In conclusion, we agree with the authors that electronic devices are cost-effective. We chose the consignment model in which the pump is usually given for free and only the consumable costs are charged. The consumable costs for one patient are the same as with a traditional device.

eComment: The Six Sigma approach: from mobile phones to chest tubes

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We read with interest the manuscript of Pompili et al. [1] about the learning curve after introduction into clinical practice of a new electronic chest drainage system. In recent times, several devices able to measure air leaks (AL) continuously and digitally have been introduced into clinical practice. According to the authors, the results of their study may be biased by their familiarity with other electronic devices. Consequently, these results need independent confirmation.

Chest tube management has a limited number of steps and is performed many times per year by thoracic surgeons; it is thus ideal for root-case analysis and evaluation of modifications. In a previous paper [2], we applied the Six Sigma concept to improve the process of AL evaluation; in particular to design and assess a protocol for postoperative AL evaluation, to reduce the time to rate AL at bedside, and to minimize the degree of variability of AL score. This translated into improved efficiency and effectiveness.

The Six Sigma quality improvement methodology is a data-driven approach developed by the Motorola Corporation that seeks to improve outcomes by eliminating the variation within a process [3]. To date, clinical use of Six Sigma methodology has focused on efficiency outcomes, such as reducing the length of hospital stay in stroke patients, but application of the Six Sigma method has been used successfully to improve clinical outcomes and also to reduce surgical complications in repetitive procedures [4].

In conclusion, we agree with the authors that electronic devices are cost-saving. However, we suggest the use of an objective method such as Six Sigma to evaluate the effectiveness of a new device.

References