

Targeted screening most practical

Finland and Singapore are examples of two small and developed nations which have stemmed the growth of Type 2 diabetes in their populations.

Sir Michael Hirst argues that the increasing prevalence of Type 2 diabetes is not inevitable.

He told a Living with Diabetes session at the Congress that, as part of the 'imperative of prevention' it is vital to slow, and then reverse, the growth in Type 2 diabetes.

Sir Michael sees the explosion of obesity and Type 2 diabetes as the health equivalent of climate change in its potentially dire consequences.

Government action by nations world-wide, in the form of public health messages, and the integration of healthy living into all aspects of life, were essential.

Diabetes is absorbing ever greater amounts of health service resources, year by year. Globally, one person is diagnosed with diabetes every five seconds; one person dies from diabetes complications every 10 seconds; and one limb is amputated every 30 seconds.

Sir Michael said increased care and prevention were needed because diabetes was:

- The leading cause of blindness in age range 18-65
- The leading cause of non-traumatic amputation
- A leading cause of renal disease
- A major risk for erectile dysfunction
- Causing a 2.5 fold increased risk of cardio and cerebrovascular disease, leading to stroke and heart attack and death.

The United Nations Resolution on Diabetes 61/225, approved by the UN General Assembly on 20 December 2006, encourages member states to develop national policies for the prevention, treatment and care of diabetes, in line with the sustainable development of their health-care systems.

Sir Michael pointed to vast variation in standards of care, access to care and new treatments, national service frameworks, diagnosis, registration and regular review, information and education, (particularly for the newly diagnosed), and motivation and support to change behaviours.

"Millions of people have Type 2 diabetes but remain undiagnosed. If identified, their diabetes can be avoided or postponed."

Results from the UK Prospective Diabetes Study suggest that people have Type 2 diabetes for between 9 to 12 years before they are diagnosed. The study also found that up to 50% were already developing complications of the condition at the time of diagnosis.

Care and treatment procedures could include:

- Screening, including retinal screening
- New treatments



Sir Michael Hirst, currently an International Diabetes Federation vice-president, became interested in diabetes more than 20 years ago when his youngest child Katie was diagnosed with Type 1 at a very young age.

Then a Member of the British Parliament, Sir Michael championed the cause of diabetes in Parliament, before being co-opted to the board of trustees of the British Diabetic Association, now Diabetes UK.

As board chairman he oversaw major changes in the operations and governance of Diabetes UK, Europe's largest organisation for people with diabetes.

Sir Michael was the keynote speaker at the Diabetes New Zealand dinner on 30 March 2008, and then presented a paper on world best practice for treatment and prevention at the IDF Western Pacific Region Congress in Wellington on 31 March 2008. He later spoke on prevention strategies at a meeting of General Practitioners organised in Auckland by Diabetes NZ Auckland.

- New technology – such as insulin pumps, continuous blood glucose monitoring, and possibly an artificial pancreas
- Surgical interventions, such as islet transplants
- 'Next stage' research, such as vaccination trials for Type 1, and stem cell therapy
- Search for a cure.

Sir Michael said most studies showed little benefit in population wide screening. Prevalence of diabetes in the UK, for example, is about 3.5–5%; though in some groups it is as high as 17%.

Targeted screening therefore seemed the most practical use of limited resources.



Sir Michael at a Congress reception with Diabetes New Zealand board members Joan Martin (left) and Pat Bent.



Prevalence of undiagnosed diabetes has been measured at 4.5% of the 40–64 aged population.

Sir Michael suggested individuals to be targeted should include those who:

- Are overweight or obese
- Have a family history of diabetes
- Are over the age of 40
- Are from minority community backgrounds, and over the age of 25
- Are women who have had gestational diabetes
- Are women with polycystic ovary syndrome who are overweight
- Have diagnosed circulatory problems or hypertension
- Have diagnosed IFG/IGT
- Have severe mental illness
- Have hypertriglyceridaemia.

Sir Michael considered there is little evidence on the optimum frequency of screening, but both Diabetes UK and the American Diabetes Association promote three-yearly screening for those in high-risk groups.

US Preventative Taskforce Recommendations: 2003 indicated: 'Patients at increased risk of cardiovascular disease may benefit most from screening for Type 2 diabetes, since management of CVD risk factors leads to reductions in major cardiovascular events'.

Integrating prevention into routine care involved:

- Targeted case finding of those at high risk, using a questionnaire approach
- Annual health checks
- Cardiovascular disease risk management programmes
- Medical practitioners/pharmacists contracts
- Public awareness and local awareness campaigns.

Those identified at risk should then be considered for:

- Lifestyle intervention – diet and physical activity
- Counselling and behaviour change support
- Education
- Pharmaceutical therapy.

Grim statistics of the diabetes pandemic

Global figures	2007	246 million
	2025	380 million
Western Pacific	2007	67 million
	2025	100 million

What to do with those identified at risk? Sir Michael said five diabetes healthy behaviour prevention goals are: BMI, fat intake, saturated fat intake, fibre intake, and exercise. Of a cohort of 24,155 in the Simmonds study, only 20% met three or more diabetes prevention goals.

"Diabetes incidence was inversely related to the number of goals achieved. None of the participants who achieved all five goals went on to develop diabetes, and the incidence of diabetes was highest in those who met none. If the entire population was to meet one more goal, the total incidence of diabetes would be predicted to fall by 20%."

Speaking at the Diabetes New Zealand dinner the previous evening Sir Michael said: "If we could get people tested we could avoid the grisly complications."

As a politician he realised one big problem inhibiting change was that the electoral cycle is far shorter than the time needed to implement necessary improvements in health systems. ●

Latest Ministry of Health figures indicate there are now more than 170,000 people in New Zealand diagnosed with diabetes – approximately 155,000 with Type 2 diabetes and 15,000 people with Type 1 diabetes.