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In reply

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ECG will be far from perfect and is an important source of potential error for those using it. To the point of this article it is hard to believe the 4 cardiac patients (especially the 84-year-old with a cardiomyopathy and a 94-year-old with ventricular tachycardia) had normal ECGs on ED presentation by the criteria used in our studies.

It is not surprising that some may find that the San Francisco Syncope Rule is less sensitive or specific when externally validating under different circumstances than we derived and validated. A different definition of syncope upon enrollment and the subjective nature of adverse outcomes, along with the imperfect application of predictors, make the claims and findings understandable. Even with these potential problems this study should make no claims that the sensitivities are different as the 95% confidence interval overlap. In fact, our studies may be equivalent if a few of the cases declared as "misses" were improperly classified by either outcome or predictor.

We are the first to admit that the San Francisco Syncope Rule is not perfect as we were not able to derive or validate a rule with high enough sensitivity to allow it to be used as the sole method of decisionmaking. It may be misleading to associate the criteria of the San Francisco Syncope Rule with the term "rule." However, our work does re-affirm much of the previous work involving risk stratification of patients with syncope, particularly regarding ECG abnormalities and structural heart disease (as best predicted by congestive heart failure).[6-8] Physicians should look at all of the evidence for syncope as recently reviewed in the American College of Emergency Physicians clinical policy document in the same journal edition.[9] We also believe, contrary to the editor's comments, no one should to wait to start using the evidence to improve their decisionmaking.

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In reply:

We thank Drs. Quinn and McDermott for their interest in our work.[1] In an external validation study, we found that the San Francisco Syncope Rule demonstrated lower sensitivity (89%; 95% confidence intervals: 81%, 97%) than reported by the San Francisco Syncope Rule investigators in their derivation[2] and validation studies.[3] Our findings are consistent with other published[4] and unpublished reports.[5-7] Drs. Quinn and McDermott point to several differences between the original San Francisco Syncope Rule investigations and our study; we believe that these differences are minor and unlikely to qualitatively change our findings.

First, Drs. Quinn and McDermott are concerned that our definition of syncope may have resulted in the enrollment of patients with persistent altered mental status. In our study, we excluded all patients with an abnormal mental status, including patients with baseline cognitive deficits. Thus, we used a definition that was more conservative than the original San Francisco Syncope Rule studies to exclude patients with potential neurologic conditions. Our frequency of patients with stroke/transient ischemic attack (0.4%) is comparable to the San Francisco Syncope Rule derivation (0.4%) and validation studies (0.4%). Both patients with stroke/transient ischemic attack in our study complained of vertigo/unsteady gait in tandem with syncope, and both were documented to have a normal mental status by both the emergency and admitting physicians.

Second, Drs. Quinn and McDermott are concerned that the 3 San Francisco Syncope Rule negative patients in our study who experienced an arrhythmia may not have had a clinically important event. On a 3 physician panel review, all 3 patients had explicit documentation of an arrhythmia on inpatient cardiac monitoring (2 patients experienced ventricular arrhythmia; the third experienced symptomatic paroxysmal supraventricular tachycardia). One patient underwent electrophysiology testing, which did not reveal inducible ventricular tachycardia. A second patient was felt to be a poor automatic implantable cardioverter defibrillator candidate given advanced age and multiple co-morbidities. The final patient required adenosine administration to terminate a symptomatic paroxysmal supraventricular tachycardia.

Finally, Drs. Quinn and McDermott point out that the definition of an "abnormal" ECG was different from the San Francisco Sycope investigations. We used explicit definitions to

help clinicians categorize ECGs as normal (including 1st degree block and premature atrial contractions), non-specific ST-T changes, and abnormal (including abnormal conduction intervals). We regarded any abnormalities and non-specific ST-T changes, regardless of whether these changes were old or new, to be positive by the San Francisco Syncope Rule. This conservative definition is likely to upwardly bias estimates of sensitivity compared to the unstructured ECG assessments used by the San Francisco Syncope Rule investigators. On retrospective review of the 4 patients who were classified as San Francisco Syncope Rule negative by the emergency physician but who experienced a cardiac event, the cardiology overread of the ECG was normal in 3 patients and abnormal in 1 patient. If the cardiologist's ECG interpretation had been used for San Francisco Syncope Rule classification for these 4 patients, the observed San Francisco Syncope Rule sensitivity in our study would have improved to 91% (95%CI: 84%, 99%). This sensitivity is still too low to justify routine application of the San Francisco Syncope Rule and comes at the cost of decreased specificity that will occur as more ECGs are labeled as "abnormal" and the number of false-positive cases increases.

In summary, the issues raised by Drs. Quinn and McDermott are unlikely to have an important effect on our findings. Our results were also robust to multiple sensitivity analyses to assess the effects of missing data, missing follow-up, and experience of the treating physician.

While it is impossible to argue with Drs. Quinn and McDermott's suggestion that clinicians should not wait "to improve their decisionmaking," we continue to urge caution regarding widespread application of the San Francisco Syncope Rule, given the lower sensitivities reported by ourselves and others. The San Francisco Syncope Rule was derived on a cohort containing only 79 serious events (including conditions diagnosed during the emergency department visit), and we are concerned about the stability of the San Francisco Syncope Rule in other populations. Although the San Francisco Syncope Rule is a serious contribution to syncope research, further large cohort research analyzing hundreds of delayed, serious clinical events will be required to generate a robust decision instrument.

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In Response to "Emergency Medicine in the Blogosphere"

To the Editor:

I am an Associate Consultant in the emergency medicine department at Singapore General Hospital, and read the May 2007 *Annals News and Perspective* article with great interest, for several reasons. I am familiar with Drs. Allen Roberts and Nicholas Genes, 2 extremely talented emergency physicians and writers whose blogs I link to and greatly enjoy reading. Allen, Nick and I were briefly part of a group of medical bloggers who set up and contributed to The Lingual Nerve (www.lingualnerve.com). Our venture was well received with daily visits numbering more than 1000 during peak periods, but sadly, time constraints and other commitments led to its demise after a year of collaboration.

I too have a personal blog, located at www.spacefan.blogspot.com, which began in 2002. Although it started out by covering more social aspects of my life, its direction changed in 2003, when I reported on the SARS epidemic in my country. It was eventually mentioned on The Guardian's Web site and garnered a favorable review (http://www.guardian.co.uk/weblog/special/0,10627,932308,00.\html – please scroll to the bottom). SARS-related entries from that year can be accessed via the archive links on the main page of my blog.

The pros and cons highlighted in the article, though cited by US-based doctors, are also applicable in other parts of the