

Do Different Body Colors and Labels of Insulin Pens Enhance a Patient's Ability to Correctly Identify Pens for Injecting Long-Acting versus Short-Acting Insulins?

Mark Lefkowitz, M.B.A.

Abstract

Background:

The objective of this study was to characterize how successfully patients with diabetes are able to distinguish between pens of the same pen type containing long- and short-acting insulins.

Methods:

Structured one-on-one interviews were conducted with 400 patients with diabetes in the United States, using either a differentiated ($n = 100$) or undifferentiated ($n = 100$) SoloSTAR® (insulin glargine vs insulin glulisine) or ($n = 200$) FlexPen® (insulin detemir vs insulin aspart). A pair of each pen type was presented simultaneously, and participants were asked to identify the pen that they would use to (1) inject at lunch, (2) inject once daily, and (3) inject at breakfast and how they differentiated between pens. The short-acting insulin pen was then presented, and the interviewer asked whether this was the correct pen to administer insulin once or thrice daily.

Results:

More patients successfully identified the correct SoloSTAR pen across the tests vs FlexPen, and the error rate (incorrect selection/inability to select) was significantly lower, respectively [2.7% ($n = 8$) vs 16.3% ($n = 98$)]. The most common reason cited for correct responses among all patients was color (of the label/pen, according to pen type).

Conclusions:

This study suggests that the full pen body color used on SoloSTAR pens enhances the patient's ability to differentiate between the pens for long- and short-acting insulin and is a notable improvement compared with the standard approach of differing label color.

J Diabetes Sci Technol 2011;5(1):136-149

Author Affiliation: Lieberman Research Group, Great Neck, New York

Keywords: color differentiation, insulin pen, long-acting insulin, patient preference, short-acting insulin

Corresponding Author: Mark Lefkowitz, M.B.A., Lieberman Research Group, 98 Cuttermill Road, Great Neck, NY 11021; email address lefkowitzm@liebermanresearch.com