THE WORLD DIABETES FOUNDATION FOCUS AREAS

The World Diabetes Foundation supports the overall objectives of the Millennium Development Goals by prioritising its funding in favour of people living with diabetes in developing countries. The countries eligible to apply for funding from the Foundation are defined by the OECD DAC list.

The World Diabetes Foundation’s strategy to work with neglected areas of diabetes care is based on health and socio-economic grounds for what is of particular relevance in development settings. The strategy translates into the following focus areas:

ACCESS TO CARE (TYPE 2 DIABETES)
PREVENTION
DIABETES EYE CARE
DIABETES FOOT CARE
PREGNANCY & DIABETES
TYPE 1 DIABETES
TUBERCULOSIS & DIABETES (TB/DM)
ADVOCACY & STAKEHOLDER ENGAGEMENT
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A staggering 80% of people with diabetes live in low- and middle-income countries - and it is the socially disadvantaged in any given country that are the most vulnerable to this disease. These rapid transitions are fuelling previously unheard of rates of non-communicable diseases (NCDs) and diabetes in developing countries which have inadequate resources and funding to protect their populations and sustain health care systems.

NCDs, particularly cardiovascular disease, type 2 diabetes, cancer and chronic respiratory diseases, are the world’s leading causes of disability and mortality — which in some cases are preventable illnesses. In 2010, five of the top six specific causes of death worldwide were NCDs, which accounted for nearly 35 million (two thirds) of the 53 million global deaths. In fact, NCDs killed more people than all other causes combined. NCDs are driven by underlying social, economic, political, environmental and cultural factors, broadly known as ‘social determinants’, and it is not surprisingly that they impede social and economic development.

Furthermore, the World Health Organization (WHO) estimates that by 2030, the total mortality rates due to NCDs will rise to an estimated 52 million people per year, nearly five times more than communicable diseases.

Making efforts to focus on prevention

Up to 80% of heart diseases, stroke and type 2 diabetes and over a third of cancers could be prevented by eliminating shared risk factors, mainly tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol. Health promotion and primary prevention are our most effective weapons in the fight against diabetes and other chronic NCDs, as these efforts do not only have the potential to prevent or delay the onset of type 2 diabetes, but also have a beneficial effect on the risk of the other common NCDs such as obesity, arterial hypertension, cancer, stroke and heart diseases. Therefore, raising awareness of diabetes in an attempt to reduce the burden of the disease and its complications will continue to be an important part of projects funded by the World Diabetes Foundation in the future.

Closing the gap on NCDs and the MDGs

There can be no doubt that the UN Summit in 2011 and the newly adopted Political Declaration were turning points in the global response to diabetes and other NCDs. In May 2013, the World Health Assembly endorsed the ‘WHO Global Action Plan for the Prevention and Control of NCDs 2013–2020’ and adopted the ‘Global Monitoring Framework on NCDs’. The Global Action Plan provides Member States, WHO and the international community
with a roadmap to establish and strengthen initiatives for the surveillance, prevention and management of NCDs.

In line with the WHO Global Action Plan on NCDs, the World Diabetes Foundation has taken a pioneering role by catalysing and instigating global and national policy changes, attracting resources to NCDs programmes and developing and supporting sustainable national level programmes for prevention and care. In addition, the World Diabetes Foundation has taken decisive steps to elevate the issues relating to diabetes and pregnancy and the link between diabetes and tuberculosis on the global development agenda. In the coming years, the Foundation will continue to take an active role in supporting grassroots initiatives that can strengthen and build capacity at the local level and pave the way for governments to include NCDs and diabetes actions plans as part of their national health policies.

An integrated approach to NCDs and care

In recognition of the interconnection between a broad range of diseases and the inherent potential for achieving obvious synergies in terms of utilising the same human resources, skills and health infrastructure, the World Diabetes Foundation – in addition to existing projects – has actively supported comprehensive national level programmes and health promotions in developing countries. Working with national ministries of health, local non-governmental organisations, diabetes associations, the health industry, health care providers and bilateral donors, the World Diabetes Foundation uses its expertise in diabetes as an entry point to assist in the formulation of long-term, comprehensive and holistic interventions that can be fully incorporated into national policies and action plans.

The World Diabetes Foundation has therefore found it a logical next step to facilitate sustainability of the individual projects in numerous countries by ensuring – where possible – that the interventions are elevated to a national strategy in a national level programme. A national level programme combines the efforts towards improving access to health care with primary and secondary prevention, under the umbrella of a government endorsed network of stakeholders, joined in the fight against diabetes and other NCDs and communicable diseases.

With the current paradigm shift towards NCDs and as the official process to review the MDGs and plan for the post-2015 development framework gets underway, we have a unique opportunity to ensure diabetes and NCDs are fully embedded in the future global development agenda. Now it is our shared responsibility and obligation to ensure that commitments are translated into sustained and effective actions for the millions of people who are suffering from diabetes, and that all stakeholders are held accountable.

Prof. Pierre Lefèbvre
Chairman
World Diabetes Foundation
The start of a new year gives us the opportunity to pause and reflect on some of the significant achievements of the past year. For me personally, 2013 marked the beginning of an exciting journey with my appointment as Managing Director of the World Diabetes Foundation. Having worked for over three decades within clinical research into diabetes, shifting my focus to diabetes in developing countries has been extremely rewarding. My field visits to Africa, Asia and Latin America over the last few months have clarified for me some of the dire challenges facing health care providers and patients living with diabetes in low resource settings and the necessity to strengthen access to primary health care with an integrated approach.

A cornerstone in the World Diabetes Foundation’s efforts to further the prevention and treatment of diabetes in the developing world has been to ensure the involvement and ownership of the projects amongst the implementing partners and local stakeholders – from government officials to health care providers – and the ability to stimulate enthusiasm for local activities.

**Sharing of best practices and improving access to care**

This year’s Annual Review therefore includes examples of best practices from around the world, demonstrating how even the smallest investments and partnerships can accelerate a catalytic effect and facilitate policy changes at the national level. The replicable projects highlighted in this Annual Review are examples of how political will and personal commitment to change the ominous projections for the future can secure the necessary resources and attention required to establish infrastructure, build capacity, create awareness and achieve improved access to health.

To date, the World Diabetes Foundation has funded 336 projects in 108 countries, which have undoubtedly responded to an urgent need in developing countries and paved the way for improved access to care and relief for people impacted by diabetes. The total project portfolio has reached USD 307.4 million, of which USD 102.7 million has been donated by the Foundation. When we look at what has been achieved and what has yet to be achieved, we feel absolutely certain that local grassroots initiatives must continue to play a significant role in improving access to diabetes prevention and care for the individual patient. The World Diabetes Foundation has assumed a pioneering role, working towards the same goal as international donors to alleviate poverty, but focusing on people affected by diabetes as our entry point.

We have in the past year brought even more attention to our established focus areas: access to care, prevention, diabetes eye care, diabetes foot care, pregnancy & diabetes, type 1 diabetes and TB & DM.

As part of our ongoing projects we have not only made efforts to improve capacity amongst health care providers at the local level but also made significant improvements for patients affected by diabetes, especially those with the least resources to withstand the disease burden. In the years to come, we will ensure more strategic focus on qualitative indicators for patient outcome, ensuring that those patients we support benefit optimally from our projects.
Advocacy and stakeholder engagement

Of the many initiatives supported by the World Diabetes Foundation in 2013, I would particularly like to highlight some of our global awareness, advocacy and stakeholder engagement programmes undertaken last year.

The World Diabetes Foundation contributed significantly to the World Diabetes Day campaign by coordinating a major awareness initiative involving the Global Diabetes Walk in collaboration with our project partners and diabetes associations, which mobilised more than half a million people across 61 countries. The 2013 Global Diabetes Walk was undoubtedly the largest awareness campaign coordinated in the history of the World Diabetes Foundation and we were very proud to see so many of our project partners actively participate to create awareness about the immense burden of diabetes across the world.

This year the World Diabetes Foundation put the spotlight on indigenous peoples and diabetes. Following the Expert Meeting organised by the World Diabetes Foundation in 2012, we took part in the Twelfth Session of the UN Permanent Forum on Indigenous Issues in May 2013 at the UN Headquarters in New York. It was during this high level session that support for the strategic recommendations was successfully garnered and on 21st May 2013, the UN Permanent Forum on Indigenous Issues tabled the strategic recommendations on diabetes and indigenous health at the plenary session. Bringing heightened attention and policy support to this neglected issue within such a short time span is quite a remarkable achievement.

Ensuring a sustainable outcome

According to recently published data, there are 382 million people living with diabetes today and 80% of them live in low-and middle-income countries. The challenges posed by diabetes in the developing world are immense as other emerging priorities also require attention. Despite the grim picture painted by these new figures, every single day our project partners ignite renewed hope for our beneficiaries by carrying the torch for the millions of people who are suffering from diabetes in the most remote corners of the world. Personally, I feel very proud to be part of this momentous task and our achievements.

The World Diabetes Foundation has grown into a leading international funding agency devoted to supporting projects and national level programmes within diabetes prevention and care in developing countries, but without the dedication, commitment and trust we receive from our project partners and collaborators, this would not have been possible to achieve. The degree of local ownership, political will and commitment displayed by our implementing partners has a direct impact on the success of our projects and without their local involvement the sustainability of these projects would be lost.

On behalf of the World Diabetes Foundation’s Board of Directors and our dedicated staff members, I therefore wish to thank our sponsors, project partners and well-wishers for their support and acknowledge their outstanding contribution to the success of our mission and to lighten the burden for people living with diabetes in the developing world.

Dr. Anders Dejgaard
Managing Director
World Diabetes Foundation
Prior to World Diabetes Day 2013, the International Diabetes Federation published the 6th Diabetes Atlas giving the latest estimates for the incidence of diabetes worldwide. The numbers revealed a stunning increase in diabetes in countries with the least capacity to confront the burden caused by this chronic disease. In line with the focus on poverty, this year’s Global Diabetes Walk campaign targeted the World Diabetes Foundation’s project partners in developing countries to encourage them to create local awareness. The following highlights from walks around the world aim to provide a flavour of local events held as part of the 2013 Global Diabetes Walk.

**Increased awareness where it is most needed**

In total, 146 organisations and individuals registered 648 diabetes walks as part of the Global Diabetes Walk campaign to mark World Diabetes Day 2013. The registrations were spread throughout all regions, highlighting a world-wide engagement and commitment to creating awareness about diabetes.

“We were most delighted to see that 98 project partners registered and organised walks in connection with World Diabetes Day this year. In particular, the participation of our African project partners was most pertinent due to the urgent need for awareness on their continent as it faces a 109% increase in diabetes over the next 20 years.”

Dr. Anders Dejgaard
Managing Director of the World Diabetes Foundation.

Altogether 23 project partners from Africa registered walks under the Global Diabetes Walk campaign. The biggest walks took place in Kenya, Tanzania and Uganda with 10,000 participants per walk. With a total of 82 walks in Africa this year, a wave of diabetes awareness has been sent from local ministries of health to rural villages in 13 African countries (Burkina Faso, Congo (Kinshasa), Ghana, Guinea-Bissau, Ivory Coast, Kenya, Madagascar, Malawi, Mali, Nigeria, South Africa, Tanzania and Uganda).

“I think the campaign has an impact on the awareness of people about health and diabetes as more and more people become aware of the importance of their diet to stay healthy.”

Prof. Joseph Drabo
Centre Hospitalier Universitaire Yalgado Ouédraogo, Burkina Faso.

Walks in Africa

- 49,900 participants in 13 countries
- 82 walks in total
Walks in Europe

- 8,800 participants in 10 countries
- 36 walks in total

In Denmark, the World Diabetes Foundation organised a large diabetes walk in Gentofte.

