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Response

We thank Dr Loh and colleagues for their comments on our recent article.[1] We agree with many of the ideas they shared, including the need to pursue a clear definition of global health, and the need to ensure that "trainee experiences are both viable and valuable." While we agree that many of the examples we gave for providing care to marginalized communities in Canada fall into the traditional role of family physicians as advocates, we tried to highlight in our paper that global health experiences would complement resident learning within the CanMEDs education framework. The importance of the role of advocate is facilitated and reinforced in the context of global health education, and highlighted in such examples as the Queen's University global health curriculum. Before global health can be fully integrated into the family medicine curriculum, there needs to be thoughtful discussion regarding what global health constitutes, and strategies to ensure trainees have beneficial experiences while still providing benefit to the community they are serving. It is only with sound academic discussion, such as this, that we are able to find the best way to move forward.

—Victor K. Ng MSc MD CCFP
—Archna Narula (Gupta) MD CCFP
London, Ont

Competing interests
None declared

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Implications of a newer Framingham model

Dr Bosomworth's integration of risk assessment and clinical practice guideline recommendations into a tool that generates patient-specific numbers needed to treat[1] has the potential to bridge an important gap in clinical decision making. The practicality is clearly appreciated, as evidenced by responses published in this journal in July 2011.[2,3] It is important to identify why, as one response noted, use of this tool might "increase ... prescription of statin drugs."[3] The Framingham general cardiovascular disease 10-year risk model (FRS-CVD), use of which was recommended in the 2009 Canadian dyslipidemia guidelines,[4] provides a risk estimate that incorporates a larger and more pathophysiologically diverse number of events. In addition to estimating the risk of "soft" and "hard" coronary artery disease (CAD) events (CAD death, myocardial infarction, coronary insufficiency, angina), it also incorporates the risk of cerebrovascular events (ischemic stroke, hemorrhagic stroke, transient ischemic attack), peripheral artery disease (intermittent claudication), and heart failure. Earlier Canadian dyslipidemia guidelines[5] advocated the use of the Framingham hard CAD 10-year risk model (FRS-CAD), which estimated only "hard" coronary events (CAD death, myocardial infarction).

For most patients, their estimated risk is greater using FRS-CVD than it is using FRS-CAD.[6] For example, in the case study that Dr Bosomworth presents, the 10-year risk using FRS-CVD is approximately 14%, while using FRS-CAD the risk estimate is 8%. In a small cohort study conducted in Ontario, the 2009 Canadian dyslipidemia guidelines' advocacy of FRS-CVD rather than FRS-CAD was shown to increase the number of patients recommended for lipid-lowering therapy by 2.3-fold.[7] In a cross-sectional analysis conducted in the United States, the use of FRS-CVD rather than FRS-CAD was shown to significantly diminish the low-risk category for both men and women.[6] If use of the FRS-CVD is adopted by upcoming US dyslipidemia guidelines, the investigators of the US analysis anticipate the effect to be profound and one that warrants "close economic and disease management evaluation."[6] In addition, because statins have not been shown to be beneficial in reducing the risk of all of the cardiovascular end points comprising the FRS-CVD risk estimate, numbers needed to treat derived from these risk estimates will for most patients inflate treatment benefit further (in addition to the extrapolation to a 10-year time period). For example, statins do not reduce the risk of hemorrhagic stroke; rather, a nonsignificant increase in risk was documented in a recent meta-analysis.[8] As it relates to clinical decision making surrounding a particular drug therapy, a risk assessment tool might be informative if it identifies a risk shown to be reduced by the intervention. In this regard, estimates of benefit extrapolated from the earlier FRS-CAD risk model would at least be more consistent with the statin evidence base in the setting of primary prevention.

—Cait O'Sullivan PharmD
Vancouver, BC

Competing interests
None declared

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Response

Cait O'Sullivan correctly points out that one of the reasons more patients considering primary cardiovascular disease prevention will be treated with statins is that the Canadian dyslipidemia guidelines are based on all cardiovascular outcomes rather than the "hard" cardiovascular outcomes used in the Adult Treatment Panel (ATP) III guidelines. The new ATP IV guidelines, due at the end of the past year, have been slow to appear. This might be partly owing to new expectations regarding guidelines produced by the Institute of Medicine (a sort of guideline on guidelines),[1] but it also must certainly reflect a concern for the increasing cost of statin therapy with reduced probability of benefit as lower risk people are offered treatment.

The new ATP IV guidelines are expected this year, and I am concerned that they might resemble the Canadian guidelines, which tend to push individuals at intermediate risk toward treatment through use of high-sensitivity C-reactive protein evaluation and lower low-density lipoprotein (LDL) thresholds despite a lack of evidence for either as a risk indicator. There now seems to be increasing support for using statins to treat cardiovascular risk rather than LDL levels.[2] Perhaps the new constraints on guideline development will help promote more attention to evidence and reduce the influence of expert opinions and conflicts of interest.

Decisions for statin use in primary prevention, as has been pointed out, depend on risk assessment and treatment threshold. Individuals at all risk levels derive an equal relative benefit from statin use, but the absolute benefit to those at low risk is small indeed. Knowing the number needed to treat (NNT) helps with shared,