Journal of Diabetes Science and Technology
Volume 2, Issue 6, November 2008

Patch-Pump Technology to Manage Type 2 Diabetes Mellitus: Hurdles to Market Acceptance

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Abstract

The recent development of novel "patch"-type insulin infusion pump (IIP) technologies has created an opportunity to improve the quality of life for a broader type 2 diabetes patient demographic. At first glance, type 2 diabetes patients represent a large percentage of the total diabetes patient population; however, adoption of traditional IIP products and multiple daily injection (MDI) therapy has remained limited amongst this patient segment. With an insulin reservoir, delivery system, and cannula integrated into a small, wearable, disposable or semidisposable device, patch pumps simplify traditional IIP therapy, while potentially offering therapeutic benefits over traditional MDI therapy. Herein, potential benefits of patch-pump technology for type 2 diabetes patients are considered while outlining the hurdles to broad product adoption that will likely limit the near term commercial opportunity.

J Diabetes Sci Technol 2008;2(6):1147-1150

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Abbreviations: (IIP) insulin infusion pump, (FDA) Food and Drug Administration, (GP) general practitioner, (HCP) health care provider, (MDI) multiple daily injections, (SMBG) self-monitored blood glucose

Keywords: type 2 diabetes, insulin infusion pump

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