In Kosovo walks took place throughout the country as part of the impressive Diabetes Week event. The World Diabetes Foundation project partners in Azerbaijan, Georgia, Moldova, Slovakia, Sweden and Uzbekistan also organised impressive walks. The Intercontinental Diabetes Walk in Istanbul saw participants from Turkey crossing the Bosporus Strait and symbolically connecting the European and Asian continents.

"The Global Diabetes Walk campaign is a kind of umbrella campaign. It nicely unites other countries’ activities and we know what other countries are doing. It helps people and organisations communicate with each other."

Prof. Temel Yilmaz
Head of the Diabetes Research and Application Center, Istanbul University and President of the Turkish Diabetes Foundation.

Walks in the Middle East and North Africa

- 13,700 participants in 7 countries
- 18 walks in total

In Jordan, the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) organised a walk which was joined by national comedy stars, Mr Hasan Sabaileh (Zaal) and Mrs Rania (Khadra), who presented a short play on living a healthy lifestyle.

In other parts of the region, the Qatar Diabetes Association organised yet another professional Beat Diabetes campaign in collaboration with the Landmark Group for some 5,000 participants. Furthermore, World Diabetes Foundation project partners in Pakistan, the West Bank, Sudan, Yemen and Afghanistan actively participated in the Global Diabetes Walk.

“We have been organising diabetes walks for the last 16 years. It is one of the major events of our organisation and a most effective tool for creating awareness about diabetes and the advantages of adopting a healthy lifestyle. I think the Global Diabetes Walk has a major and prominent impact on people’s awareness about health and diabetes, particularly in Pakistan where the awareness level is low.”

Prof. Abdul Basit
Director, Baqai Institute of Diabetology & Endocrinology (BIDE), Pakistan.
Walks in North America and the Caribbean

- 12,300 participants in 4 countries
- 51 walks in total

World Diabetes Foundation project partners in Haiti, Jamaica and Mexico organised walks as part of the Global Diabetes Walk campaign. Activities in Mexico were at an all-time high with 11,600 participants spread over 27 walks. The biggest single event took place in September when the Mexican Diabetes Federation organised the 21st Caminata Nacional Del Paciente Diabético in Mexico City. Once again, the American First Nations from the Quinault Diabetes, Wellness & Prevention Program in Taholah, Washington State, joined the walk.

Walks in South and Central America

- 27,400 participants in 9 countries
- 28 walks in total

Last year’s Global Diabetes Walk award winner from Bolivia organised a run in Cochabamba for 2,500 participants. Walks in Brazil accounted for almost 17,000 participants, and World Diabetes Foundation project partners in Belize, Bolivia, Brazil, Colombia, El Salvador, Honduras, Guatemala and Peru also organised walks.

“The Global Diabetes Walk campaign is a very important opportunity to teach the population, not only in Barranquilla but also across Colombia, about the importance of living a healthy lifestyle and exercising. The walk this year was so successful that we had national media coverage. And our work does not stop after the walk. We continue transmitting the message throughout the year.”

Dr. Humberto Mendoza Charris,
Advisor at the District Mayor Office Barranquilla, Colombia.
Walks in South-East Asia

- 175,500 participants in 5 countries
- 393 walks in total

The 2011 winner of the Global Diabetes Walk award, the Diabetes Society of the Maldives, took another creative step with a truly breath-taking campaign. Under the slogan ‘Maldives Dive for Diabetes’, divers created a blue circle in the turquoise waters off the Embudgu Lagoon.

Walks also took place in Bhutan, Bangladesh and Sri Lanka – the latter with more than 100 walks with a total of 100,000 participants. Throughout India, as per tradition, numerous walks were organised receiving broad media coverage and participation from high-level politicians and key opinion leaders.

“The campaign had a cascade effect and was extended to other venues. For instance, one of the partners organised an awareness campaign during a three day fair in Varanasi in Uttar Pradesh, which created awareness among more than 300,000 people. The Global Diabetes Walk campaign and activities have an impact on other NGOs and institutions in the health sector to focus on diabetes awareness.”

Dr. Shalini Prabhata
Program Manager, The Catholic Health Association of India (CHAI)

Walks in the Western Pacific

- 227,000 participants in 13 countries
- 40 walks in total

World Diabetes Foundation project partners in Cambodia, Indonesia, the Marshall Islands, the Solomon Islands, Thailand and Vietnam all organised walks. Once again, Columbia Asia Hospitals created a beautiful walk in Kuala Lumpur, Malaysia for 3,000 participants. The 2012 Global Diabetes Walk award winner in the Philippines defied the typhoon which hit the country a few days prior to World Diabetes Day and conducted their event as planned. In China, 200,000 people walked to create awareness about diabetes.

“For us at the Chinese Center for Health Education, the Global Diabetes Walk in Beijing was a good chance to transmit diabetes prevention information to the public. By running activities all over the world with one theme on the same day, the effect of the Global Diabetes Walk is much stronger than any separate activities.”

Ms. Vivian Leslie
Project Officer at the Chinese Center for Health Education, Beijing.
The process leading up to this high-level meeting and decision was initially catalysed in March 2012, when a Call to Action, developed at an Expert Meeting organised by the World Diabetes Foundation and co-hosted by the International Diabetes Federation, addressed specific areas of intervention to improve access to diabetes prevention and care for indigenous peoples.

The staggering prevalence of diabetes in indigenous peoples is a dire health inequality. Half of all indigenous adults over the age of 35 have type 2 diabetes and the prevalence of diabetes in some populations has reached such epidemic proportions that it places the very existence of indigenous communities at risk. Diabetes in pregnancy and gestational diabetes also poses a major threat to indigenous women, whose reproductive health is closely linked to the future risk of their offspring developing diabetes, and thus creates an intergenerational ‘amplifier’ of the disease.

**Building the evidence case**

The Expert Meeting in Copenhagen provided a forum for interaction between stakeholders to share perspectives and best practice while pursuing the realisation of the objectives of the United Nations (UN) Declaration on the Rights of Indigenous Peoples. Meeting participants included a broad range of expert stakeholders including indigenous representatives from 15 countries, international health experts, renowned researchers, special rapporteurs on indigenous issues from the UN, representation from the UN Permanent Forum on Indigenous Issues, the Pan American Health Organization, the World Diabetes Foundation project partners and academics.

To elevate this process to the next level the World Diabetes Foundation took part in the Twelfth Session of the Permanent Forum in May 2013 at the UN Headquarters in New York and engaged in the debate with indigenous.
leaders and representatives from all continents to garner support for the strategic recommendations which were formed as part of a collective, engaging and inclusive process. On 21st May 2013, the UN Permanent Forum on Indigenous Issues listened and acted decisively by tabling the strategic recommendations at the plenary session.

Engaging indigenous leaders across the world

To further build on this political momentum, the World Diabetes Foundation organised an advocacy meeting on 10 June 2013 in connection with the Global Indigenous Preparatory Conference in Alta, Norway leading up to the UN World Conference on Indigenous Peoples to be held in New York in 2014. The advocacy meeting was co-hosted by the International Working Group on Indigenous Affairs and the Sami Parliament. The key objective of this meeting was to highlight the burden of diabetes amongst indigenous peoples with particular focus on maternal health and gender issues.

In his opening remarks at the advocacy meeting, His Excellency, Mr. Damien Miller, Australian Ambassador to Denmark, Norway and Iceland said: “I am greatly honoured and delighted to address participants at this auspicious event. Today, I speak to you not only as an Ambassador, but also as a representative of the Australian aboriginal indigenous community. Most indigenous peoples with diabetes around the world are never diagnosed; they never receive treatment for diabetes and die from the condition without knowing the reason for their suffering. The Government of Australia has taken decisive steps to address this urgent public health issue and also address this at the community level amongst indigenous aboriginals. I hope this important meeting will underline the future course of action needed in order to halt the diabetes epidemic that poses a grave threat to the health and lives of the world’s estimated 350 million indigenous peoples.”
Taking action beyond the Post-2015 Development Agenda

At the Global Indigenous Preparatory Conference in Alta, Norway, indigenous leaders and representatives from civil society concluded that now more than ever, indigenous peoples’ needs and views must be included in the Post-2015 Development Agenda, where the Millennium Development Goals (MDGs) will most likely be redefined and adapted to a changing world.

“As a Board Member of the World Diabetes Foundation and former Vice Chair of the UN Permanent Forum on Indigenous Issues, I am truly proud to be able to bring the issue of indigenous health and diabetes onto the global health agenda within such a short time span,” says Ms. Ida Nicolaisen who spearheaded this initiative at the World Diabetes Foundation.

Reflecting on the outcome, Ms. Nicolaisen further elaborates: “To ensure indigenous peoples’ participation in the implementation of the UN Political Declaration, Global NCD Targets and the Post-2015 Development Agenda, governments need to build an enabling environment for civil society – including clear roles, consultation and engagement of NGOs and indigenous organisations.”

“This will also require investments in capacity building at the country level, support for the engagement of civil society and monitoring and evaluation. Collaborative and multisectoral partnerships will be needed to drive action at all levels – including intersectoral collaboration between different UN agencies and the vital participation of the UN Permanent Forum on Indigenous Issues,” she concludes.
RECOMMENDATIONS OF THE PERMANENT FORUM ON HEALTH

(The following recommendations are selected from the official document)

- To draw more attention to diabetes and other non-communicable diseases, the Permanent Forum recommends that WHO, the Pan American Health Organization (PAHO) and Governments develop action plans to improve access by indigenous peoples living with diabetes to health prevention and care of diabetes and non-communicable diseases. The Forum urges States to establish or reinforce community-based health programmes that empower and educate indigenous women and children to prevent and overcome diabetes and non-communicable diseases.

- The Permanent Forum requests WHO and PAHO to undertake a global study jointly with relevant indigenous peoples’ institutions and indigenous health experts on the situation of indigenous peoples living with diabetes and non-communicable diseases to establish the international evidence base needed. The results of the study can be presented at the fourteenth session of the Forum and in appropriate processes within WHO and PAHO.

- The Permanent Forum recalls the many recommendations that call for statistics on indigenous health. Data collection and disaggregation remain a challenge. In particular, the delivery of health care in rural and remote areas remains a major obstacle to the right to health. In addition, there remains an urgent need for more indigenous health professionals, mental health services and programmes addressing non-communicable diseases and reproductive health. In particular, the Forum reaffirms the recommendation of the eighth session that an expert group meeting on sexual health and reproductive rights be held.

- The Permanent Forum calls for heightened attention to be paid to diabetes and other non-communicable diseases by WHO, PAHO and States, including at the World Conference on Indigenous Peoples, to be held in 2014, and calls upon these parties to discuss issues relating to indigenous health and formulate an action plan with particular focus on improving prevention and access to the care of diabetes and non-communicable diseases.
equality and the empowerment of women, reducing child mortality and improving maternal health.

Pregnancy and diabetes

Focusing on gestational diabetes is a low-cost intervention which not only improves both maternal and child health, but can also prevent future cases of diabetes. Providing screening and care to mothers at risk of gestational diabetes is therefore likely to have a multi-generational impact which ultimately benefits the health care system.

This is why pregnancy and diabetes is one of the World Diabetes Foundation’s eight focus areas, with 40 gestational diabetes projects supported worldwide in 26 different countries to date. The first ever project focusing specifically on gestational diabetes took place back in 2004 in rural and urban India. This project was incredibly successful and internationally recognised, and led to compulsory screenings for diabetes for all pregnant women across the state of Tamil Nadu.

