Reaching the base of the pyramid

As a global healthcare company with over 90 years of experience in innovation and leadership in diabetes care, Novo Nordisk has made a long-term commitment to improving access to treatment for people with diabetes.

Around one-third of the world’s population lacks regular access to healthcare, including essential medicines such as insulin. This is especially true in low- and middle-income countries, where the majority of people with diabetes live.

However, low- and middle-income countries account for only a small fraction of global healthcare spending on diabetes. As diabetes is often not a recognised healthcare priority, there are many barriers to accessing adequate care for those affected.

Novo Nordisk is the world’s largest producer of generic human insulin. It is therefore both a responsibility and a business opportunity for Novo Nordisk to support local health authorities in making sure that insulin reaches those who need it.

The Base of the Pyramid (BoP) project, which forms part of Novo Nordisk’s renewed strategy for global access to diabetes care, reflects the company’s commitment to making a positive contribution towards improving access to diabetes care and meeting the United Nations Sustainable Development Goals.

THE GLOBAL DIABETES CHALLENGE

415 MILLION PEOPLE HAVE DIABETES

BY 2040 THIS FIGURE COULD RISE TO 642 MILLION

3 OUT OF 4 PEOPLE WITH DIABETES LIVE IN LOW- AND MIDDLE-INCOME COUNTRIES
THE BASE OF THE PYRAMID PROJECT

Novo Nordisk established the BoP project to identify innovative and sustainable solutions that support an integrated approach to diagnosis, treatment and control of diabetes for the working poor living at the base of the economic pyramid (Figure 2).

The BoP project works to ensure that people with diabetes in partner countries have access to integrated diabetes care by focusing on five components (Figure 1). With these five components our commitment goes way beyond insulin.

Public-private partnership-driven solutions

The BoP project aims to form public–private partnerships to improve access to diabetes care. This model promotes shared responsibility between Novo Nordisk, government and various local stakeholders, and is aligned with the United Nations Sustainable Development Goals. Through these collaborations, Novo Nordisk aims to create shared value by developing scalable, sustainable and profitable solutions that increase access to diabetes care for the working poor as well as provide value to Novo Nordisk’s business.

Locally adapted business models

The BoP project applies different business models in different countries. The models are adapted to address local barriers to care and meet the diabetes care needs of the working poor.

Since its initiation in 2010, the BoP project has been rolled out in Kenya, Ghana, Nigeria and India. Novo Nordisk aims to expand the project to additional countries.

FIGURE 1 BOp PROJECT COMPONENTS

- Raising diabetes awareness
- Educating people in diabetes self-management
- Improving availability and affordability of insulin
- Training healthcare professionals
- Screening and diagnosis

Services are often located long distances away from potential service users, requiring substantial transportation costs, time and money on their part in order to access them. Health workers, medicines and equipment are generally insufficient to meet demand, and there can be long waiting times to see staff, who may be in need of additional training in order to provide an adequate level of care.

FIGURE 2 THE ECONOMIC PYRAMID

BoP is a socioeconomic concept referring to the world’s poorest citizens, many of whom have limited access to basic healthcare. Today, the global population is 7.2 billion, of which 4–5 billion form the base of the economic pyramid (see figure below). Within this segment there is a group of people on low incomes, the working poor, who have difficulties accessing health services despite having some disposable income.
In Kenya, Novo Nordisk has embarked on a public–private partnership with the Ministry of Health and faith-based organisations that manage approximately 1,000 health facilities in Kenya. Novo Nordisk works with the faith-based organisations and distributors to optimise the supply chain and limit price mark-ups. This is achieved through a memorandum of understanding signed with each link in the distribution chain, and the price of a vial of insulin is stamped on the packaging. These measures make it difficult for distributors and suppliers to exceed the target price.

The success of this Novo Nordisk-led initiative has helped streamline the local policy on cost and distribution throughout Kenya, which all pharmacies are now expected to follow. Today, insulin is consistently available at an affordable price (5 US dollars per vial equivalent to one month's consumption).

Beyond medicine
However, Novo Nordisk’s BoP efforts in Kenya go far beyond this. More than 1,100 healthcare professionals have received training in diabetes care. Training extends to pharmacists as well as nurses and nutritionists. In addition, long-term mentorships ensure effective learning is continued. As part of the project, essential equipment such as HbA1c machines have also been made available at the facilities.

Furthermore, in collaboration with the Kenya Defeat Diabetes Association, diabetes patient support groups have been established at faith-based facilities.

Strengthening healthcare capacity
In 2015, following the initiation of a decentralisation process, which shifted healthcare decision-making from government to the counties, the project was scaled up to include a focus on building capacity in the public sector. This has involved the establishment of centres of excellence for diabetes care linked to large public hospitals. So far, two such centres have been established. As a minimum standard, these centres provide all components of limited care* as defined by the International Diabetes Federation (IDF). Achieving this level of care is a noticeable improvement on the current state of diabetes care in public facilities.

Driving awareness of diabetes
Increasing diabetes awareness is key to diabetes prevention and to ensuring that more people are diagnosed and receive the treatment they need. An awareness campaign on diabetes risk factors and the importance of early detection and proper treatment of the disease was therefore rolled out in 2015. The campaign reached approximately 1.5 million people.

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*Limited care’ is defined as ‘care that seeks to achieve the major objectives of diabetes management, but is provided in healthcare settings with very limited resources’.

