# OHTAC Recommendation

## Continuous Glucose Monitoring for Patients with Diabetes

*Presented to the Ontario Health Technology Advisory Committee in May, 2011*

**July 2011**

OHTAC Ontario Health Technology Advisory Committee

## Issue Background

A literature search was conducted by the Medical Advisory Secretariat (MAS) to determine the effectiveness and cost-effectiveness of continuous glucose monitoring combined with self-monitoring of blood glucose compared with self-monitoring of blood glucose alone in the management of diabetes.

## OHTAC Findings

Based on the MAS review, OHTAC found moderate quality evidence that continuous glucose monitoring plus self monitoring of blood glucose:

1. is not more effective than self monitoring of blood glucose alone in the reduction of HbA1c using insulin infusion pumps for Type 1 diabetes.
2. is not more effective than self monitoring of blood glucose alone in the reduction of hypoglycemic or severe hypoglycemic events using insulin infusion pumps for Type 1 diabetes.

## Decision Determinants

OHTAC has developed a decision-making framework that consists of seven guiding principles for decision making and a decision-making tool, called the Decision Determinants (DD) tool. The evaluation of the four explicit main criteria (overall clinical benefit, value for money, feasibility of adoption into health system, and consistency with expected societal & ethical values) are reported in using 1 of 4 symbols. For more information on the Decision-Making Framework, please refer to the Decision Determinants Guidance Document or visit: www.health.gov.on.ca/english/providers/program/ohtac/decision_frame.html

| | Technology |
|---|---|
| **Overall clinical benefit** | No significant difference in change in HbA1c or hypoglycemia/severe hypoglycemia for continuous glucose monitoring plus self monitoring of blood glucose compared to self monitoring of blood glucose alone.<br>Compliance issues were noted (i.e., patients not wearing continuous glucose monitoring devices for stipulated amount of time during the studies) |
| **Consistency with expected societal and ethical values** | General assumption that continuous glucose monitoring should not be used if it does not improve outcomes for poorly controlled diabetes. |
| **Value for money** | Low value for money.<br>Incremental cost over SMBG alone ~ $160M CAD per year. |
| **Feasibility of adoption into the health system** | Continuous glucose monitor sensors/transmitters are not covered by the Assistive Devices Program. |

In considering the above ratings, OHTAC determined that moderate quality evidence that continuous glucose monitoring plus self monitoring of blood glucose:

- is not more effective than self monitoring of blood glucose alone in the reduction of HbA1c using insulin infusion pumps for Type 1 diabetes
- is not more effective than self monitoring of blood glucose alone in the reduction of hypoglycemic or severe hypoglycemic events using insulin infusion pumps for Type 1 diabetes

outweighed value for money or feasibility of adoption into the health system.

## OHTAC Recommendation

OHTAC made the following recommendation:

Continuous glucose monitoring combined with self monitoring of blood glucose is not recommended for the management of insulin dependent diabetes.