Policy changes at the national level

Since then, the World Diabetes Foundation has supported, and continues to support, projects in India with a range of stakeholders including the Federation of Obstetric & Gynaecological Societies of India (FOGSI) and the Diabetes in Pregnancy Study Group India (DIPSI).
to ensure that gestational diabetes is addressed as part of the country’s maternal health services in an effort to reduce maternal mortality across India. Project activities have included awareness and screening campaigns, strengthening of health clinics to include gestational diabetes services and capacity building through the training of health care professionals.

The impact of these projects can now be seen in many regions in India, including Tamil Nadu, Punjab, Bihar and Delhi, where screening for gestational diabetes has become compulsory. Changes have also occurred within the services offered by the large National Rural Health Mission initiative of the Government of India.

An international impact

In the international arena, the World Diabetes Foundation has also played a catalysing and facilitating role in bringing attention to gestational diabetes as an important factor for the prevention of diabetes, at both primary care and policy level. Recently, the World Health Organization (WHO) revised their diagnostic criteria and classification of hyperglycaemia first detected in pregnancy.

“I believe the World Diabetes Foundation can take indirect credit for the WHO revisiting their criteria which were originally created two decades ago, as we have initiated attention for gestational diabetes and supported national programmes that have facilitated the process for policy makers to focus more on gestational diabetes,” says Dr. Kapur. In fact, two members of the expert group convened to revise the criteria are project partners with the World Diabetes Foundation.

However, even though the new WHO guidelines are a step in the right direction, many challenges still exist for developing countries. In India, fully implementing the new criteria could mean that almost one third of pregnant women will be diagnosed with gestational diabetes, which will place tremendous pressure on the health care system.

But the benefits of this increase in diagnosis will far outweigh the challenges, believes Dr. Kapur. “From an Asian perspective, women are smaller and so a large baby – which is one of the consequences of gestational diabetes – presents a greater obstetric risk. Therefore it is very important that all women with gestational diabetes are diagnosed. The last word has therefore not been said on diagnostic criteria for diabetes in pregnancy!” he says. “Recently, and for the first time, a United Nation’s document has directly linked gestational diabetes and MDG five. This shows that our work over the last eight years has helped push the agenda and that we are making a difference.”
AFRICA REGION

56 ONGOING PROJECTS
50 COMPLETED PROJECTS

FUNDRAISING PROJECTS IN CONGO-BRAZZAVILLE, MADAGASCAR AND MALAWI

NATIONAL LEVEL PROGRAMMES IN GHANA, KENYA, MOZAMBIQUE, TANZANIA, UGANDA AND ZANZIBAR

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* Country with ongoing project(s)  * Country with national level programme(s)  * Country with fundraising project(s)  * Ongoing  * Completed
In the African region, the prevalence of type 2 diabetes is rising quickly. Rapid uncontrolled urbanisation and major changes in lifestyle are driving the diabetes epidemic. The increase in prevalence presents a substantial public health and socio-economic burden in the face of scarce resources and limited health care capacity. The rate of undiagnosed diabetes is high in most countries in Africa. Individuals who are unaware they have diabetes are at very high risk of developing chronic complications. Therefore, the rate of diabetes-related morbidity and mortality in this region could grow substantially. A multi-sectorial approach to diabetes control and care is therefore vital to sustain improved access to diabetes care in Africa.

Diabetes prevalence for the region was 5.7% in 2013 with 19.8 million people living with diabetes. By 2035, an estimated 41.5 million people will have diabetes which constitutes an increase of more than 109%. The World Diabetes Foundation has supported numerous national level programmes in this region including: Kenya, the United Republic of Tanzania, Zanzibar, Uganda, Ghana and most recently Mozambique. In addition, the World Diabetes Foundation has funded several advocacy meetings that have facilitated policy changes and has also funded regional and national guidelines for the prevention, care and control of diabetes.
When the World Diabetes Foundation supported its first diabetes care project in one of the poorest countries in the world – Tanzania – over twelve years ago, minimal health care services existed for people living with diabetes in this region. Much has changed since then. Today, Tanzania has a comprehensive national level diabetes programme and the World Diabetes Foundation has recently supported its 16th project in the country. The National Diabetes Primary Prevention programme will reinforce previous projects that focused on primary prevention of diabetes and non-communicable diseases (NCDs).

The objective of the school-based programme is to strengthen the implementation of the existing National School Health programme in schools around the Lake Zone region, by promoting healthy eating habits and physical exercise, in order to help prevent future generations from developing diabetes and related NCDs.

Helping students reach their potential

“Healthy eating habits in childhood and adolescence can promote optimal childhood health, growth and intellectual development; prevent immediate health problems, such as iron deficiency, obesity, eating disorders, and dental caries; and may prevent long-term health problems, such as diabetes, coronary heart disease, cancer and stroke,” explains Dr. Samwel Ogillo, Chief Executive Officer at the Association of Private Health Facilities in Tanzania (APHFTA), the organization managing the project. “Furthermore, school health programmes can help children attain an improved educational potential and proper health by providing them with the skills, social support and environmental reinforcement they need to adopt long-term, healthy eating behaviours.”

Implementation responsibilities for the National Diabetes Primary Prevention programme will be shared with the Ministry of Health and Social Welfare (MoHSW) and Ministry of Education and Vocational Training (MoEVT). “This collaboration clearly emphasizes the role of public-private partnership in the fight against NCDs in Tanzania. Our tripartite relationship with the MoHSW and MoEVT will optimise resources, maximize the impact and ensure the long-term sustainability of activities once the project has been completed,” says Dr. Ogillo. In addition, the Tanzanian Diabetes Association will provide technical support for the programme.

The National Diabetes Primary Prevention programme builds on a previous primary prevention project managed by the APHFTA that covered 20 schools in the Lake Zone regions and which successfully increased knowledge on diabetes prevention among school children, parents and community members and furthermore increased patient visits to local health care facilities. This new project will target 100 schools in addition to the 20 targeted in the previous project that will be used as a learning point for the newly recruited schools.
**EXPECTED OUTCOME**

**MoHSW and MoEVT** school health programme structures strengthened and policies reviewed, monitoring approach established.

Regional and district officials and school health programme coordinators sensitized or trained.

- **240** teachers and **480** food vendors sensitized or trained and various equipment and education and awareness materials provided to schools.

- An estimated **100,000** school children at **120** schools provided with enhanced tuition on diet, lifestyle and NCDs and an estimated **200,000** family or community members reached.

- **150** health care staff trained and **50** primary health centres provided with basic equipment for screening of diabetes and other NCDs.

The existing school curriculum already has time allocated for health education and activities but the policy framework and regulations are not being implemented due to lack of technical knowledge. The National Diabetes Primary Prevention programme therefore aims to turn policy into action. Sports clubs and nutritional classes will be supported in the 120 schools with the ambition to reach 100,000 school children. The school curriculum and education materials that have been developed by APHFTA and partners, including the Ministry of Education, will be utilized as teaching aids. Each child receiving the education sessions will be expected to reach out to at least two family members thus reaching a further 200,000 people. “Information is a catalyst for change,” says Dr. Ogillo. “It is envisaged that awareness about diabetes and NCDs will help improve lifestyles and induce healthy eating habits.”

**Ensuring a sustainable approach to training**

To achieve the project’s objectives, regional and district officials, school health programme co-ordinators and teachers will all receive training. In order to ensure sustainability of the knowledge dissemination, the District School Health Coordinators will be trained as part of the ‘Trainer of Trainers’ principle, to play a key role in strengthening and maintaining the programme at the primary school level.

Teaching about the importance of healthy eating is an important component of the programme. “Children are used to fried foods and staple foods which are heavy on starch and carbohydrates with seasonal fruits. The food vendors at schools usually supply junk foods including deep fried foods, canned and artificial juices and ice creams,” points out Dr. Ogillo. Therefore food vendors, who are often found within the school premises, will be given training on the importance of healthy food and how to prepare it.

Capacity of primary health centres located adjacent to the targeted schools will be increased, through training of health care staff on basic NCDs prevention and detection. This will ensure that the health workers have the capacity to establish links between their facilities and communities within the targeted programme area. In addition, the trained health care professionals will be better equipped to improve collaboration with the nearby schools to conduct health education sessions on a regular basis.

Furthermore, the APHFTA will work with the Tanzania Institute of Education and National Examination Council to incorporate NCDs topics into the training curriculum which will allow the teachers to conduct the training and then work in different areas of the country in order to pass on this knowledge to their peers and students. Ultimately, it is hoped that by supporting the MoHSW and MoEVT in the implementation of the school health policy, the National Diabetes Primary Prevention programme will be expanded across Tanzania.

**PROJECT PARTNERS IN UR OF TANZANIA**

- Abbas Medical Centre
- Association of Private Health Facilities in Tanzania (APHFTA)
- Ministry of Health Tanzania
- Ministry of Health Zanzibar
- Muhimbili National Hospital
- Tanzania Diabetes Association

**PROJECT FUNDING**

Co-funding USD 2,267,200

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The National Diabetes Primary Prevention programme will be expanded across Tanzania.
about diabetes in all segments of society. Although these projects proved to be extremely successful, much still needs to be done to improve the situation for people living with diabetes in Mali. Consequently, a second phase of projects has been developed to contribute to improving health care and the quality of life of the population through the prevention and treatment of diabetes.

The first project in this second phase – which focused on improving prevention and treatment of diabetes in adults, children and pregnant women and reducing the development of diabetes-related complications, in particular diabetic neuropathy and foot ulcers – has now been completed. The three-year project took place in the capital district of Bamako, the regions of Timbuktu, Sikasso, Mopti, Ségou, Kayes, Gao, Koulikoro and the Douentza district.

The project had three major objectives, explains Mr. Besançon: “We wanted to increase the decentralization of care to provide more opportunities to care for patients living with diabetes in the country and increase awareness campaigns for the prevention of risk factors for diabetes. We also wanted to strengthen the role of the patients associations so that they could improve their engagement in the health care system in the fight against diabetes.” All of the project’s objectives were achieved – if not surpassed – by the plethora of activities which took place before the end of the project in June 2013.

It is estimated that approximately 3% of the population of Mali has diabetes. However, a study conducted at the Point G National hospital in 1996 revealed that diabetes was the second biggest cause of hospitalization after HIV/AIDS in the department of internal medicine. The most frequent complication is neuropathy and foot ulcers which accounts for about 60% of non-traumatic amputations in Mali. Furthermore, diabetic retinopathy is often detected at such a late stage that, in many cases, it leads to blindness.

Building health care equity

Long-term complications of diabetes are severe in Mali for many reasons including the acute lack of trained doctors and awareness among both health care professionals and the general population. In fact, ten years ago the international non-governmental organization Santé Diabète (SD) found that there were only two specialist doctors – one endocrinologist and one diabetologist – in the whole country who were responsible for over 350 consultations a week. “The two main problems for people living with diabetes in Mali is access to diabetes care, especially in the rural areas of Mali, and the cost of treatment, which is very high compared to the very low average wage in this country,” says Mr. Stéphane Besançon, Director General of SD.

Previous projects in Mali organised by SD, and supported by the World Diabetes Foundation, focused on training of health care professionals and raising awareness about diabetes in all segments of society. Although these projects proved to be extremely successful, much still needs to be done to improve the situation for people living with diabetes in Mali. Consequently, a second phase of projects has been developed to contribute to improving health care and the quality of life of the population through the prevention and treatment of diabetes.
The force of civil society and the people

The level of knowledge about diabetes, its risk factors and consequences has been raised significantly among the general population during the course of the project. Approximately 13,685 participants took part in an information campaign lasting 64 days, during which 951 people were diagnosed with diabetes. The broadcasting of drama sketches and radio messages, the development of tools for prevention for schools, and the production of a primary prevention DVD containing cartoons – to name just a few of the activities undertaken during the project – all helped to raise awareness of this chronic disease. The results of these activities have been quantified through a survey of the adult population, students and school pupils. Over 75% of survey participants from each of these target groups obtained at least 80% correct answers for the questionnaire about diabetes, its symptoms and risk factors.

