



Title **Appropriate use of Insulin Pump—Real-Time Continuous Glucose Monitoring Systems in the Veteran Population**

Agency **VATAP, VA Technology Assessment Program**

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Reference VA Technology Assessment Program Brief Overview, July 20, 2006.
www4.va.gov/VATAP/docs/InsulinPump2008tagm.pdf

Aim

To evaluate the use of insulin pumps – real-time continuous blood glucose monitoring devices in managing Veterans Affairs' (VA) patients with type 1 diabetes.

Further research/reviews required

Additional studies using large populations are needed to determine the impact of CGMS on managing patients with diabetes.

Conclusions and results

Literature searches resulted in 183 citations, of which 34 were retrieved and 8 citations met criteria for inclusion in this report. The results suggest comparable safety and efficacy of the insulin pump and multiple daily injections in adults with insulin-treated, uncontrolled, diabetes who are adequately trained and supported by a specialized team. Results also suggest insulin pumps may improve lifestyle and quality of life based on convenience, flexibility, and ease of use. However, existing evidence has not shown significant improvements in controlling diabetes or improvements in quality of life using indicators from which we can derive reliable cost-effectiveness estimates of the available treatment options.

Recommendations

No firm conclusions or recommendations can be made regarding the appropriate use of insulin pump – real-time continuous glucose monitoring systems to manage VA patients with diabetes.

Methods

In June 2006, comprehensive literature searches of the peer-reviewed published literature were conducted using the Cochrane Library, MEDLINE, EMBASE, and Current Contents databases, and the HTA database, using word phrases and thesaurus terms describing continuous blood glucose monitoring and insulin infusion pumps. The American Diabetes Association annual meeting abstracts were hand searched for 2006. US government sources, Medtronic Minimed, FDA, and patent applications for data supporting FDA approval were also searched.