Global and local solutions to managing and preventing Type 2 diabetes: the Melbourne declaration on diabetes and beyond

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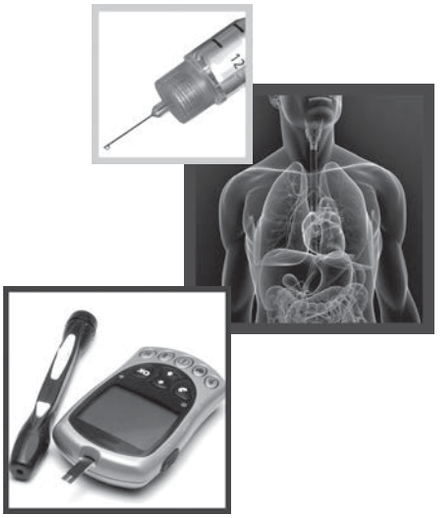

World Diabetes Congress, Melbourne, Victoria, Australia, 2–6 December 2013

Every 2 years the International Diabetes Federation holds the World Diabetes Congress. It brings together world leaders and experts including healthcare professionals, researchers, policy-makers, pharmaceutical companies, people with diabetes, their families and their carers exchanging diverse views, perspectives, challenges and solutions with respect to the prevention, management and treatment of diabetes. Twenty years after the World Diabetes Congress in Japan, the focus was again in the western pacific region as Melbourne hosted the World Diabetes Congress from 2–6 December 2013. Over 10,000 delegates came from across the globe to hear the President of the International Diabetes Federation Sir Michael Hirst, outline the threat the world faces from diabetes – it is a global challenge requiring a global response. One of the key outcomes of the conference was the release of the Melbourne Declaration on Diabetes in which 50 Government signatories committed themselves to tackling the global challenge posed by the surging worldwide diabetes pandemic calling for more preventative work, early diagnosis, management and access to adequate care, treatment and medicines. The showcase of research, ground-breaking scientific sessions, programs and activities occurring across the globe was inspiring and encouraging. It generated considerable momentum and optimism for increased, concerted and coordinated efforts both globally and locally. With political will, governments, nongovernment organizations and industry working collaboratively, and the collective spirit of those networks of policy-makers, researchers, health professionals and communities working in this field we can overcome the greatest health care challenge of the 21st century.

The International Diabetes Federation (IDF) held the World Diabetes Congress (WDC), in Melbourne, Victoria, Australia in December 2013 [101]. The IDF is an umbrella organization of over 200 national diabetes associations in over 160 countries. It represents the global voice for people with diabetes and those at risk. Twenty years after the WDC in Japan, the global health highlight was again in

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the western pacific region as Melbourne hosted the WDC from 2–6 December 2013. Occurring every 2 years the WDC is a coming together of world leaders and experts including healthcare professionals, researchers, policy-makers, pharmaceutical companies, people with diabetes, their families and their carers. This unique opportunity heard the voices of 10,300 delegates with diverse views, perspectives and cultures all sharing a common cause of tackling the global challenges posed by the greatest healthcare challenge of the 21st century.

The event opened with an address from the President of the IDF Sir Michael Hirst in which he outlined that diabetes is a major threat to the health and productivity of all nations. It remains the leading cause of blindness, amputations, kidney failure, heart attacks and stroke, and early death. Throughout the globe, disadvantaged people carry the greatest burden and indigenous communities are especially vulnerable. It has been estimated that by 2035 there will be 600 million people with diabetes, approximately one in ten of the world's population, and a further 450 million at risk of developing the disease [1]. Currently, more than a third of all people with diabetes are found in the western pacific region. It is also the region that has the highest number of undiagnosed cases and the highest number of deaths attributable to diabetes.

A concerted effort will be required by the world's governments if they are to achieve the reduction of 25% in avoidable deaths by 2025, as well as halting the growth of obesity and diabetes and securing access by 80% of the population to essential medicines and technologies as agreed at the 66th World Health Assembly (WHA) held in May 2013.

In Australia, 8% of the population is now living with diabetes. This is predicted to increase to 14% over the next 20 years. Indigenous communities in Australia are also a major concern as the prevalence within this population is three- to four-times higher than the rest of Australia. These trends are mirrored across both developed and developing countries. Nations have more in common then differences as they face similar challenges, identifying, preventing and treating the complications of Type 2 diabetes. Cultural and socioeconomic differences aside, only the scale and magnitude of the challenges differ. Notwithstanding, what is clear is that the only way we are seriously going to manage the diabetes epidemic is by preventing more cases of it occurring.

Encouragingly, a range of potential solutions for managing and preventing the diabetes pandemic were highlighted during the WDC. The Programme Committee led by Professor Paul Zimmet from Australia with international representation delivered a world class selection of keynote addresses, papers, posters and workshops covering seven major themes including: clinical and basic science; diabetes in indigenous people; diabetes research in the 20th century; education and integrated care; global challenges in health; living with diabetes; and public health and epidemiology.