The project contributed significantly to the strengthening of 18 diabetes associations throughout the country and ultimately the formation of the National Federation of Diabetic Patients of Mali (Fenadim), which today is a powerful coalition for advocacy in the country. This has helped move diabetes up the national agenda and an unexpected – but very welcome – outcome of this is that diabetes is now an important aspect of the new health care policy of Mali which is currently being defined. Furthermore, gestational diabetes has been included in the new reproductive health policy of Mali and issues of malnutrition – including over-nutrition – have been addressed in the new nutritional policy document for the country.

Creating health care capacity

To improve patient care and compliance, the project has helped strengthen the health care system by improving the level of skills of health care professionals in terms of detection and treatment of diabetes complications, in particular long-term complications related to neuropathy and foot ulcers. Thousands of doctors, nurses, paramedics and other health care professionals have received training regarding diabetes in children, adults and pregnant women during the course of the project. Reaching out to medical students, two official degrees in endocrinology and diabetology and an official course resulting in a university diploma have been created.

Another unexpected outcome of the project was the establishment of a 30-bed endocrinology and diabetology unit at the National Hospital in Mali. The project has also successfully obtained compulsory health insurance cover for diabetes medication to reduce the cost for patients. This last result is particularly significant as one years’ worth of insulin previously cost almost 40% of a family’s annual income, which meant that many people with diabetes simply could not afford treatment – even if it was made available.
Uniting stakeholders for the greater cause

A further unplanned outcome of the project was the provision of humanitarian aid to thousands of people with diabetes who were severely affected by the coup d’état which took place in March 2012, the following occupation in the north of the country, and the subsequent war. During this time of hardship, patients in the north of the country had no access – or very limited access – to health care professionals and medicines. In addition, a large number of patients were displaced to the south. However, the close collaboration between SD, hospital partners and the Ministry of Health enabled the urgent development of a response that included provision of treatment to 1,800 people with diabetes in the north – which ultimately saved lives.

Reflecting on both the expected and unexpected outcomes of the project, Mr. Besançon acknowledges that all the activities have had a positive impact on raising awareness, increasing knowledge and facilitating lifestyle behaviour changes in the general population and in people living with diabetes. Furthermore, diabetes care has been improved by increasing capacity of trained health care professionals in Mali. He points out that the project’s success has been recognised globally, as it has been used as a model in international conferences and universities, with its training modules and awareness strategies used in several countries.

“I believe our success is largely due to the project’s ability to unite stakeholders from both the public domain and civil society and in strengthening patient associations. The project has reinforced the capacity of patients and civil society to improve access to quality care, to champion their rights to health and, through the formation of the patient associations, reduced the social and economic impact of diabetes,” explains Mr. Besançon.

Speaking on behalf of the World Diabetes Foundation, Programme Coordinator Ms. Susanne Brixtofte Olejas says: “We place great emphasis on the presence of what we call local champions in the implementation of the funded interventions. These are individuals or organisations like Mr. Besançon and SD that are willing to and capable of carrying the torch locally and guiding the process to effectively push the diabetes agenda at the policy level,” she says.

“With the support from the World Diabetes Foundation, a lot has been achieved in Mali – both in terms of building health equity and health care capacity – which has allowed SD to leverage and attract other resources at the national and international level, enabling a true catalytic effect across the entire country,” concludes Ms. Brixtofte Olejas.
RESULTS FOR 5 PROJECTS IN MALI

42 clinics established
10 clinics strengthened with GDM* care

10,500 patients treated at established clinics

1,141 doctors trained
1116 nurses trained

102 awareness camps
509,602 people reached through awareness activities
16,053 people screened at camps

1,030 paramedics trained

951 people detected with diabetic retinopathy
144 people treated with laser treatment

3,500 patients screened for diabetic foot
3,250 feet saved through treatment

PROJECT PARTNER
ONG Santé Diabète

WDF contribution (total)
USD 1,118,805
30%

Co-funding
USD 2,639,033
70%

*GDM is an abbreviation for gestational diabetes mellitus
MIDDLE EAST AND NORTH AFRICA REGION

15 ONGOING PROJECTS
18 COMPLETED PROJECTS

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Three of the world’s top 10 countries with the highest prevalence of diabetes are in the Middle East and North Africa (MENA). Diabetes prevalence for the MENA region was 10.9% in 2013 with 34.6 million people living with diabetes. The estimated increase in the number of cases between 2013 and 2035 is a staggering 96% – bringing the total to 67.9 million people. Over the past three decades major social and economic changes have transformed many of the countries in this region. Changes include rapid urbanisation, reduced infant mortality and increasing life expectancy. These developments have brought about a constellation of negative behavioural and lifestyle changes relating to poor quality of nutrition and reduced physical activity, giving rise to some of the highest levels of obesity in the world.

The World Diabetes Foundation has funded 33 projects in the MENA region with improved focus on building access to care through capacity building, primary prevention and establishing numerous diabetes clinics. These projects are implemented with the collaboration of national governments, UN agencies, private health care institutions and non-governmental organisations.

**MIDDLE EAST AND NORTH AFRICA REGION**

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**PROJECT RESULTS FOR ACCESS TO CARE**

- 3,024* awareness camps held
- 24,930* people screened
- 6,470* doctors trained
- 1.822* nurses trained
- 588* clinics established or strengthened
- 134,996* patients treated at established clinics
- 2,259* paramedics trained
- 6,470* doctors trained
- 1.822* nurses trained

**DISTRIBUTION OF FUNDING 2002-2013**

- WDF funding USD 9,656,224 34%
- Co-funding USD 18,708,270* 66%

**DISTRIBUTION OF FUNDING TO FOCUS AREAS IN THE REGION**

- Access to care 47%
- Prevention 13%
- Foot 12%
- Eye 7%
- Pregnancy 9%
- Type 1 diabetes 9%
- TB & DM 3%

*All figures are estimates based on internal World Diabetes Foundation reporting
Access to proper health care is a major problem for refugees living in the West Bank and Gaza. Economic difficulties and mobility constraints due to the ongoing conflict have led to insecurity and stress resulting in an increase in non-communicable diseases such as hypertension and diabetes – and a rise in diabetes complications. While guidelines for diabetes management exist, training and proper assessment and follow-up of interventions has not been possible. The burden of diabetes for this extremely vulnerable segment of society is therefore growing rapidly.

It is in this traumatic setting that the United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) – the second largest health care provider after the Ministry of Health – is implementing a project to improve the detection and management of diabetes in the West Bank and upgrading the management of diabetes foot care in Gaza. The project is funded by the World Diabetes Foundation.

**Differing approaches**

As Gaza and the West Bank have their specific health challenges, different approaches to improve diabetes care in each area is required. “In the West Bank, the situation is slightly different from Gaza,” says Dr. Mahmoud Wohoush, UNRWA project co-ordinator for the West Bank. “The specific health care facilities that allow us to expand more comprehensive management of diabetes care, inducing both primary and secondary prevention, are available here. We have established our own centre of excellence for diabetes care in the southern part of the West Bank. Patients can be referred here from other health centres to receive more specialized diabetes care. Moreover, there are specialized centres collaborating with UNRWA such as Augusta Victoria Hospital, St. John’s Eye Hospital and the Ministry of Health diabetes centre where patients can be referred and get more advanced care if needed. The project helps us to improve such care and networks within the West Bank.”

But with limited health care facilities in Gaza, it was decided that addressing diabetes foot care was the best option for this region: “Diabetes foot care is manageable at primary health care settings like ours and across the 22 primary health clinics operating in Gaza and can be delivered by trained nurses. Prevention and early detection of abnormalities and timely management can postpone or even prevent late complications and amputation. It is therefore the most cost-effective intervention we can make in Gaza,” says Dr. Isa Saleh, UNRWA project co-ordinator for Gaza.
A multi-partner philosophy

The project, which began in 2010, has involved partnerships with a range of stakeholders including the Ministry of Health, the Palestinian Medical Relief Society, the World Health Organization (WHO), the Augusta Victoria Hospital and other public and private organisations.

“I strongly believe that partnerships are a must when it comes to providing adequate diabetes care,” explains Dr. Akihiro Seita, director of UNRWA’s health programme. “Diabetes is a multi-factorial condition and multiple partners are needed to address such complex challenges. Here at UNRWA we strongly believe in, and thus pursue, wider partnerships for the better care of diabetes among Palestine refugees.”

Project development in Gaza

These partnerships have helped the establishment of diabetes foot care units in each of the UNRWA health centres in Gaza. A field disease control officer and senior medical officer have been trained as trainers in foot care at the National Diabetic Centre in Amman – the WHO collaborating centre for diabetes. The aim is for them to subsequently train 170 health care professionals at the health centres.

To raise awareness, over 5,500 diabetes education sessions and 240 awareness camps have so far been conducted and 40,000 foot care brochures have been produced to educate patients about foot complications. To date, over 32,000 people have been screened for diabetes and foot care and 738 feet have been saved through treatment. Furthermore, a system has been established to improve diabetes foot care examinations and early detection of foot complications.

Improved networks in the West Bank

The project has helped improve networks – and diabetes care – within the West Bank, by strengthening health clinics in the area and building capacity amongst health care professional in diabetes management, with 76 doctors trained to date. In addition, 59 doctors, nurses, psychosocial workers, physiotherapists, pharmacists and nutritionists have also received training in the psychosocial issues faced by people living with diabetes.

Fairs to raise awareness about diabetes in the West Bank have so far resulted in more than 86,000 refugees being reached, while more than 10,500 refugees at-risk have been screened for diabetes. As part of the project, essential medicines are being offered free of charge through the clinics. Future plans include addressing
As the three-year project nears completion, it is possible to look back and see how much has been accomplished under difficult circumstances. “In both areas, we are very proud of the hard work done by our frontline workers at health centres. Their working conditions as well as overall social, economic and security situation are far from ideal. Under such situations, they have been committed and dedicated to the project-supported activities. This we are very proud of,” says Dr. Seita.

This dedication has no doubt played an important role in the ongoing success of the project. “In Gaza, the project helped us to formulate our diabetes foot care policy, which will be incorporated in all our other fields of operation – namely Lebanon and Jordan. In the West Bank, the project outlined the optimal way of partnership development with local specialized institutions for diabetes care. Without the support of the World Diabetes Foundation we would not have come out with such a clear understanding at the policy level,” Dr. Seita concludes.

diabetes risk factors and prevention at educational institutions such as healthy canteens.

Even tribal Bedouin communities, who are suffering displacement and who have very limited access to health care, are being reached through five existing mobile care units which have been strengthened by introducing diabetes screening and care.

