With a vision of placing diabetes higher up on the global agenda, the World Diabetes Foundation is working tirelessly as a catalyst for change. By raising global awareness of this epidemic disease, Managing Director Dr Anders Dejgaard is aiming to support effective prevention and treatment in the developing world and beyond.

Could you discuss the vision of the World Diabetes Foundation (WDF)?

The Foundation aims to further the prevention and treatment of diabetes and its complications in developing countries. Our vision is to alleviate human suffering related to diabetes and its complications among those least able to withstand the burden of disease.

How has your background prepared you for the role of Managing Director?

I am a physician by training, educated at the University of Copenhagen, Denmark. I worked for some years in the public healthcare system to become a certified specialist in endocrinology. At the same time I conducted research within diabetic autonomic neuropathy and wrote my doctoral thesis within this area.

In the mid-1980s I started working at Novo Nordisk A/S. I managed several drug development teams, the products of which have been used by millions of patients worldwide. Most of these drugs were initially marketed to treat people in the developed world, but in time the majority will be offered to patients in the developing world.

In this period I also travelled around the world to give lectures and witnessed the major impact of the diabetes epidemic. Presently, nearly 400 million people are living with diabetes – nearly half of them undiagnosed – and over 500 million people have the pre-stages of diabetes, and the numbers continue to grow. What’s worse, more than 80 per cent live in the developing world where scarce resources must deal with a vast array of health priorities. Therefore, people living with diabetes in these areas do not receive the care they need.

When offered, it did not take me long to accept my position as Managing Director. The work at WDF is very much closing the circle, as I now have the opportunity to help people in need affected by diabetes in the developing world. It is, and has been, very rewarding.

How has the Foundation evolved since its launch in 2002?

Throughout its 12 years of operation WDF has acted as a catalyst. We help partners in the developing world to set up programmes and projects that improve the prevention and care of patients living with diabetes in a sustainable manner. Until now we have initiated 378 different projects, of which 188 are still active and we have supported projects in 108 countries, of which 78 are still running. Today, our project portfolio has a value of US $ 325 million, of which $ 111 million was donated by WDF. With these projects we have reached many millions of patients with awareness campaigns and screening camps, and we have been instrumental in establishing improved access to care for millions more.

To what extent has the Foundation seen success in increasing global awareness of diabetes? What more can be done to this end?

WDF has been highly active in numerous advocacy meetings all over the developing world. We have organised several Diabetes Global Leadership Fora and other high-level meetings to discuss the consequences of the diabetes tsunami and gain commitment from global leaders to act.

I believe the UN high-level meeting in 2006 was a very important step. The UN resolution on diabetes recognises the disease as a chronic, debilitating and costly condition that poses a risk to individuals, member states and the entire world, as well as presenting a serious challenge to the achievement of the Millennium Development Goals.

In addition to this, together with the International Union Against Tuberculosis and Lung Diseases (UNION), we have increased awareness of the consequences of tuberculosis (TB) and diabetes comorbidity. Last year, in collaboration with UNION, we published The Looming Co-epidemic of TB and Diabetes – A Call to Action, which attracted significant media attention towards this frightening comorbidity.

On a local and national level WDF stimulates and engages in the establishment of noncommunicable disease (NCD) plans, and we have many programmes where local awareness campaigns play a vital role. These often include screening activities, which are essential as only half of those affected by diabetes are aware they have the disease. To address this, WDF organises a Global Diabetes Walk every year on World Diabetes Day (14 November), to spread global awareness of the disease.

Why is WDF prioritising diabetes and TB as one of its newest areas of focus?

One in three people in the world carries a latent TB infection. Every person infected with TB has a 10 per cent life-long risk that the infection will activate into an overt clinical infection. TB causes high morbidity and mortality globally with over 9 million active TB cases and nearly 2 million deaths per year, making it the second leading cause of infectious death worldwide.

