative care of cancer patients, we must remember that most people in Canada die of other causes. In a study involving patients with advanced chronic obstructive pulmonary disease (COPD) and those with lung cancer, the COPD patients reported deficiencies in quality of life, symptom control and access to palliative care that exceeded the deficiencies experienced by the patients with lung cancer.² This study and others have shown that, for patients with advanced lung and heart disease, we fail to address their needs to discuss satisfactorily treatment options, prognosis, advance directives, symptom relief, and use and nonuse of mechanical ventilation, their wishes to know what dying might be like or their fears of what they are fac-

ing.²⁻⁸ Given that COPD and congestive heart failure are responsible for the majority of admissions for acute hospital care, we are failing to provide effective and coordinated palliative and end-of-life care for large numbers of patients. Moreover, there is evidence that we engage in emergency life-prolonging interventions more often for these patients than for cancer patients with a similar life expectancy.⁹

Historically, research into palliative and end-of-life care has been conducted in large part by researchers working in relative isolation, with a focus mostly on patients with cancer. Recently, through a grant from the Canadian Institutes of Health Research (CIHR), leading researchers in end-of-life care from a broad range of disciplines (health law, sociology, anthropology, health economics, clinical epidemiology, psychology and the more traditional health professions, including nursing, pharmacology and several medical specialties) met to assess research into palliative and end-of-life care in Canada.

The following areas of research were identified. First, we need a better understanding of why, when, where, how and with what effect do providers (e.g., intensivists, respirologists, cardiologists, general internists, palliative care physicians, nurses and social workers) speak to dying patients and their families regarding prognosis, treatments and other issues related to end-of-life care. We also need to examine ways of improving communication and decision-making. Second, we need to examine how dying patients and their families assess their quality of life, symptoms, burden on caregivers, preferences and satisfaction with care in the final months to weeks of life and to look at treatments that improve quality of life and symptoms. Third, we need a better understanding of the features of patients' diseases (e.g., biological, clinical, functional, comorbid) that affect prognosis, symptoms and quality of life. Finally, we need to examine more closely the issues related to ethics, policy and health services utilization that impede or encourage appropriate high-quality end-of-life care.

Given the complexity of issues related to quality of life, quantity of life, and the trade-off between them in a system that is in large part designed to treat acute illnesses, a multidisciplinary team approach to the conceptualization, implementation and interpretation of end-of-life research is vital. In the future, we envision multidisciplinary research teams exploring end-of-life issues in all life-limiting diseases and populations to improve our understanding of, and ability to achieve, excellent quality care at the end of life for all Can-

adians. We look forward to further funding initiatives in this field to be announced by CIHR (www.cihr.ca). We can build on the success of other research groups and learn from experts from other networks, such as the National Cancer Institute Clinical Trials Group and the Canadian Critical Care Trials Group.¹⁰ We are looking for partnerships and invite all researchers in end-of-life and palliative care to contact us by email (gmrocker@dal.ca and dkh2@post.queensu.ca) if they would like to be part of this new endeavour and to participate in a protocol development meeting later this year.

Competing interests: None declared.

Dr. Rocker is Professor in the Department of Medicine, Dalhousie University, Halifax, NS, and President of the Canadian Critical Care Society, Toronto, Ont. Dr. Heyland is Associate Professor in the Department of Medicine, Queens University, Kingston, Ont., and a Career Scientist with the Ontario Ministry of Health and Long-Term Care, Toronto, Ont.

Contributors: Both authors contributed substantially to the writing of the article and approved the final version.

References

1. Subcommittee to update "Of Life and Death" of the Standing Senate Committee on Social Affairs, Science and Technology. *Quality end-of-life care: the right of every Canadian*. Ottawa: Senate of Canada; 2000. Available: www.parl.gc.ca/36/2/parlbus/commbus/senate/com-e/upda-e/rep-e/repfinjun00-e.htm (accessed 2003 July 17).
2. Gore JM, Brophy CJ, Greenstone MA. How well do we care for patients with end stage chronic obstructive pulmonary disease (COPD)? A comparison of palliative care and quality of life in COPD and lung cancer. *Thorax* 2000;55(12):1000-6.
3. Heffner JE, Fahy B, Hilling L, Barbieri C. Attitudes regarding advance directives among patients in pulmonary rehabilitation. *Am J Respir Crit Care Med* 1996;154(6 Pt 1):1735-40.
4. Heffner JE, Barbieri C. End-of-life care preferences of patients enrolled in cardiovascular rehabilitation programs. *Chest* 2000;117(5):1474-81.
5. Curtis JR, Wenrich MD, Carline JD, Shannon SE, Ambrozio DM, Ramsey PG. Patients' perspectives on physician skill in end-of-life care: differences between patients with COPD, cancer, and AIDS. *Chest* 2002;122(1):356-62.
6. Bailey PH. Death stories: acute exacerbations of chronic obstructive pulmonary disease. *Qual Health Res* 2001;11(3):322-38.
7. Guthrie SJ, Hill KM, Muers ME. Living with severe COPD. A qualitative exploration of the experience of patients in Leeds. *Respir Med* 2001;95(3):196-204.
8. Tranmer JE, Heyland DK, Dudgeon D, Squires-Graham M, Coulson K. Measuring the symptom experience of seriously ill cancer and noncancer hospitalized patients near the end of life with the memorial symptom assessment scale. *J Pain Symptom Manage* 2003;25(5):420-9.
9. Tanvetanont T, Leighton JC. Life-sustaining treatments in patients who died of chronic congestive heart failure compared with metastatic cancer. *Crit Care Med* 2003;31(1):60-4.
10. Cook DJ, Todd TRJ. The Canadian Critical Care Trials Group: a collaborative educational organization for the advancement of adult clinical ICU research. *Intensive Care World* 1997;14(2):68-70.

Correspondence to: Dr. Graeme Rocker, Rm. 4457, Halifax Infirmary, 1796 Summer St., Halifax NS B3H 3A7; fax 902 473-6202; gmrocker@dal.ca