**A challenging environment**

Dr. Anil Kapur, Board Member of the World Diabetes Foundation who instigated the process to establish the partnership with the UNRWA, comments: “The burden of diabetes is growing rapidly, especially among refugees who are already extremely vulnerable. To halt this situation, it is essential to improve access to quality care and ensure prevention, early diagnostics and compliance of treatment in order to avoid the devastating complications that are derailing lives. The commendable efforts undertaken by the UNRWA should be complimented. They have utilized the funding received from the World Diabetes Foundation to improve the delivery of diabetes care and to build sustainable solutions by leveraging the strength and knowledge of the local partners.”
RESULTS FOR 9 PROJECTS SUPPORTED IN THE WEST BANK AND GAZA REGION

202 clinics established

15,608 patients treated at established clinics

371 awareness camps
97,643 people reached through awareness activities
13,000 people screened at camps

132 clinics strengthened with GDM* care
5,085 women screened for GDM

17 diabetic retinopathy training camps
10,965 people screened for diabetic retinopathy
1,168 people detected with diabetic retinopathy
1,354 people treated with laser/eye surgery

42,918 patients screened for diabetic foot
8,726 feet saved through treatment

PROJECT PARTNERS (9 PROJECTS)

• UNRWA
• St. John Eye Hospital Group
• DanChurchAid
• Augusta Victoria Hospital - Diabetes Care Center

DISTRIBUTION OF FUNDING TO 9 PROJECTS IN THE WEST BANK AND GAZA REGION

WDF contribution
USD 3,284,604
24%

Co-funding
USD 10,379,676
76%

*GDM is an abbreviation for gestational diabetes mellitus
## South-East Asia Region

- **42 Ongoing Projects**
- **39 Completed Projects**

**Fundraising Project in Bangladesh**

**National Level Programme in Sri Lanka**

### Map of South-East Asia Region

![Map of South-East Asia Region](image)

### Table of Projects by Country

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- **Maldives**
- **Mauritius** (not shown on map)

### Legend

- Red circle: Country with ongoing project(s)
- Orange circle: Indian state with ongoing project(s)
- Yellow triangle: Country with national level programme(s)
- Grey circle: Country with fundraising project(s)
- White circle: Ongoing projects
- Black circle: Completed projects
SOUTH-EAST ASIA REGION

Close to one-fifth of all adults with diabetes in the world live in South-East Asia. Current estimates indicate that 8.7% of the adult population or 72.1 million people have diabetes in this region. This will increase to 123 million people by 2035, or 10% of the adult population. The projected increase in the regional diabetes prevalence is a consequence of large scale urbanisation and increasing life expectancy. With 1.2 million deaths attributable to diabetes complications, this region has the second highest number of deaths due to diabetes of any of the seven regions. The majority of projects funded by the World Diabetes Foundation in South-East Asia are located in India which has the second highest number of people living with diabetes in any country (65.1 million). Five projects in Bangladesh and a national level programme in Sri Lanka are ongoing. Given the high mortality rate, the World Diabetes Foundation has supported numerous primary prevention projects, including diabetes and pregnancy which have paved the way for local policy changes and included integrated access to diabetes prevention and care at the national level in India.

In addition, the Foundation has provided funding for projects, documenting effective strategies and building effective health care capacity for screening and management of TB and diabetes which has encouraged the Government of India to recognise the dual burden and induced local policy changes in the area of “bidirectional” screening, where those diagnosed with TB would be screened for diabetes and vice versa at the national level.

*All figures are estimates based on internal World Diabetes Foundation reporting
The health care system in the Maldives is greatly constrained by geography. With heavy workloads and limited resources, the few doctors and nurses do their best to treat the dispersed population of 350,000 inhabitants. The incidence of diabetes in the Maldives is largely unknown, but is currently estimated to be 6.5% and rising. But with limited access to health care services and information, many simply do not know they have this disease, and those that have been diagnosed are likely to develop long-term complications such as diabetic retinopathy.

This is the challenge the Diabetes Society of the Maldives (DSM) is planning to overcome. Consisting of just six to seven dedicated individuals, the DSM is a NGO that doesn’t let its small size limit its great ambitions. “Our aim is to create awareness among the public about diabetes and to emphasize the importance of prevention,” explains Ms. Aishath Shiruhana, Chief Executive Officer for the DSM. “We act as a centre of information for diabetes by educating people through screening programmes, presentations, consultations and health education. In addition, we also work to improve diabetes care throughout the country to help people with diabetes lead a normal life with their illness.”

In 2013, the work and effectiveness of the DSM was recognised by the World Health Organization (WHO) when the NGO was awarded the Dr. LEE Jong-Wook Memorial Prize for Public Health which is given in acknowledgment of an outstanding contribution to public health. “The Diabetes Society of the Maldives is being awarded for its success in creating public awareness on diabetes, making health promotion interventions for prevention of non-communicable diseases, and training local staff to offer counselling and treatment,” stated the WHO at the time of the award.

An impossible situation

Building on a previous project funded by the World Diabetes Foundation which trained health care professionals in primary care and raised general awareness of diabetes, the DSM is now addressing the issue of diabetic retinopathy. Before the project there
were no eye clinics specialising in diabetic retinopathy in the Maldives, which made diagnosis and treatment almost impossible for many patients, says Ms. Shiruhana. “Most of the patients with complications related to diabetes were referred abroad – and most people are not able to afford to go abroad.”

**Reaching out to 86 islands**

As no screening or awareness activities for diabetes eye care complications had previously taken place in the country, this project is therefore making a huge impact. In addition, specially targeted outreach events, where people with diabetes are screened for diabetic retinopathy, are taking place twice a year and are targeted to reach 86 islands of the Maldives. Prior to the screening events, awareness programmes, camps and mass media campaigns involving TV, radio and publications are being used to increase knowledge about the importance of early detection of diabetes-related eye complications. It is estimated that at least 25% of the total population of the Maldives will be reached in this way.

**The only specialised eye clinic in the country**

Any patients with diabetes who are diagnosed with eye complications at the screening events will be referred to a specialised eye clinic which has been established in the capital city Malé. The clinic – the first of its kind in the Maldives – is fully-equipped to provide eye examinations and laser treatment for those patients in need. The health centres are also referring patients to the clinic.

Over the course of the three-year project it is anticipated that 4,500 examinations and treatments will take place at the clinic. “The establishment of the clinic is our biggest achievement so far. Our ultimate hope is that all people with diabetes have access to diabetic retinopathy screening and treatment at an affordable cost in the Maldives,” says Ms. Shiruhana. In fact the DSM is already looking to the future, as it is currently working to get the clinic registered under the Social Medical Insurance scheme. The long-term ambition is to secure a sustainable outcome when the project ends, by ensuring that patients are able to receive services free of charge in the future.
WESTERN PACIFIC REGION

28 ONGOING PROJECTS
20 COMPLETED PROJECTS
FUNDRAISING PROJECTS IN CAMBODIA, LAOS AND VIETNAM
NATIONAL LEVEL PROGRAMME IN FIJI

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- Country with ongoing project(s)
- Country with national level programme(s)
- Country with fundraising project(s)

Legend:
- Ongoing
- Completed
During the past three decades the Western Pacific region, in particular China, has experienced rapid economic development leading to improved standards of living and increasing urbanisation. As a downside, this development has brought about unhealthy lifestyles and, consequently, a significant rise in obesity and diabetes rates. Some 138.2 million people are living with diabetes in the Western Pacific region which has one of the largest populations affected by this disease. This number is estimated to increase to more than 201.8 million people with diabetes by 2035. China has the highest number of people living with diabetes (98 million) in the world and is on the verge of being overwhelmed by this disease.

The World Diabetes Foundation has granted support to comprehensive community awareness and diabetes prevention and care projects in numerous countries in this region. Among these are major ongoing programmes that seek to turn the tide by means of lifestyle interventions and by providing integrated care in China, Thailand, Cambodia and Indonesia. In addition, the World Diabetes Foundation is starting to focus its efforts on the Pacific Island nations which hold unfortunate records in obesity that are causing widespread diabetes complications. The World Diabetes Foundation has recently granted support to the first national level programme in Fiji.
The island country of Fiji, with its tropical climate and location in the Pacific Ocean, is many people’s idea of paradise. But for the 860,000 inhabitants living on 110 of the 332 islands in Fiji, the changing lifestyle and urbanisation has become a public health concern. A staggering 65% of the population is overweight and 30% are obese due to poor diet and a sedentary lifestyle.

“The last 20 years has seen the establishment of many new fast food outlets combined with a plethora of soft drinks companies,” explains Dr. Wahid Khan, Honorary Secretary of the World Organization of Family Doctors, Asia Pacific Region and Chairman of Diabetes Fiji. “The 2011 Steps survey shows that only 15% of the population consumes five daily servings of fruits and vegetables despite a media campaign over the last five years to increase this notion.”

A three-pronged approach

For a developing country, Fiji has a relatively good standard of public health compared to other countries in the region. However while the burden of infectious diseases is being adequately addressed, the emerging challenge of non-communicable diseases (NCDs), in particular diabetes and hypertension, requires urgent action. It is estimated that NCDs account for more than 50% of the annual health care spending and are responsible for 77% of all deaths in Fiji.

Following on from a successful project which focused on diabetic retinopathy, the World Diabetes Foundation is now supporting its second project in Fiji in partnership with the Fijian Ministry of Health and Diabetes Fiji. This new project aims to decrease foot amputations relating to diabetes and improve the overall management of diabetes at the primary care level.

The project’s strategic objectives are threefold and aligned with the Ministry of Health and the National Strategic Plan on Non-Communicable Diseases. Firstly, the capacity of health care providers will be strengthened. Secondly, health care facilities will be equipped for improved management of diabetes including foot care. Thirdly, activities aimed at raising awareness and improving health-seeking behaviour among the general population will be conducted.

“Save rather than cut”

The shifting focus from infectious diseases to NCDs in Fiji, coupled with the increasing emigration of health care professionals and the reduction in the age of mandatory retirement for public workers, has resulted in a gap in health care capacity. To address this issue close to 500 health care professionals, including surgeons, nurses, primary care doctors and students, will receive training during the course of the three-year project.

“The major objective of the project is to decrease the level of amputations in Fiji. Champion surgeons will therefore be selected to promote the motto ‘save rather
EXPECTED OUTCOME

Standardisation of guidelines & training materials
Decreased admissions & amputations due to diabetes
Increase in consultations on diabetes

476 health care professionals trained

PROJECT PARTNER

Diabetes Fiji & Fiji Ministry of Health

DISTRIBUTION OF FUNDING TO PROJECT

WDF contribution (total)
USD 600,000
26%

Co-funding
USD 1,694,820
74%

than cut,” says Dr. Khan. “In addition to training nurses and primary care physicians in foot care, we will also train medical and nursing students at schools that are attached to hospitals with international track records of providing good quality foot care.”

To ensure that newly-trained health care professionals can carry out their work, targeted health care facilities will be equipped with essential medical equipment and medicines for improved management of diabetes and foot care. The Senior Programme Coordinator of the World Diabetes Foundation, Mr. Bent Lautrup-Nielsen, who recently conducted a field visit to Fiji, elaborates on the project approach and outcome:

“This particular project funded by the World Diabetes Foundation enables the Fijian Ministry of Health and the Diabetes association of Fiji to strengthen diabetes care at the primary level. It also provides screening in remote, underserved areas and detects cases of diabetes that would otherwise not have been detected until major complications had occurred. Diabetes is often referred to as ‘the silent killer’ because the early stages show few symptoms and so conducting screenings at the primary care level and building awareness about diabetes and its complications is imperative to save lives.”

“I hope this project will serve as an inspiration and pave the way for other projects in the Pacific Region, which has some of the highest prevalence rates of diabetes in the world,” adds Mr. Lautrup-Nielsen.

Encouraging health-seeking behaviour

In addition to increasing the supply of services the project also aims to increase demand for health consultations, by raising awareness of diabetes and foot complications among local communities, in particular populations at high-risk of developing diabetes and people already diagnosed with diabetes. This will be achieved through the development of materials for awareness creation, implementing a media strategy and a plan for the dissemination of public information on diabetes and foot care. In addition, community-based programmes, peer education and workshops will be conducted.