An overwhelming number of active TB cases and deaths occur in low- and middle-income countries. Conditions that suppress the immune system – HIV, and also diabetes – activate the latent infections so that
they become active TB. A diagnosis of diabetes increases a person’s risk of developing TB two to three times compared to a non-diabetic person. With the current diabetes epidemic, a risk exists that we will see a significant increase in TB globally, especially in low- and middle-income countries.

Moreover, the existence of comorbidities makes diabetes difficult to regulate, causing blood glucose values to fluctuate, increasing the risk of complications. It also makes TB very difficult to treat, as some patients will become resistant to anti-TB medicine and more patients will have a relapse of the active disease after initial successful treatment. Finally, TB patients with diabetes are contagious longer than their non-diabetic counterparts, and mortality is higher in dual-diseased persons. Consequently, it is critical that all TB patients are screened for diabetes and referred for treatment. Likewise we must ensure that diabetes patients and those with clinical signs of TB are screened for TB. Therefore, it is very logical that we prioritise this comorbidity, and get programmes up and running, particularly in countries with high incidences of TB, for instance, India, Bangladesh, Pakistan and China.

Through these projects on the ground and the advocacy work we have done with UNION, we have made major progress for these patients. In India, for example, it is now policy that TB patients should be screened for diabetes.

Can you elaborate further on how WDF is enhancing education and capacity-building?

In cooperation with the International Federation for Gynaecology and Obstetricians (FIGO), the Foundation has arranged several international educational meetings to inform and train healthcare providers in gestational diabetes mellitus (GDM). This is a neglected condition with severe health consequences for maternal and child health, especially in developing countries.

Furthermore, most of our programmes have an element of capacity-building, especially to strengthen primary healthcare. This includes training of relevant healthcare providers, creating local treatment guidelines, establishing clinics with relevant equipment, and stimulating the establishment of registries and referral systems. In areas where distances to clinics are long and cumbersome we have introduced mobile clinics with advanced diagnostic and treatment equipment. In this way, we can assure that even people living in remote rural areas are offered screening and treatment with regular follow-up.

One of the key focus areas for the Foundation is diabetes in pregnancy. What advantages are seen from screening pregnant women?

Diabetes in pregnancy may either be pre-existing diabetes (type 1 or 2), or diabetes diagnosed during pregnancy (GDM). Both conditions require special attention from a treatment perspective in order to avoid severe complications for mother and child.

If undiagnosed and untreated, hyperglycaemia leads to a higher incidence of maternal morbidity, including caesarean deliveries, birth trauma, preeclampsia and subsequent development of type 2 diabetes. Perinatal and neonatal foetal morbidities are also increased; the latter include malformations, macrosomia, birth injury, hypoglycaemia and shoulder dystocia. Long-term consequences in offspring with *in utero* exposure to maternal hyperglycaemia may include higher risks for obesity and diabetes later in life due to epigenetic changes in the read out of the genome.

Too many pregnant women are not screened for GDM and too many do not receive proper treatment. This is an especially significant problem in many low-income countries, where proper maternal and child care faces many obstructions from societal, cultural, religious and gender inequity perspectives.

This is the reason why WDF pays special attention to this problem. We have conducted many programmes around the developing world where screening, treatment and capacity-building are major elements. Together with FIGO, we have also established many training and awareness activities and are in the process of writing global guidelines on how to diagnose and treat GDM with special emphasis on low-income countries.

What would you define as being WDF’s key successes to date?

First and foremost, the improvement we have achieved in the quality of life for many patients. Second, it has been encouraging to witness the increased international attention NCDs have gained within the last 10 years, with the World Health Organization framework on NCDs and its requirements for each country globally to establish country-specific plans for action to stop these diseases. I believe in all modesty that our advocacy has contributed to this increased appreciation. Third, we are very proud of the international awareness that has been established, especially towards gestational diabetes and the comorbidity of TB and diabetes.

Looking ahead, which areas will WDF be focusing on in the near future?

The epidemic of NCDs is one of the most significant global health hazards the world experiences today. We need to continue our activities, together with our partners and other donors, to continuously insist NCDs are a high priority in national health plans and receive the attention they deserve.