One of the key outcomes of the WDC was the release of the Melbourne Declaration on Diabetes as a result of the Parliamentary Champions For Diabetes Forum [102]. The Declaration established the Parliamentarians for Diabetes Global Network. Members of more than 50 parliaments committed themselves to tackling the global challenge posed by the surging worldwide diabetes pandemic. The Declaration acknowledged the increasingly serious social, economic and medical threat faced by nations large and small by the increasing diabetes pandemic. The signatories committed to working across parliaments to ensure that diabetes is high on the political agenda in every country. The call to action demands more preventative work, early diagnosis, management and access to adequate care, treatment and medicines.

Welcoming the Declaration, the President of the IDF Sir Michael Hirst said, "This is an important moment in the political battle to ensure that governments understand the threat the world faces from diabetes. This is a global challenge requiring a global response. The Melbourne Declaration provides our parliamentary supporters with the tools to raise the issue in every country across the world and press for change" [103].

The Honorable Judi Moylan is the Global Coordinator of the Parliamentarians for Diabetes Global Network with British MP Adrian Sanders as President. Simon Busuttil, Malta's opposition leader and Dr Rachel Nyamai MP from Kenya are Vice Presidents. Sir Michael Hirst, President of the IDF, and Guy Barnett, a former Australian politician, are Co-Chairs of the Forum and *ex officio* members of the Executive Committee.

There was a very strong prevention theme throughout the WDC and promising examples of what might be possible covering both population level long-term community-based interventions to a range of individual and group programs that target individuals at high-risk of developing Type 2 diabetes. There were two particularly interesting presentations that I attended.

First, Dr Shelley Bowen from the Victorian Department of Health (Australia) presented on Healthy Together Victoria (HTV), which is developing a long-term community-based approach and building a prevention system that will demonstrate wider and more sustained local and population health change by addressing the determinants of healthy eating and physical activity [104]. HTV aims to:

- Develop the essential system building blocks of a prevention effort
- Apply and adapt knowledge cocreation approaches
- Inject a culture and practice of thinking and acting 'systems' and navigating complexity
- Build multiple health promoting environments: early childhood, schools, workplaces and communities

Within HTV nests Healthy Together Communities (HTC) – a concentrated prevention effort across 14 local government municipalities, reaching over 1.3 million people, 520 schools, 938 early childhood services, 4409 medium to large workplaces, with local, regional and national government all working together to tackle the determinants of physical activity and nutrition. HTC is one of the largest complex community-level interventions in the world.

This effort is driven by a new prevention workforce, new multilevel systems leadership and governance arrangements, local government led delivery, networks of practice, and the development of a quality system for health promotion. The conscious use of systems theory and methods to guide and support intervention design, implementation and evaluation is critical. This is aided by embedded research capacity across policy and practice teams. This approach helps to understand the systemic drivers of chronic disease at the community level, support reflective practice, help identify system leverage points, and provide rapid feedback and reflection on the impacts of actions being taken by the workforce, locally and across the state, so that implementation can be optimized. The first stage of the evaluation is due towards the end of 2015.

Second, David Marrero (Indiana School of Medicine, IN, USA) and colleagues provided preliminary results of their study to see if a modified version of the Weight Watchers (WW) program can effectively reduce risk for Type 2 diabetes in persons with prediabetes and enhance long-term adherence to weight modification. WW is structured to enhance accessibility and maintenance; sessions are community-based, repeated frequently, and the program is easy to restart when needed. Two hundred and twenty six participants with prediabetes were randomly assigned to a WW program modified specifically for persons with prediabetes or a control intervention, a self-initiated weight loss program using National Diabetes Education Program (NDEP) materials. The WW participants attended a special 'activation' session in which weight and diabetes risk were discussed, a weight loss goal associated with risk reduction (7%) assigned, and description of how to use WW sessions to achieve risk reduction goals was provided. They were then 'mainstreamed' into WW programs in their communities. Subjects in the control group were provided NDEP materials and counseled about the relationship of weight to diabetes risk and strategies for starting a weight reduction program including goal setting, tracking food intake and increasing physical activity. The 12-month follow-up data demonstrated significant weight loss of (5.8 ± 6.9%) in the WW groups compared with the control group (0.7 ± 4.3%) ($p < 0.0001$). The authors concluded that if these results are maintained the WW approach is an effective format for diabetes prevention and if universally adopted it could offer a significant increase in the availability of prevention programs.

With the momentum generated by the 2013 WDC and the Melbourne Declaration on Diabetes the future of Type 2 diabetes prevention, treatment and management seems brighter than ever and optimism is high that the WHA goals may well be achieved. The plethora of research, programs and activities occurring across the globe is inspiring and encouraging. We need a concerted and coordinated effort both globally and locally. With political will, governments, nongovernment organizations and industry working collaboratively, and the collective spirit of those networks of policy-makers, researchers, health professionals and communities working in this field we can make a difference. It will be interesting to see how we are travelling on this journey at the next WDC in Vancouver in 2015.

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