“We are planning a national registration process which will provide some true figures on numbers, localities and major complications of diabetes. By taking this approach, we hope to centralise the data collection so that people with diabetes can be properly managed and compliance improved,” explains Dr. Khan. “Health care policies are already in place. What we need to do is progress and act on them. To do this effectively without duplicating services we need to get all stakeholders engaged together in a united effort to tackle the diabetes crisis. The success story of this project will be used to identify the immense goodwill that exists in Fijian society and to ensure the sustainability of the project,” he concludes.
Taking an innovative approach to sight-saving diabetes care in rural China

China has 92 million people living with diabetes – more than any other country in the world – and blindness caused by diabetes complications is a major problem. Yet many people with diabetic retinopathy are undiagnosed and only 10% of those affected in rural China receive treatment. The World Diabetes Foundation has taken a multi-stakeholder approach to change this dire situation.

Neither patients nor doctors in rural China understand that diabetic retinopathy is initially without symptoms. Patients don’t want to pay for a more expensive examination when they believe their vision is fine, so they simply wait until the vision worsens to have a thorough eye exam,” explains Prof. Nathan Congdon, Division of Preventive Ophthalmology, Zhongshan Ophthalmic Center (ZOC), and Senior Advisor at ORBIS International North Asia. “Prior to this project, funded by the World Diabetes Foundation, there was no proper system to diagnose and treat diabetic retinopathy in this remote area. Patients were diagnosed, if at all, at a point when it was often too late for treatment and their vision had already been lost in one or both eyes.”

Telemedicine network

This World Diabetes Foundation-sponsored project leverages the Comprehensive Rural Eye Care Service and Training (CREST) initiative, a collaborative effort between ORBIS International and ZOC. CREST is creating a model of eye care, including diabetic retinopathy, glaucoma and children’s eye disease, which is being integrated with the existing health care system at 10 selected county hospitals in the rural Guangdong province of Southern China.

“The World Diabetes Foundation’s support has allowed us to create a fully computerized and automated network linking the 10 branch centres and ZOC together,” says Prof. Congdon. Digital cameras have been placed at the branch centres which are connected to a reading centre for retinal photo grading at ZOC. Treatment, if necessary, is undertaken by ZOC experts together with local doctors on a fully-equipped mobile van which travels to all of the 10 centres. For the first time, an electronic medical record system has been established which keeps track of outpatient information, treatment, compliance and follow-up. Long-term adherence to follow-up examinations, a key challenge in rural areas such as this, is being addressed via an automated SMS system which will hopefully boost compliance amongst the patients.

A focus on supply and demand

During the course of the project, 70 local doctors will receive training to diagnose, treat, provide follow-up and refer cases requiring more complex surgical treatment to ZOC. People with diabetes will be shown videos explaining the importance of eye examinations at all hospitals, thus creating awareness within the CREST network. All patients over the age of 40 will receive low-cost, comprehensive eye exams, even if they have no symptoms. ORBIS International will initially subsidise the cost of these exams. However, it is hoped that the results of the project will convince the local hospitals to lower the price of the exams as demand increases, realizing that the low-cost exams actually increase profits by allowing them to identify more patients needing treatment. The ambition of the project is therefore also to persuade the Ministry of Health to offer a low-cost comprehensive examination package to make it easy for patients to get early check-ups, rather than wait until sight has been impaired and complex emergency surgery potentially becomes necessary.
Co-funding
USD 2,009,205
83%

WDF contribution
USD 400,000
17%

PROJECT RESULTS

10 clinics established
20 doctors trained
20 nurses trained
4,654 patients treated
32 paramedics trained

113 awareness/screening camps
8,973 people reached through awareness activities
80 people treated with laser

PROJECT PARTNERS

Zhongshan Opthalmic Center – Sun Yat-sen University, ZOC, & ORBIS

“Everybody benefits from this system, both doctors and hospitals, so everyone has a vested interest in taking part and scaling it up,” Prof. Congdon explains. “One of our key goals in this project is to change the way the health system copes with diabetic retinopathy. We use research and outcome data to document our methods in every aspect. For example, how does the capacity building of local doctors impact the identification of cases of diabetic retinopathy? And also from a cost effectiveness perspective, what are the benefits from using telemedicine and a grading centre? How well do automated SMS messages work to improve compliance? All of these issues will be looked at while applying a research methodology. We want to show exactly what works and why, to help advocate with the Ministry of Health to scale up the best practices and to make this model sustainable.”

A replicable and scalable model

The project benefits from many international partners and collaborators: in addition to the World Diabetes Foundation and US-based ORBIS, the Indian company FORUS has provided the digital cameras and the system software has been designed by the Australian organization Commonwealth Scientific and Industrial Research Organisation (CSIRO), which is responsible for providing telemedicine eye care for Australia’s aboriginal population. “We are honoured to be working with ZOC and the World Diabetes Foundation on this cutting edge project. We are anticipating that this model, once proven successful, is one that we will help replicate throughout China and around the world,” says Mr. George Smith, Director, ORBIS North Asia.

Before this project, the diagnosis and treatment of diabetic retinopathy simply did not exist in rural Guangdong as county hospitals only provided cataract surgery and acute care. Today, thanks to this project, things have changed.

Mr. Teis Piel Christensen, Programme Coordinator at the World Diabetes Foundation, is equally enthused by the innovative project and multi-stakeholder approach. “This project is proof of the Foundation’s ability to support innovative initiatives which in the best cases can catalyse an entirely different approach towards diabetes care. In the pilot project a cost-efficient screening, grading and treatment method which takes advantage of new technologies, combined with a mobile treatment van, has brought eye care services to the doorstep – specifically in rural areas. This has led to a significant removal of the barriers normally preventing rural and poorer people from accessing essential diabetic retinopathy services, and has thereby ultimately prevented new cases of blindness”.

“Every day is an achievement, in that we are literally doing something that no one has done before,” adds Prof. Congdon. “And ultimately we will create a model to manage not just complex, chronic eye diseases but systemic diseases as well. Our ambition is to develop a model that will be scalable, sustainable, smart, usable, patient-friendly and based on an improved understanding of disease and health on both sides of the stethoscope: for the patient and doctor.”
### South and Central America / North America and the Caribbean Regions

**17 Ongoing Projects and 10 Completed Projects in South and Central America**

**14 Ongoing Projects and 5 Completed Projects in North America and Caribbean**

**Fundraising Project in Haiti**

**National Level Programme in Honduras**

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<th>Completed Projects</th>
<th>National Level</th>
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- **Country with ongoing project(s)**
- **Country with national level programme(s)**
- **Country with fundraising project(s)**
- **Ongoing**
- **Completed**
Compared to other parts of the developing world, South and Central America are traditionally not considered to be major hot spots for diabetes and other chronic diseases. However, with the economic transition, globalisation and the accompanying changes in living standards, the prevalence of diabetes and obesity is steadily rising in this region and the social and economic impact of diabetes is becoming evident. Diabetes prevalence for South and Central America was 8.2% in 2013, with 24.1 million people living with diabetes. The estimated increase in prevalence of almost 60% between 2013 and 2035 will see this figure rise to approximately 38.5 million people.

Diabetes prevalence for North America and the Caribbean was 9.6% in 2013 with close to 37 million people living with diabetes. This is projected to increase to 50.4 million people by 2035 in the region which constitutes an increase of more than 37%. During the last few years, the World Diabetes Foundation has extended its support and collaboration in this region to include funding of national level programmes in Honduras and Mexico and projects which address primary prevention and capacity building in the Caribbean.
Vida Nueva, meaning “new life”, is the name of a multi-stakeholder project taking place in the district of Barranquilla in northern Colombia. This project is the first in the history of the World Diabetes Foundation which targets Colombia specifically and aims to diagnose and treat women with gestational diabetes and its complications. In addition, the objective of this particular project is to prevent the mothers and their offspring from developing type 2 diabetes in the future.

Caring for future generations

Proper estimates of gestational diabetes prevalence in Colombia do not exist. But the incidence of type 2 diabetes has increased in the country and is expected to continue to rise, so it can be expected that the incidence of gestational diabetes has increased as well. Undiagnosed and untreated gestational diabetes can lead to birth complications, including neonatal death, hypertensive disorders, obstructed labour, infections and a higher risk of the mother and baby developing type 2 diabetes later in life. The Barranquilla District Municipality has therefore decided to take action to protect the health of future generations.

A multitude of stakeholders

Vida Nueva is a public-private partnership which is anchored within and owned by the Barranquilla Health Department. The project is co-funded by the World Diabetes Foundation and Novo Nordisk. The Colombian Federal Ministry of Health forms part of the technical committee for the project, providing technical assistance in order to align the project’s regulations within the Colombian national policy. Other notable stakeholders and collaborators on this project include IPS Universitaria (responsible for administering the public health centres in Barranquilla), the Centre for Health Research (CIIS), five local universities, the Colombian Diabetes Federation, the Colombian Endocrinology Association, the University of Helsinki, the University of Copenhagen and the Steno Health Promotion Centre.

The project required many high-level stakeholders as the first step was to develop gestational diabetes guidelines, protocols and training manuals. A national and international advisory and consultation process therefore took place to ensure consensus and support. This has resulted in a 20-page gestational diabetes diagnosis and treatment guideline that has been well received by the stakeholders. Furthermore, the Barranquilla Health Department has been restructured to include a gestational diabetes project centre.

“In our opinion, having a range of stakeholders is a great asset and one of the cornerstones of the success of Vida Nueva,” explains Dr. Humberto Mendoza Charris, Vida Nueva project co-ordinator at the Barranquilla Health Department. “In regions like ours where resources are limited, it is important to unite all actions around a common objective in order to avoid duplicating efforts and wasting resources; this makes it possible for more people to benefit from the invested resources. As our experience shows, when these stakeholders are involved right from the planning stage of the project and through
its follow-up they stay motivated and performance improves continuously.’

**Changing lives**

The second step of Vida Nueva involves capacity building in the form of training for doctors, nurses and nutritionists. These health care professionals have been trained in how to implement the guidelines and a special gestational diabetes department, established at the maternity hospital as part of this project, provides specialised care and postnatal monitoring. In addition, university professors have received training enabling them to pass on this knowledge to their students and peers.

The implementation of a programme to screen approximately 80% of pregnant women in the city – currently estimated to be 25,000 women – constitutes the third step of the project, with provision of care and follow-up for those diagnosed with gestational diabetes. Furthermore, an awareness and information campaign at primary care level has been supported by the project.

The project is ongoing but has already proven its worth, according to Dr. Mendoza: “The acceptance among the mothers and young women, their enthusiasm and desire to improve the state of their health despite the economic, social and cultural adversities they face, is probably the achievement that stands out the most. The interest shown by academia, scientists and the international community in expanding the project’s achievements, with the aim of preventing diabetes and initiating treatment as early as possible, is also a great achievement.’”

**Barranquilla: a Replicable Project Model**

The project’s success has also been acknowledged by the Ministry of Health, who has declared Barranquilla a Replicable Project Model for health promotion, prevention, integrated care and rehabilitation of type 2 diabetes and gestational diabetes. The Ministry has endorsed the guidelines developed during this project, which will now become a national model and will be replicated throughout the country.

“I am certain that we are creating a comprehensive model for the prevention and treatment of gestational diabetes in Colombia. When people see the results in their own population they will surely adopt the measures and recommendations that the Government is promoting to prevent and treat diabetes and gestational diabetes, based on the experiences in the trial area of Barranquilla,’ states Dr. Mendoza.

