

**In Response to “Health Screening on Aconcagua”**

*To the Editor:*

We read with great interest the recent letter to the editor by Windsor et al “Health Screening on Aconcagua.”<sup>1</sup> We spent 3 weeks in January 2009 on Aconcagua at Plaza de Mulas base camp (4365 m) prospectively enrolling subjects in an investigation of acute mountain sickness (AMS). We directly observed the health screening process referred to in Windsor’s letter. If a climber had systolic blood pressure (SBP)  $\geq 160$  mm Hg, the person was advised to return for a recheck 12 hours later. If the second measurement remained  $\geq 160$  mm Hg, the climber was started on a low-dose calcium channel blocker. This practice is evidently based on the British Hypertension Society IV guidelines for the management of hypertension in the general community, which state that antihypertensive therapy is indicated as treatment for sustained SBP  $\geq 160$  mm Hg or diastolic blood pressure  $\geq 100$  mm Hg.<sup>2</sup>

Windsor et al brought up 2 concerns with this approach, namely, initiation of treatment based on only 1 or 2 elevated readings and the lack of literature supporting hypertension as a predictor of altitude sickness. We too were unable to identify any studies describing a clear association between hypertension and altitude sickness. Furthermore, British Hypertension Society IV guidelines are geared towards screening for and management of hypertension in the outpatient primary care population. Extrapolation of these guidelines to elevated readings at an altitude of 4365 m may be problematic.

In our study, we enrolled 127 subjects at 4365 m while they were acclimating at base camp. Subjects prospectively filled out a questionnaire with demographics, medical history, experience at altitude, and characteristics of their current expedition. We then recorded 1 set of vital signs on the subjects while at base camp and collected outcome data after their summit attempt. We currently have outcome data on 65 subjects. Our primary outcome is the presence of AMS, as measured by the Lake Louise Scoring System AMS self-report questionnaire. Given the high incidence of AMS on Aconcagua, we report those subjects who experienced a severe degree of AMS, as defined by a Lake Louise Questionnaire score of  $\geq 5$ .<sup>3,4</sup>

Twelve of 65 subjects (19%) had a SBP  $\geq 160$  mm Hg on our 1 isolated reading, of whom 6 (50%) had a severe degree of AMS. Meanwhile, of the 53 patients with SBP  $< 160$  mm Hg, 27 (49%) had a severe degree of AMS. The difference between the prevalence of AMS in the