Collaborative Atorvastatin Diabetes Study (CARDS) and can suggest 2 additional exercises related to this study. First, in CARDS, the reduction in the death rate for diabetic patients who received atorvastatin was from 5.8% to 4.3%, an absolute risk reduction of 1.5% over 4 years (1.5%/4 = 0.375% annually), which yields a number needed to treat of 100/0.375 or about 275. If atorvastatin costs about £20 per month (about Can$47), how much did it cost to save one life? The answer is 20 × 12 × 275 or £66 000 (Can$154 500). Is this cost-effective? Second, from the CARDS data, we can calculate the 10-year risk of coronary artery disease for diabetic patients not receiving statin treatment. The overall rate of cardiovascular events in the placebo group was 13.4%, and median follow-up was 4 years. Therefore, the annual rate would be 13.4%/4 (3.35%) and the 10-year rate would be 33.5%. The rate of coronary artery disease was approximately three-quarters of the total cardiovascular risk[5,6] or about 25%.

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[Three of the authors respond:]

We thank Harold Siden and Gerry Burns for sharing their insights regarding the challenges of teaching EBM to clinicians and for raising important issues pertaining to the use of tips (or scripts) and other fascinating innovations in such teaching. Siden points more broadly to obstacles to the full integration of EBM into clinical practice. We have addressed Gerry Burns's comments regarding number needed to treat, cost-effectiveness and long-term outcomes in a previous letter.[1]

Burns suggests a relationship, and some potential differences, between our EBM scripts,[2] his own scripts and the notion of "threshold concepts" being developed within the ETL project (Enhancing Teaching-Learning Environments in Undergraduate Courses) at the University of Edinburgh (www.ed.ac.uk/etl/project.html). We suspect that the improvisational aspect of our scripts may constitute one important difference. Our scripts, like those studied by Irby,[3,4] are subject to variation, truncation and expansion, depending on the circumstances and on learners' prior knowledge. Irby described how exemplary clinical teachers balance illness and curriculum scripts in the course of customizing their teaching rounds to the needs of both patients and learners.[3] Rather than threshold concepts, he focused on characteristic learner misconceptions as guides to instructional decisions.

We find interactive teaching to be inherently improvisational. In the teachers' versions of our tips,[5] narrative descriptions highlight possible variations based on learners' responses and characteristic errors. The reports of field tests describe substantive modifications of the approaches that have arisen when teachers not involved in developing the tips used them in learner settings different from those in which they originated.

Both Siden and Burns touch on the need to adapt the tips to specific contexts by using examples and corresponding numbers relevant to the topic or question at hand. Readers of both the learners'[6] and the teachers'[5] versions of a single tips installment, such as installment 2 on confidence intervals, may notice that a given example is presented more generically in the latter than in the former. We expect that teachers who adopt these approaches will frequently supply their own clinical context, numbers drawn from an article being appraised or other specialty-specific content.

Siden comments on variations in availability of quality evidence among different medical specialties and clinical areas. Resources such as the *ACP Journal Club* place internal medicine in advance of many other specialties in important clinical areas. Efforts aimed at a broader range of specialties exist, such as the McMaster Online Rating of Evidence ("MORE"; see http://hiru.mcmaster.ca/more). A paucity of clinical research ultimately limits evidence-based clinical practice. Undoubtedly, the frontiers of medical knowledge based upon well-performed clinical research will continue to expand over time, rendering all the more salient the need for effective teaching tools in equipping clinicians to digest and use such information.

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Guidelines for STEMI

We commend Peter Bogaty and colleagues[1] for their Canadian adaptation of the ST-elevation myocardial infarction (STEMI) guidelines. They have appropriately emphasized the importance of time to reperfusion, whether thrombolysis or primary percutaneous coronary intervention (PCI) is used. Although primary PCI may be superior to thrombolysis when performed in a timely manner, this benefit may be attenuated or lost altogether when PCI is delayed more than 60 minutes.[2] However, it may be possible to derive the benefits of primary PCI without the inherent treatment delay by administering thrombolysis followed by immediate transfer for PCI. This strategy, termed "facilitated PCI," may be the optimal mode of reperfusion for many patients in Canada, where interventional centres are regionalized. Although early studies failed to show a benefit of routine PCI immediately after thrombolysis,[3] PCI technology has changed considerably in recent years. More recent studies have indicated that facilitated PCI may indeed be safe and effective,[4] but larger studies are needed to provide definitive answers.

The TRANSFER-AMI trial, initiated by Canadian investigators and funded by the Canadian Institutes of Health Research, will randomly assign approximately 1200 high-risk STEMI patients treated with thrombolysis in non-PCI hospitals to be transferred immediately for facilitated PCI or to receive standard care. This study could have a significant impact on the treatment of STEMI in Canada, and we strongly encourage Canadian centres to participate (for further information, see the Web site of the Canadian Heart Research Centre, www.chrc.net).

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Peter Bogaty and colleagues,[1] in their review of the American College of Cardiology/American Heart Association STEMI guidelines from a Canadian perspective, recommend transfer of STEMI patients with Killip class 3/4 or other high-risk features of acute myocardial infarction for PCI, if such intervention is reliably available within 60 minutes. However, achieving a 60-minute transfer imposes significant challenges for emergency medical services (EMS) that the authors have not considered. Several studies examining interfacility transfer for primary PCI, operating under rigorous study protocols, were able to achieve randomization-to-balloon times of 80 to 122 minutes,[2–5] which suggests that meeting a 60-minute target may be difficult in everyday practice.

The following recommendations would help to safely achieve this target:

- The paramedics caring for the patient should be capable of advanced life support (ALS) interventions, as some of the patients may experience the complications of STEMI while in transit.[4] Therefore, EMS dispatch should provide an ALS-crewed vehicle in the same time frame as would apply for a critical 9-1-1 call (in our system, this would be 8 minutes, 59 seconds). Alternatively, the same ambulance that brought the patient to the emergency department, if its crew is capable of providing ALS, should be used to transfer the patient.
- A PCI "hot link" should exist between the referring and receiving institutions. The PCI centre should accept referrals without question and should reassess for PCI suitability on arrival.
- Patients should be taken directly to the catheterization suite, without a stop in the receiving emergency department.

We feel that a 60-minute target for transfer is unlikely to be met without specific optimization of EMS and hospital systems. The absence of such optimization will inevitably lead to failure and abandonment of a strategy that has the potential to lessen morbidity and mortality.

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