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:


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

Contact:
Medical Technology Association of Australia
Level 12, 54 Miller Street, North Sydney, NSW, 2060, Australia
Email: Reception@mtaa.org.au