## Education and Health Standing Committee

# The Food Fix

The role of diet in type 2 diabetes prevention and management

Report No. 6

Presented by

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Laid on the Table of the Legislative Assembly on 11 April 2019

# Executive Summary

TYPE 2 diabetes is the fastest growing chronic condition in Australia, affecting around 1.1 million people. In Western Australia, more than 100,000 people have been diagnosed with the disease and thousands are suffering from it without a formal diagnosis. An estimated 10 per cent of Western Australia's health budget – around $1 billion – is spent on dealing with the consequences of type 2 diabetes. However, the Department of Health was unable to provide an accurate cost figure. There is also insufficient data to accurately identify how many West Australians are currently suffering with type 2 diabetes.

The complications of poorly managed diabetes, which include cardiovascular disease, kidney failure, limb amputation, erectile dysfunction and blindness, represent a significant cost to the public health system. This could be avoided if systemic, community-wide changes to type 2 diabetes management and prevention were implemented.

One of the key risk factors for developing type 2 diabetes is being overweight or obese. Studies conducted over the past decade have investigated the impact of weight loss on blood glucose levels, with many showing that dietary changes that result in 10 to 15 per cent weight loss can put type 2 diabetes into remission. This means the patient no longer requires medication and will avoid the prospect of hospitalisation from associated complications.

This inquiry considered whether dietary interventions to encourage weight loss would be a feasible approach for management of type 2 diabetes, as well as how best to encourage healthy eating habits to help prevent future cases of type 2 diabetes.

At present, the Department of Health refers people to the non-government diabetes support organisation Diabetes WA for advice on diet. But this inquiry has revealed that Diabetes WA's advice – to follow the Australian Dietary Guidelines – is at odds with the Department's view that the guidelines are not suitable for people with type 2 diabetes.

Healthcare professionals, particularly dietitians, are deeply divided on dietary recommendations for type 2 diabetes, and the Department of Health does not provide adequate direction. The United Kingdom's public health system is more open to advances in this area, supporting the exploration of alternatives to pharmacotherapy that may then form part of official guidelines and government programs.

The Committee looked to the example of the UK government and Diabetes UK in supporting a trial of a very low calorie diet to put type 2 diabetes into remission. The trial follows the discovery by Professor Roy Taylor (Newcastle University) that loss of fat from the liver and pancreas is the key to putting type 2 diabetes into remission. A fast way to do this is by using meal replacements. The Committee recommends that the State Government monitors the outcomes of a subsidised meal replacement program being offered through the UK National Health Service for patients at risk of type 2 diabetes.

A low carbohydrate diet has also been shown to put type 2 diabetes into remission, but this approach is not endorsed in Australia and health professionals have been sanctioned for recommending it to patients. However, the CSIRO has recommended a low carbohydrate

diet. Some GPs and patients in WA have been guided by UK GP David Unwin, who has produced resources to assist patients, while others may have sought guidance from internet sources of variable quality. Dr Unwin's practice in England has saved its public health system thousands of pounds in diabetes drug prescriptions. The Committee recommends that the Department of Health investigate how a low carbohydrate program developed by the CSIRO can be made readily available to WA doctors as part of the treatment guidelines for people with pre-diabetes and type 2 diabetes.

Another effective method of weight loss which puts type 2 diabetes into remission is bariatric (weight loss) surgery. While this is considered an expensive option, studies show that the cost of the surgery is recouped in one to two years, based on savings to the public health system from not having to treat someone with type 2 diabetes. However, most surgery is performed in the private system, and those who may benefit the most are least able to afford it. The Committee recommends that a greater proportion of bariatric surgery procedures be performed in the public health system to ensure equity of access and high standards of care.

The inquiry also investigated the value of structured self-management education, which is the approach favoured by key diabetes organisations such as Diabetes WA. This approach is premised on giving people the information and skills to manage their diabetes better, but does not promote any particular diet. Again, this model was developed in the UK where studies have shown it to be effective. The programs are low cost and have the potential to deliver savings to the tertiary health sector, but at present access is not widespread.

There are regulatory measures the State could impose to assist people to eat more healthily, including removing junk food advertising from its assets, menu labelling and planning laws which make health and wellbeing a relevant consideration in fast food restaurant planning applications. In addition to this, people and food manufacturers can also be 'nudged' to behave better. People can be encouraged to make repeated marginal changes which can lead to wider changes in the food system, such as reformulation of products (to make them healthier) by food manufacturers.

Understanding the social and cultural factors that underlie unhealthy eating habits and attitudes to diabetes management is critical in tackling the disease. Factors such as a person's attitude to health services, view of nourishment, perception of a desirable body size, and cultural attitudes to food will determine the best approach. The international Cities Changing Diabetes program has developed tools for cities to identify those for whom clinical medicine is not working, to understand their needs and to understand how to reach them. Cities Changing Diabetes can assist city and health leaders to create their own action plan for tackling diabetes, but it has no presence in Australia. The Committee recommends that the State Government and local authorities use the tools or consider joining the program.

Another key factor in the success of prevention programs – particularly where a dietary change is being implemented – is regular professional support or coaching, but access to dietitians and diabetes educators is limited by the very fact that there has not yet been a type 2 diabetes diagnosis.

Access to diabetes care is more problematic in regional areas, and some of these areas have the greatest need. People in the Kimberley are 2.8 times more likely to be hospitalised for diabetes and impaired glucose regulation than people across the whole State, and 5.6 times more likely to die from it. The potential of telehealth services to address poor access to health professionals in rural and regional areas has not been fully realised.

Groups that are more susceptible to type 2 diabetes are poorly catered for. Very few programs target Aboriginal groups, migrant populations and susceptible ethnic groups, the socioeconomically disadvantaged and women who have had gestational diabetes. Half of all women who have had gestational diabetes will go on to develop type 2 diabetes, but there is no follow-up once the gestational diabetes has receded.

The State Government is currently introducing the new *Public Health Act 2016,* a major reform to public health in the State which will require local governments to implement preventative health programs. UK local government authorities such as Leicester City Council and Newcastle City Council can offer examples of health initiatives to promote healthy eating, tackle obesity and engage populations susceptible to type 2 diabetes, which local governments here may wish to consider.

Failure to consider type 2 diabetes as a priority within the health system will lead to higher future health costs as prevalence grows and complications requiring hospital treatment increase. The State Government must properly consider the cost-benefits of implementing a suite of prevention and management strategies, which would include:

- delivery of dietary intervention programs to put type 2 diabetes into remission
- publicly funded bariatric surgery for patients with type 2 diabetes who stand to benefit the most metabolically
- group self-management programs
- regulatory measures.