

Correspondence

NOVEL EPINEPHRINE AUTO-INJECTOR (NEA): SHARPS INJURY PREVENTION VALIDATION AND COMPARABLE ANALYSIS WITH EPIPEN AND TWINJECT

To the Editor: Guerlain et al¹ concluded that “the sharps injury prevention feature was verified for the novel epinephrine auto-injector (Intelliject), and health care professionals experienced in the use of EpiPen and Twinject for allergic emergencies perceived Intelliject to be a safer and preferred alternative.”¹ However, this conclusion is flawed.

Although this study was intended to obtain feedback on, and evaluate preference for, features of Intelliject compared with those of Twinject and EpiPen, it was poorly designed and employed methods that were biased toward Intelliject. The selected participants were practicing nurses who had trained patients on EpiPen and Twinject in the previous 12 months, rather than patients or caregivers who would represent typical users of epinephrine auto-injectors (EA) in the real world. Moreover, participants underwent extensive training and testing for Intelliject. In the training phase, each participant was required to read the instructions and successfully demonstrate the use of the device 3 times consecutively. In the testing phase, each participant was required to inject 18 Intelliject devices—a different orange and a new Intelliject device were used for each injection. However, participants did not undergo equivalent training

and testing for EpiPen or Twinject. In the comparative evaluation step, participants were asked to rate the 3 EA devices based on preference for size/shape, ease of use, ease of training patients in use, perceived safety, and overall preference, but these features were not equally tested or reported for all 3 devices, which is not reflective of a true comparator trial. Participants were also asked to recall instances during which an EA was used incorrectly. Although participants listed a retractable needle as a beneficial feature of Intelliject (potentially preventing exposure to a needle already contaminated with a blood product), participants’ reports of their least favorite features of Intelliject—the shape for gripping/holding, the difficulty in removing both the outer case and safety cap, and the tendency of the device to become slippery when wet (features that are critical during stressful emergency situations²)—suggest that Intelliject may be potentially hazardous in real-world settings.

Overall, flawed methodology and comparisons raise substantial questions about the validity of the authors’ conclusion. This study’s use of an EpiPen device not available in the United States and since replaced by a newer version (with needle protection)³ rendered any findings for the comparison with EpiPen clinically irrelevant.

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