Furthermore, the Ministry of Health has asked the Barranquilla Health Department to provide advice and technical assistance on the implementation of the Vida Nueva gestational diabetes project so that the experience can be replicated in the rest of the country. “The Ministry of Health in Colombia has established the trial area concept as part of the public health strategy, so that local governments can learn and share best policy practices with the aim of using diabetes as an entry point,’ adds Dr. Mendoza.
Diabetes is a serious health burden for Mexico. In recent years this chronic condition has become the primary or secondary cause of mortality in the country (depending on classification), and one third of heart attacks and half of all chronic renal failures are a direct consequence of diabetes. By the time type 2 diabetes is diagnosed, complications – in particular diabetic retinopathy – are often already apparent. The impact of diabetes is therefore not only on mortality but also on morbidity and quality of life. Diabetes and diabetic retinopathy therefore represent an enormous burden for the individual and their family, as well as for the health care system and society in general.

Building sustainable partnerships

To address this issue, the National Institute of Public Health, in partnership with the Association for the Avoidance of Blindness, the Federal Ministry of Health and Health Secretariat of Morelos State – with significant co-funding from the World Diabetes Foundation – will be launching a pilot project for the detection and treatment of diabetic retinopathy.

“Mexico is experiencing a nutrition and health transition,” explains Dr. Simón Barquera, who is responsible for the project and Director of Research in Nutrition Policies and Programmes at the National Institute of Public Health (INSP). “Diet and lifestyles have changed significantly since the 1980s. Consumption of soft drinks, refined carbohydrates and processed foods rich in sodium, fat and sugar has increased, while physical activity has declined. There is also a shift from people living in rural to urban areas – right now more than 70% of the population is living in urban areas and this proportion is expected to increase.”

An opportunity to improve health

The project will target vulnerable adult populations with scarce resources and limited or no access to health services in two communities in the state of Morelos. A non-invasive screening programme using two mobile units will be developed to identify diabetic retinopathy in people over the age of 40 years. Health care professionals will receive training in order to conduct the screening. Furthermore, the patients screened will have a clinical and anthropometric evaluation for the detection of other factors of cardiovascular risk (dyslipidaemias, obesity and arterial hypertension) and
will be given recommendations for physical activity, diet, and general preventive measures.

“We want to demonstrate that given the current technology available, early diagnosis of retinopathy is cost-effective. However this screening will allow for many other positive results including risk stratification and preventive recommendations for the rest of the participants,” Dr. Barquera points out.

A coordinated effort

It is hoped that at least 14,000 people will have been screened for diabetes and other chronic diseases by the end of the two-year project. An estimated 2,000 people will receive eye examinations and it is anticipated that 500 cases of diabetic retinopathy will be detected and treated free of charge and on site if possible, or through referral to a specialised eye hospital for those requiring surgery. A telemedicine system will be linked to the mobile units and the hospital. All the data gathered will be sent daily to the Coordination Centre of the INSP, who will then dispatch it to the Specialist Technical Unit at a local Blindness Hospital where a group of highly qualified doctors with expertise in the detection and management of diabetic retinopathy will review and validate the diagnoses and agree on the necessary treatment. Furthermore, any detected cases of cataracts, glaucoma and age-related macular degeneration will receive the required treatment.

Justification for a national programme

“The largest percentage of cases of preventable blindness in Mexico is attributable to diabetic retinopathy,” states Dr. Barquera. “There are currently a large number of individuals with diabetes who end up blind because they were not diagnosed and treated in due time. We want to show that the advantages of early diagnosis and treatment are enormous, as it reduces the number of highly specialised surgical cases. It also reduces the risk of blindness and visual impairment with important cost savings to the health system, society and patients in general.”

During the course of the project evidence will therefore be generated to support the project’s cost-effectiveness and success in the prevention and early treatment of diabetic retinopathy. A proposal will then be made to scale up this model of mobile eye care through the
Increased focus on primary care

Mr. Bent Lautrup-Nielsen, Senior Programme Coordinator at the World Diabetes Foundation, is responsible for the projects in Mexico: "While diabetes-related complications constitute a major threat to financially constrained health care budgets in developing countries like Mexico, effective primary care and secondary prevention in this area can make an enormous difference – also seen from a health economic perspective."

"If such priorities are combined with a strengthened focus on diabetes care at the primary health care level and the creation of awareness at the community level, there is hope that the enormous challenge posed by the growing diabetes burden on the health care systems and development in Mexico can be addressed at the appropriate level. In recent years, we have managed to establish partnerships with key stakeholders at various levels in Mexico and we are encouraged by the great interest in our support in a country where there is a significant need and much to be done," he concludes.
EXPECTED IMPACT AND OUTCOME

At least **14,000** people screened for diabetes and other chronic diseases.

An estimated **2,000** people provided with eye examinations and an estimated **500** cases of diabetic retinopathy detected and treated.

Populations targeted represent marginalised segments with limited or no access to care. Care will be provided free of charge.

PROJECT PARTNERS IN MEXICO

- Mexican Diabetes Federation
- InterAmerican Heart Foundation
- PAHO Washington DC HQ
- PAHO US-Mexico Border Office
- Guanajuato University
- Resultados Médicos, Desarrolle e Investigación
- Morelos State Health Secretariat
- National Institute of Public Health

DISTRIBUTION OF FUNDING TO PROJECT

WDF contribution
USD 349,829
52%

Co-funding
USD 318,193
48%
EUROPE REGION

8 ONGOING PROJECTS
7 COMPLETED PROJECTS

FUNDRAISING PROJECT IN MOLDOVA
It has been estimated that 56.3 million people, or 6.8% of the adult population, live with diabetes in this vast region. The aging population in Europe will place increasing numbers of people at risk of diabetes, which will consequently place a greater cost and burden on health care systems in the future. By 2035, an estimated 68.9 million people will have diabetes in this region if preventive measures are not successfully implemented.

The World Diabetes Foundation has funded 15 projects in Europe, with the majority taking place in Uzbekistan, Kyrgyzstan and Georgia. These projects have predominantly focused on providing improved access to care, awareness and prevention of diabetes complications with specific focus on diabetes foot and eye care complications. The World Diabetes Foundation only grants support to projects in countries included in the OECD Development Assistance Committee list, which explains the relatively low number of projects supported in Europe.
The ultimate goal is of course to achieve a better integrated patient-centred care model and protect people with diabetes and their families from the catastrophic consequences of diabetes and the economic cost of complications that are derailing lives.

Strengthening specialised centres for integrated care

The National Centre for Prevention, Diagnosis and Treatment of Diabetes Complications – the first tertiary diabetes centre in Moldova – was established as part of the initial project just over a year ago at the Republican Clinical Hospital in the capital city Chisinau. The Centre offers advanced diagnostics and treatment for eye and foot care for people with diabetes which is provided free of charge.

“Before the Centre was established, there were no digital retinal cameras in the capital state clinics – let alone the rural areas – and there were only four ophthalmic lasers to treat diabetic retinopathy in the whole country. Problems relating to diabetes and foot care were largely neglected. But now patients with diabetes complications are being screened and receiving the necessary treatment. Furthermore, we have a common universal classification for diabetic retinopathy and diabetes foot care covering the entire country, which is a very important step for creating a strong reference system,” points out Dr. Palarie.

A comprehensive Diabetes Prevention and Education Centre has also been established as part of the second project supported by the World Diabetes Foundation.

The Association for Study of Chronic Diseases is a non-profit non-governmental organisation (NGO) founded in 2009 by a team of young doctors who wanted to change the approach to chronic diseases in Moldova. The World Diabetes Foundation is supporting two projects implemented by this Association. The first project aims to improve prevention, diagnosis and treatment of diabetes complications related to foot and eye care covering the entire country, including the Transnistrian territory, while the second project will create a sustainable, integrated patient-orientated model of diabetes care for Moldova.

“I have a strong belief that when we discuss the management of diabetes we must talk about creating an infrastructure consisting of care, prevention and education. It is about creating networks between primary, secondary and tertiary care in collaboration with local authorities, patients, doctors and advocacy organisations etc,” explains Dr. Natalia Palarie, President of the Association for Study of Chronic Diseases. “The ultimate goal is of course to achieve a better integrated patient-centred care model and protect people with diabetes and their families from the catastrophic consequences of diabetes and the economic cost of complications that are derailing lives.”

Care, prevention and education

The Republic of Moldova is ranked as the poorest country in Europe, with 95% of the population living on less than USD 10 a day. Obesity rates in this small but densely populated country are alarming: approximately half of the population is overweight and 30% are obese. These figures are rising dramatically with around 60% of people over the age of 50 being overweight or obese. Not surprisingly, the incidence of diabetes is also increasing – but the actual number of those living with diabetes is presently unknown.

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The World Diabetes Foundation is proud to be supporting this vision.

WITH NO SPECIALISED DIABETES CARE CENTRES AND NO MEDICAL FACILITIES TO DIAGNOSE AND TREAT EYE AND FOOT COMPLICATIONS RELATED TO DIABETES, THE ASSOCIATION FOR STUDY OF CHRONIC DISEASES IN MOLDOVA HAD A VISION THAT WOULD MAKE A HUGE IMPACT ON ITS COUNTRY’S POPULATION. THE WORLD DIABETES FOUNDATION IS PROUD TO BE SUPPORTING THIS VISION.

ESTABLISHING A COUNTRY-WIDE NETWORK FOR DIABETES CARE IN MOLDOVA

"I have a strong belief that when we discuss the management of diabetes we must talk about creating an infrastructure consisting of care, prevention and education. It is about creating networks between primary, secondary and tertiary care in collaboration with local authorities, patients, doctors and advocacy organisations etc,” explains Dr. Natalia Palarie, President of the Association for Study of Chronic Diseases. “The
“Today, patients do not only receive medical care, but also counselling and educational support at the Centre. It serves as an informational hub putting together all the required information for patients, their family members and doctors and nurses in one place,” Dr. Palarie says.

A mobile unit plays a key role in both projects, as it educates, screens and monitors patients living in rural areas for diabetic foot and diabetic retinopathy. Furthermore, the mobile unit creates awareness about diabetes within the general population and provides training for health care professionals. “In our camps, held in each of the 36 districts of Moldova, we have trained hundreds of physicians and the feedback we have from the regional doctors is very rewarding,” Dr. Palarie explains. In addition, a total of 120 nurses will be trained as part of the second project. “Nurses working with diabetes patients can now play the active role of diabetes educators, which has never been done before,” adds Dr. Palarie.

The benefit to society

The huge impact of these projects can be appreciated not only by reviewing the high numbers of health care professionals that have been trained and patients that have been screened and treated for diabetes complications, but also by acknowledging how diabetes has been elevated on the health care agenda in Moldova. “Our projects have been recognized by the Ministry of Health as an integral part of the national diabetes strategy and for the first time diabetes has been included on the university curriculum as a separate discipline,” notes Dr. Palarie.

Mr. Ulugbek Bekmukhamedov, the Programme Coordinator at the World Diabetes Foundation who visited the projects in Moldova, says: “With the support granted by the World Diabetes Foundation we have witnessed the establishment of the first advanced tertiary care centre of its kind in Moldova which is providing free treatment and catering for diabetes eye and foot care for patients. These are the very same devastating complications that can be prevented if diagnosis and proper management of diabetes is available,” he explains. “I am delighted to acknowledge the role of the Ministry of Health in prioritising diabetes prevention and care in Moldova and the commendable contribution from the Association for Study of Chronic Diseases who made this project come to life.”

