

## Letters to the Editor

### Reply to Letter From Thornhill et al.—Infective Endocarditis Hospitalizations Before and After the 2007 American Heart Association Prophylaxis Guidelines



#### To the Editor:

We appreciate the interest of Professor Thornhill and colleagues regarding our analysis of infective endocarditis (IE) hospitalizations before and after the 2007 American Heart Association (AHA) prophylaxis guidelines.<sup>1</sup>

The lack of antibiotic prophylaxis (AP) prescribing data in our study is certainly a limitation. The data source available to us unfortunately does not include AP prescription data. However, our group has previously shown that (1) the 2007 AHA guidelines resulted in a significant reduction in AP prescribing among Canadian cardiologists<sup>2,3</sup>; and (2) that dentists in Canada rely heavily on recommendations from patient's cardiologists as to whether or not AP is required for a given individual.<sup>4</sup>

We agree with Thornhill and colleagues that the incidence of IE associated with native valve disease (either nonrheumatic valvular disease or chronic rheumatic heart disease) and streptococcal IE are most likely to be influenced by the AHA guidelines, relative to other subgroups. To investigate this further we examined the incidence of IE associated with native valve disease and streptococcal species. As in Figure 3 of our report, we excluded *Streptococcus pneumoniae* and groups A, B,

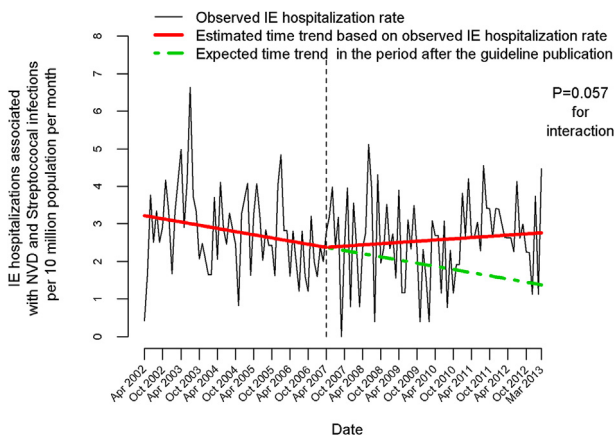
C, D, and G. With change point analysis, no change in the population-based incidence was observed (figure not shown). Change point analysis does not stipulate when a change in the incidence should have occurred. When we specifically look before and after April 2007, we see a borderline trend (Fig. 1). The slope of incidence over time for native valve IE with streptococcal species was slightly higher after compared with before April 2007 ( $P = 0.057$  for interaction term). More years of follow-up are needed to ascertain whether this holds true.

The challenge with interpreting data from streptococcal species using International Classification of Diseases codes is that unfortunately there is no code specific to *Streptococcus viridans*, the organism most likely to be influenced by reducing prescriptions for AP.

Drawing comparisons between our study findings and those of Dayer and colleagues is difficult, because the National Institute for Clinical Excellence guidelines differed from the AHA guidelines, and the rate of dissemination and uptake of these guidelines among clinicians might also have differed.

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**Figure 1.** Incidence of infective endocarditis hospitalizations associated with native valve disease and streptococcal species. The vertical dashed line indicates the first fiscal quarter of 2007, the month of online guideline publication (April 2007). IE, infective endocarditis; NVD, native valve disease.

#### Disclosures

The authors have no conflicts of interest to disclose.

#### References

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