- Goldsmith M, Vadas B. Oral dosage forms including an antiplatelet agent and an enterically coated acid inhibitor. Cogentus Pharmaceuticals: United States patent application no. 20070243243 (issued 2007 Oct. 18).
- Juurlink DN. Clopidogrel with or without omeprazole in coronary disease. N Engl J Med 2011;364:681-2.
- Chen CH, Yang JC, Uang YS, et al. Differential inhibitory effects of proton pump inhibitors on the metabolism and antiplatelet activities of clopidogrel and prasugrel. *Biopharm Drug Dispos* 2012; 33:278.83
- Arbel Y, et al. Platelet inhibitory effect of clopidogrel in patients treated with omeprazole, pantoprazole, and famotidine: a prospective, randomized, crossover study. Clin Cardiol 2013;36:342-6.

CMAJ 2014. DOI:10.1503/cmaj.114-0014

The author responds

The points raised by Juurlink1 in response to our article² are worthy of consideration. The release kinetics of the drugs as given in the COGENT trial may have attenuated the potential for a drug-drug interaction. However, in the absence of any further randomized clinical trial of concomitant omeprazole and clopidogrel, extrapolation from the COGENT dataset may be the best evaluation we have of whether there is a real interaction. The observational data are mixed and cannot provide the same level of evidence as a randomized trial. The pharmacokinetic and pharmacodynamic data are fairly consistent, though the relationship with clinical outcomes is uncertain and controversial. Nevertheless, if all proton pump inhibitor options are easily available and similarly priced, to initiate therapy with a proton pump inhibitor that does not have this potential interaction seems prudent.

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References

- Juurlink D. Clopidogrel and proton pump inhibitors [letter]. CMAJ 2014;186:212–13.
- Matteau A, Bhatt DL. Recent advances in antithrombotic therapy after acute coronary syndrome. CMAJ 2013; Nov. 4 [Epub ahead of print].

CMAJ 2014. DOI:10.1503/cmaj.114-0015

The quality of mercy

In their *CMAJ* commentary, Cook and colleagues¹ point out deficiencies in end-of-life care in Canada, in particular that many people receive unwanted life support, and are cared for in institutions when they would prefer to die at home.

Unfortunately, the authors do not

mention the obvious corollary to avoidance of unwanted life support, namely ending a life that is becoming more intolerable with each passing day. The lack of such an option in Canada must be a fundamental component of any discussion of end-of-life care.

It may be that skilled nursing and appropriate medication in a modern palliative care setting can alleviate most physical suffering. However, for some people, the chief misery at the end of life may not be from physical suffering, but from the loss of privacy, dignity, purpose and independence.

Even though suicide is a legal act, helping someone end his or her life remains a criminal offence. In spite of polls indicating that a majority of Canadians believe such assistance should be available if requested, the present federal government is clear that it will not change the law; the Canadian Medical Association also seems to prefer the status quo.

In the end, it all comes down to one simple question, "Whose decision should it be?" The answer can be found in another question, "Whose life is it?"

John S. Mackay MD Retired pathologist

Reference

 Cook D, Rocker G, Heyland D. Enhancing the quality of end-of-life care in Canada. CMAJ 2013; 185:1383-4.

CMAJ 2014. DOI:10.1503/cmaj.114-0013

Independent research needed to inform end-oflife policy choices

In their *CMAJ* editorial, Flegel and Fletcher¹ call for a national dialogue on end-of-life care, arguing that policy change should not be the result of a single court decision.¹ In Canada, different medical end-of-life practices, such as treatment withdrawal, use of medication justified by symptom management and use of lethal drugs are being debated.²-⁴ Concerns about the effects of policies are central to the Canadian debate, and international evidence is quoted by proponents and opponents of legislative reforms.

We recently conducted a scoping

review of international evidence on medical end-of-life practices, with a focus on the use of lethal drugs by physicians.⁵ Key findings from this review are currently relevant to public debate. We found no empirical study on the use of lethal drugs by physicians in Canada, which is surprising given frequent claims that "assisted suicide," "euthanasia" or "medical aid in dying" are being practised illegally in Canada.

Policy-makers should therefore be careful in drawing conclusions about what is known, and not known, about the likely effects of policies.

Scientific evidence alone cannot provide simple answers to complex end-of-life care dilemmas. However, having robust knowledge publicly available is a precondition for informed democratic deliberation on end-of-life care in Canada.

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References

- Flegel K, Fletcher J. Choosing when and how to die: Are we ready to perform therapeutic homicide? CMAJ 2012;184:1227.
- Carter v. Canada (Attorney General), 2012 BCSC886. No. S112688.
- Vogel L. Legal ambiguities surround authority to make end-of-life decisions. CMAJ 2011;183:E617-8.
- Bill 52: An Act respecting the end-of-life. Quebec (QC): National Assembly of Québec; 2013.
- Boivin A, Marcoux I, Mays N, et al. What evidence is available about the medical practice of euthanasia in contexts of prohibition and legalization? A scoping review. Proceeding from the North American Primary Care Research Group conference; 2013 Nov. 10–12; Ottawa (ON).

CMAJ 2014. DOI:10.1503/cmaj.114-0012