Letters to the Editor

Epinephrine Autoinjector Warning

To the Editor:

We suspect most of your readers are familiar with the EpiPen. Its black needle tip and gray safety cap have been standard for almost 40 years. In the fall of 2010, the EpiPen colors were changed: the black needle end became orange and the gray safety cap became blue. Other changes were made to the EpiPen autoinjector that might not be readily apparent to all providers or users, especially in the excitement of a life-threatening anaphylactic reaction.

Figure 1 shows a number of autoinjectors. One of them is not epinephrine, but might find its way into your hands or your patient's, and would allow a patient in anaphylaxis to die. There is no warning that it is not epinephrine despite its nearly identical appearance to traditional epinephrine autoinjectors. The drug name administered by the nonepinephrine autoinjector is Alsuma, an antimigraine medication whose autoinjector version was approved by the Food and Drug Administration in 2010. The Alsuma autoinjector has colors identical to the new EpiPen also released in 2010 and a casing identical to the old EpiPen (Figure 2), even down to the design of the caps (Figure 3). Nine-year-old EpiPens still have 63% efficacy,¹ and many consumers and physicians are aware of this, so it is likely we will have this problem of confusion with both old and new EpiPens for several more years even as old EpiPens expire.

This problem is especially pressing in the wilderness setting. A recent expert panel studying the management

Figure 2. From left to right: new post-2010 EpiPen autoinjector; Alsuma autoinjector first introduced in 2010; pre-2010 EpiPen autoinjector.

of anaphylaxis in the wilderness noted that “even the simple autoinjector is not so simple to use when a patient [in the wilderness] is *in extremis*.”² In addition, the Wilderness Medical Society has released a formal position statement that, in situations when access to standard medical care will be delayed owing to weather or geography, that “properly trained, non-medical professionals . . . be trained to appropriately administer epinephrine for the treatment of anaphylaxis.”² The unique recommendation that nonmedical professionals independently diagnose and treat a medical condition with a prescription drug increases the importance that the drug be appropri-

Figure 1. Different autoinjectors: 4 of these 5 autoinjectors are intended for anaphylaxis; 1 is an autoinjector intended for migraine treatment.

Figure 3. Alsuma (left) and EpiPen (right) safety caps have identical construction and markings. The blue coloring of the Alsuma safety cap is identical to the blue used in the new EpiPen (see Figure 2).

Figure 4. Proposed markings for Alsuma autoinjector.

ately labeled and uniquely identifiable. It also underscores the importance that the wilderness medicine community be aware of possible look-alikes, to ensure that “proper training” of nonmedical professionals includes awareness of this situation.

We urge that all Alsuma autoinjectors be labeled “NOT EPI” in red and black letters on the white container (Figure 4). There are other epinephrine autoinjectors in a white container. This warning and request for relabeling is being sent to the Food and Drug Administration, who we hope will require Alsuma to apply strong adhesive labels to both device and case stating NOT EPI until both can be redesigned to more clearly differentiate this product from epinephrine autoinjectors.

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2. Gaudio F, Lemery J, Johnson D. Wilderness Medical Society roundtable report: recommendations on the use of epinephrine in outdoor education and wilderness settings. *Wilderness Environ Med*. 2010;21:185–187.

Using the 6-Minute Walk Test for Screening Summit Success on Mount Aconcagua

To the Editor:

Mount Aconcagua, at 6962 m, is the tallest mountain in the southern hemisphere and one of the highly sought after 7 summits. It is a preferred destination among climbers owing to the psychological and physical demands it imposes, and serves as a nontechnical introduction to extremely high altitude climbing. With more than 3000 visitors annually attempting the climb predictors of summit success are in demand.

In a 2010 *Wilderness & Environmental Medicine* article, Lazio et al¹ proposed the use of a 6-minute walk test (6MWT) as a possible predictor of summit success. They found age and post-6MWT oxygen saturations above 75% to be statistically significant predictors of summit success, and suggested the test was easy to replicate in remote high altitude environments.

On an Aconcagua expedition in January 2012, our group of 4 climbers decided to test the reliability of the 6MWT as a predictor of our own summit success. We replicated the methodology in the original article as closely as possible.^{1,2} Climbers were blinded to all results to prevent psychological effects interfering with their success.

Our results are depicted in the Table. Although we acknowledge that our results are very limited owing to a small sample size, they do support those of the original article. Additionally, we can confirm that the test was easy to reproduce, simple to conduct, and required minimal infrastructure. These are important requirements for a screening test of this nature.

In a recent *Wilderness & Environmental Medicine* letter, Daniels³ stated that the 6MWT was not predictive of summit success on Mount Kilimanjaro. Unfortunately, owing to a lack of detailed methodology and insufficient sample size, a comparison between the original results and the Kilimanjaro results is not possible. However, this illustrates the potential use and easy reproducibility of this test in other remote environments.

Table. Pre and Post- 6MWT oxygen saturations at base camp and summit results

Climber no.	Age, years	Pre-6MWT O ₂ saturation	Post-6MWT O ₂ saturation	Summit
1	56	83	72	No
2	36	94	88	Yes
3	24	88	82	No
4	31	88	84	Yes

6MWT, 6-minute walk test.