His Excellency, Minister of Health for the Republic of Moldova, Mr. Andrei Usatii has been engaged in the process of the project and has been very pleased with the outcome to date: “Dr. Palarie and her team have developed a bold and innovative approach to diabetes care by improving access to diagnosis and treatment, training of health care professionals and raising awareness among the general population. We appreciate the very valuable contribution of the World Diabetes Foundation to the health care system of our country. Such projects are of vital importance for our society and benefit for the development of our country as a whole,” he concludes.
The World Diabetes Foundation strives to fund projects in regions where resources for diabetes prevention and treatment are scarce and the projected future burden of diabetes is high. Our guiding principle is to allocate funding to areas where we believe it can make a lasting difference.

The South-East Asia and the Western Pacific regions, which combined account for 55% of people living with diabetes in countries eligible for World Diabetes Foundation project funding, receive 42% of the Foundation’s funds. The Africa, Middle East and North Africa regions combined receive 40% of the funds, despite accounting for only 14% of people living with diabetes in countries eligible for funding from the Foundation. The relatively high share of funding to Africa in particular emphasises the Foundation’s poverty focus in targeting those countries least able to withstand the burden.

From 2002 to 2013, the World Diabetes Foundation has funded 336 projects in 108 countries, focusing on awareness, education and capacity building at the local, regional and global level. By the end of 2013, the total project portfolio had reached USD 307.4 million, of which USD 110.1 million was donated by the World Diabetes Foundation. The largest proportion (37%) of the Foundation’s funding is spent on access to care, strengthening health care systems and building health care capacity, followed by creating awareness and primary prevention.

The USD value of the WDF portfolio is reassessed on a quarterly basis against realised grants.
ABOUT THE WORLD DIABETES FOUNDATION

The World Diabetes Foundation was established in 2002 through a commitment of DKK 1.1 billion (approximately USD 195 million) to be allocated during the period 2001 - 2017 by Novo Nordisk A/S. The Foundation is registered as an independent trust and governed by a Board of seven experts in the field of diabetes, access to health and development assistance. The World Diabetes Foundation raises funds from other sources to support specific projects ensuring a multiplier effect; for every USD spent, the Foundation is able to raise approximately USD 2 in cash or as in-kind donations from other sources.

For more information, please visit: www.worlddiabetesfoundation.org
### ACCUMULATED PROJECT RESULTS (2002–2013)*

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<td>No of patients screened for foot care</td>
<td>96,186</td>
<td>26,473</td>
</tr>
<tr>
<td><strong>PREVENTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers trained</td>
<td>2,049</td>
<td>80</td>
</tr>
<tr>
<td>Children and parents reached</td>
<td>104,627</td>
<td>2,500</td>
</tr>
<tr>
<td><strong>PREGNANCY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDM clinics strengthened</td>
<td>210</td>
<td>–</td>
</tr>
<tr>
<td>Women screened for GDM</td>
<td>35,890</td>
<td>–</td>
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<tr>
<td><strong>TYPE 1 DIABETES</strong></td>
<td></td>
<td></td>
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<tr>
<td>Children with DM1 received care</td>
<td>4,578</td>
<td>–</td>
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<td><strong>TUBERCULOSIS &amp; DIABETES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care professionals trained in TB</td>
<td>740</td>
<td>–</td>
</tr>
<tr>
<td>Clinics strengthened with TB</td>
<td>70</td>
<td>–</td>
</tr>
<tr>
<td>People screened for TB/DM</td>
<td>9,299</td>
<td>–</td>
</tr>
</tbody>
</table>

* Results are based on internal reporting to WDF
** IDF Diabetes Atlas, 6th. Ed. 2013
<table>
<thead>
<tr>
<th>MIDDLE EAST &amp; NORTH AFRICA</th>
<th>NORTH AMERICA &amp; CARIBBEAN</th>
<th>SOUTH AND CENTRAL AMERICA</th>
<th>SOUTH EAST ASIA</th>
<th>WESTERN PACIFIC</th>
<th>GLOBAL***</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>35,000,000</td>
<td>37,000,000</td>
<td>24,000,000</td>
<td>72,000,000</td>
<td>138,000,000</td>
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<td>382,000,000</td>
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<td>60</td>
<td>71</td>
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<td>4,085,474</td>
<td>7,462,146</td>
<td>26,280,070</td>
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<td>7,120,411</td>
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<td>4</td>
<td>7</td>
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<td>16</td>
<td>6</td>
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<tr>
<td>588</td>
<td>207</td>
<td>642</td>
<td>1,186</td>
<td>2,236</td>
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<td>6,797</td>
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<td>187</td>
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<td>37,427</td>
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<td>6,102</td>
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<td>627</td>
<td>7</td>
<td>130</td>
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<td>113,651</td>
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<td>226,850</td>
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<tr>
<td>448</td>
<td></td>
<td>85</td>
<td>80,640</td>
<td>17,469</td>
<td></td>
<td>103,260</td>
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<td>70</td>
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<td>361,788</td>
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<td>487</td>
<td>1,700</td>
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<td>28,907</td>
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<td>1,004</td>
<td>45,237</td>
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<td>37,383</td>
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<td>24</td>
<td>1,985</td>
<td>897</td>
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</tr>
<tr>
<td>74,736</td>
<td>699</td>
<td>35,500</td>
<td>70,017</td>
<td>177,454</td>
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<td>394,296</td>
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<tr>
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<td></td>
<td>721</td>
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<td>9,519</td>
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<td></td>
<td></td>
<td></td>
<td>1,220</td>
<td>7,568</td>
<td></td>
<td>9,528</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>165</td>
<td></td>
<td>235</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2,196</td>
<td></td>
<td>82,288</td>
</tr>
</tbody>
</table>

***Includes WDF advocacy & strategic platforms
### PROFIT AND LOSS ACCOUNT
**1 JANUARY – 31 DECEMBER 2013**

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DKK '000</td>
<td>DKK '000</td>
</tr>
<tr>
<td>Donations from Novo Nordisk A/S and others</td>
<td>65,326</td>
<td>65,230</td>
</tr>
<tr>
<td>Administration expenses</td>
<td>-5,842</td>
<td>-5,329</td>
</tr>
<tr>
<td>Project expenses</td>
<td>-9,663</td>
<td>-9,228</td>
</tr>
<tr>
<td><strong>Profit/(loss) before financial income and expenses</strong></td>
<td><strong>49,821</strong></td>
<td><strong>50,673</strong></td>
</tr>
<tr>
<td>Financial income</td>
<td>1,211</td>
<td>2,227</td>
</tr>
<tr>
<td>Financial expenses</td>
<td>-995</td>
<td>-1,415</td>
</tr>
<tr>
<td><strong>Profit/(loss) for the year</strong></td>
<td><strong>50,037</strong></td>
<td><strong>51,485</strong></td>
</tr>
</tbody>
</table>

#### Proposed distribution

<table>
<thead>
<tr>
<th>proposed distribution</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net distributions from the World Diabetes Foundation</td>
<td>46,769</td>
<td>61,352</td>
</tr>
<tr>
<td>At disposal for future distributions</td>
<td>3,268</td>
<td>-9,867</td>
</tr>
<tr>
<td><strong>Total proposed distribution</strong></td>
<td><strong>50,037</strong></td>
<td><strong>51,485</strong></td>
</tr>
</tbody>
</table>

#### Gross distributions

The World Diabetes Foundation has distributed DKK 56,754k in 2013, exclusive of reversal of unutilised grants from prior years.

The Foundation has met the main criterion of only supporting projects within the Foundation’s statutes. The other main criterion of ensuring full distribution was also met.
# BALANCE SHEET AT 31 DECEMBER 2013

## ASSETS

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DKK '000</td>
<td>DKK '000</td>
</tr>
<tr>
<td>Tied-up capital</td>
<td>260</td>
<td>260</td>
</tr>
<tr>
<td><strong>Tied-up assets</strong></td>
<td><strong>260</strong></td>
<td><strong>260</strong></td>
</tr>
<tr>
<td>Receivable donations from Novo Nordisk A/S</td>
<td>16,001</td>
<td>12,553</td>
</tr>
<tr>
<td>Interest receivable</td>
<td>857</td>
<td>528</td>
</tr>
<tr>
<td>Other receivable</td>
<td>101</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total receivable</strong></td>
<td><strong>16,959</strong></td>
<td><strong>13,081</strong></td>
</tr>
<tr>
<td>Holding of bonds</td>
<td>42,000</td>
<td>24,269</td>
</tr>
<tr>
<td>Bank and currency deposits</td>
<td>119,704</td>
<td>152,918</td>
</tr>
<tr>
<td><strong>Disposable assets</strong></td>
<td><strong>178,663</strong></td>
<td><strong>190,268</strong></td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>178,923</strong></td>
<td><strong>190,528</strong></td>
</tr>
</tbody>
</table>

## LIABILITIES AND EQUITY

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DKK '000</td>
<td>DKK '000</td>
</tr>
<tr>
<td>Tied-up capital</td>
<td>260</td>
<td>260</td>
</tr>
<tr>
<td>Disposable capital</td>
<td>25,730</td>
<td>22,461</td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td><strong>25,990</strong></td>
<td><strong>22,721</strong></td>
</tr>
<tr>
<td>Accrued distributions</td>
<td>150,564</td>
<td>165,416</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>2,369</td>
<td>2,391</td>
</tr>
<tr>
<td><strong>Total short-term liabilities</strong></td>
<td><strong>152,933</strong></td>
<td><strong>167,807</strong></td>
</tr>
<tr>
<td><strong>Total equity and liabilities</strong></td>
<td><strong>178,923</strong></td>
<td><strong>190,528</strong></td>
</tr>
</tbody>
</table>

The above is an abstract of the Audited Financial Statements for 2013. Administrative expenses amounted to 8.8% of the income of the year.

For full details of the audited annual accounts, please refer to our website:
www.worlddiabetesfoundation.org
INCOME 2013
DKK ‘000

Fundraising
Novo Nordisk A/S and others
1,221

Financial income
1,211

Donations from
Novo Nordisk A/S
64,105

EXPENDITURE 2013
DKK ‘000

Project expenses
9,663

Administrative
expenses
5,842

Distributions
to projects
56,754

TARGET
SEGMENTATION 2013

Patients
14%

Health care
systems
57%

General public
29%

GEOGRAPHICAL
SEGMENTATION 2013

Middle East and
North Africa
6%

South and
Central America
10%

North America
and Caribbean
12%

South East Asia
12%

Europe
10%

Africa
39%

Global
4%

Western
Pacific
7%
Our aim is to alleviate human suffering related to diabetes and its complications among those least able to withstand the burden of the disease.

1. We will recognise people with diabetes and related diseases as dignified humans in all our activities and communications.

2. We will display respect for the culture and values of the communities and countries within which we work.

3. We will facilitate the UN Millennium Development Goals by striving to reduce the beneficiaries’ vulnerability – addressing basic needs but also promoting development of sustainable solutions.

4. We will give support regardless of race, gender or creed of the recipients in the developing world based upon assessment of needs and capabilities to meet these needs.

5. We will promote local ownership of sustainable initiatives in cooperation with governments, private institutions and civil society.

6. We will help build and strengthen local capacity to ensure that the recipients are empowered as key players in the development process.

7. We will seek to support and create synergy between both top-down and bottom-up approaches that apply participation and partnership as both a means and a goal.

8. We will be accountable to both those we seek to assist and those from whom we accept resources.

9. We will adopt and require our partners to adopt a zero tolerance policy to corruption and bribery.

10. We will be open and transparent, and report on the impact of our work, and the factors limiting or enhancing that impact.
The World Diabetes Foundation is dedicated to supporting the prevention and treatment of diabetes in the developing world.

The World Diabetes Foundation creates partnerships and acts as a catalyst to help others do more.

The World Diabetes Foundation strives to educate and advocate globally in an effort to create awareness, care and relief to those impacted by the disease.