

# Inequitable Access to Innovative Technologies for Diabetes Treatment and Management in Australia

## Background

Around 1 million Australians have diabetes or approximately 4.5% of the Australian population.

Most have type 2 diabetes (90%). However, the common form in children and adolescents is type 1 diabetes.

Diabetes is the sixth leading cause of death. It is also the cause of one in every 25 hospitalisations in Australia. Diabetes places a large economic burden on the Australian healthcare system in terms of expenditure on hospitalisations, aged care, medications, diagnostic services and other out-of-hospital medical care.

Australian healthcare spending on diabetes was estimated to cost at least \$1.5 billion in 2008–09.

A report on the global health expenditure on diabetes estimated the total annual Australian healthcare expenditure for diabetes to reach US\$10.9 billion by 2030.

## Insulin pump

Insulin pump therapy is currently the only type of treatment that replicates normal insulin secretion by a healthy pancreas.

This is especially important for individuals with type 1 diabetes, for whom insulin therapy is necessary for survival.

Since the inclusion of insulin pump consumables on the National Diabetes Services Scheme (NDSS) in 2004, there was a slight growth in the use of insulin pumps in Australia. However, the proportion of Australians with type 1 diabetes who use insulin pumps remains relatively low, representing only 10% of individuals with type 1 diabetes - there were 10,510 insulin pump users in Australia as at 30 June 2011.

## Clinical benefits

Insulin pump therapy is recommended as a treatment option for children and adults with type 1 diabetes due to the numerous clinical benefits it provides compared with multiple dosage injections (MDI) therapy.

### Benefits include:

- reduction in HbA1c levels
- decreased glucose variability
- fewer episodes of severe hypoglycaemia
- improvement in individual's quality of life (QOL).

Insulin pump therapy is shown to be cost-effective compared to MDI therapy.

The use of insulin pumps is also recommended for adults with diabetes with the following conditions:

- poorly controlled blood glucose levels
- severe hypoglycaemia who suffer frequent episodes
- lives in rural and remote regions (via remote monitoring)
- pregnant women who require tight glucose control with respect to the outcome of pregnancy.

Use of insulin pump therapy is 'good value for money' in Australia.

### Cost benefits of insulin pump therapy include:

- improving glycaemic control
- prevention of complications
- reducing the costs of diabetes-related hospitalisations - where hospital costs for diabetes and diabetes-related complications accounts for 50% of overall healthcare expenditure for diabetes.

## Recommendations

Access to insulin pumps should be made available to those who would clinically benefit most from insulin pump therapy including:

- those under the age of 18 or over the age of 18 (who have been using insulin pumps when they were younger)
- women who are pregnant or trying to conceive, individuals with poor glycaemic control
- individuals with high initial HbA1c
- individuals with severe and/or unpredictable hypoglycaemia.

Access to insulin pumps should not be age restricted but should be evidence-based and in accordance with Australian and international clinical guidelines to avoid/prevent adverse diabetes-related health outcomes.

### For more details and references:

VOT report on Diabetes and Insulin Pump Therapy. Available at: <http://www.mtaa.org.au/about-the-industry/value-of-technology/diabetes>.

MTAA Submission to the PBS on the draft report for stage two of the diabetes review of insulin pumps - 4 August 2014. Available at: <http://www.mtaa.org.au/docs/submissions/mtaa-response-pbs-diabetes-review-uploaded.pdf?sfvrsn=0>

MTAA Submission to the PBS on the Post Market Review of Products Used in the Management of Diabetes - 14 February 2013. Available at: <http://mtaaweb01/docs/submissions/mtaa-submission-pbs-post-market-review-of-diabetes-management-feb-2013.pdf?sfvrsn=0>.

### Acknowledgements:



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