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PROJECT REACH AND RESULTS

INSULIN SUPPLY
- Price reduction of 75% from 1,800 to 500 Kenyan shillings per insulin vial (from around 18 to 5 US dollars).
- 27 out of 47 counties covered by the programme.
- A 247% increase in the number of facilities stocking insulin (from 53 in 2012 to 184 in 2015).
- Approximately 6,000 people receiving improved access to safe, affordable diabetes care on a monthly basis.

PATIENT SUPPORT
- 46 diabetes support centres established.
- More than 600 healthcare professionals educated in basic diabetes care and more than 500 trained in a more advanced curriculum.
- 20,000 people screened for diabetes.
- 1.5 million people reached through diabetes awareness campaigns.

PARTNERS
The Kenya Ministry of Health, the Royal Danish Embassy in Kenya, Phillips Pharmaceuticals Ltd, Mission for Essential Drugs and Supplies (MEDS), Kenya Conference of Catholic Bishops and Christian Health Association Kenya (faith-based organisations) and the Kenya Defeat Diabetes Association, Mombasa and Kakamega County.

JANE’S STORY
Jane Nyambura Chege was diagnosed with diabetes 20 years ago, at the age of 29. To control her blood sugar and thus her diabetes, Jane needs daily injections of insulin. One month's supply of insulin used to cost Jane the equivalent of four days' pay. This meant that at times she chose to do without the medicine so as not to overstretch her family’s already tight finances. This sacrifice almost cost Jane her life, as her weight dropped to just 38 kg.

For Jane, the BoP project has brought about a notable difference. She can now buy insulin at her local clinic for an amount the family can afford. Jane's health is now stable and she is able to help her husband out in the fields.

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478,000 ADULTS HAVE DIABETES²
60% OF THEM ARE UNDIAGNOSED²

JANE NYAMBURA CHEGE
Kenya
Jane has diabetes
ESTABLISHING DIABETES SUPPORT CENTRES IN GHANA AND NIGERIA

People with diabetes in Ghana and Nigeria often need to travel long distances to seek out care in large, crowded hospitals. This means that they struggle to access adequate personalised care and appropriate education on how to manage their diabetes and prevent complications.

‘One-stop’ diabetes treatment and care
In Ghana and Nigeria, Novo Nordisk has partnered with health authorities to establish diabetes support centres at public hospitals. These centres, which offer personalised and comprehensive care in one location for people with diabetes, are integrated within and adapted to the hospital’s existing structure. Many of the centres are equipped with a mini-laboratory for performing diabetes diagnostic tests, as well as a pharmacy, so that patients have ‘one-stop’ care and treatment. This one-stop model of diabetes care benefits people in need of treatment by reducing the time spent at the hospital and both travel time and costs.

Greater access to trained healthcare professionals
This model also supports the public sector by expanding services, optimising effective management and improving healthcare professionals’ capabilities. All doctors, nurses, nutritionists and pharmacists working at the centres receive training on diabetes management. As a result, people with diabetes now have access to healthcare professionals who have received comprehensive training on diabetes management in regions where diabetes care was often less prioritised.

The centres are open daily, and nurses are available to advise and educate people living with the condition about diabetes self-management. Often, nutritionists are also present, and those attending the centre can seek advice on how to adapt their diet to improve and manage their condition.

Once or twice a week, special diabetes clinic days are held at the centres. These clinic days are dedicated to helping people with diabetes, and a doctor is available for consultation. People visiting the clinic are also screened for other non-communicable diseases, such as hypertension, during their examination.

Diabetes awareness and screening
With the help of diagnostic partners, Novo Nordisk also supports ongoing awareness and screening activities for communities living in the areas surrounding the diabetes support centres.

GHANA – PROJECT REACH AND RESULTS
• Six diabetes support centres established.
• More than 400 healthcare professionals trained.
• 1,548 people with diabetes being treated with insulin.

PARTNERS
Local hospitals, local health authorities and Palb Pharmaceuticals.

NIGERIA – PROJECT REACH AND RESULTS
• Seven diabetes support centres established.
• 150 healthcare professionals trained.
• More than 900 people with diabetes being treated with insulin.

PARTNERS
Local hospitals, local health authorities and Roche Diabetes Care.


BRINGING CARE CLOSER TO THE PEOPLE WHO NEED IT IN INDIA

People with diabetes living in rural India often have to travel long distances to consult a healthcare provider. The subsequent travel costs and loss of daily income are key barriers to access to care.

In India, the BoP project is active in the state of Bihar and works with public health workers to deliver diabetes care to people’s doorsteps in rural and semi-rural areas.

The BoP project aims to address barriers to care by collaborating with Accredited Social Health Activist (ASHA) workers. ASHA workers constitute a pillar of the National Rural Health Mission’s strategy to improve the proximity and affordability of basic healthcare services in rural India.

As part of the BoP project, Novo Nordisk trains ASHA workers in diabetes management and monitoring. The role of ASHA workers is to support people in managing their diabetes and provide advice on healthy living. They encourage people with diabetes to visit clinics for regular check-ups and refer those at risk of diabetes to a primary care facility for screening. The presence of trained ASHA workers in rural India is helping people with diabetes to overcome some of the barriers that prevent them from accessing diabetes care.

PROJECT REACH AND RESULTS
- 350 ASHA workers trained.

PARTNERS
ASHA workers and health authorities.

THE DIABETES CHALLENGE IN AFRICA AND SOUTH-EAST ASIA

AFRICA²
An estimated 14.2 million adults aged 20–79 have diabetes in the Africa Region. This number is expected to more than double to over 34 million people by 2040.

More than two-thirds (66.7%) of people with diabetes in the Africa Region are undiagnosed.

The overwhelming majority of the world’s poorest citizens live in Africa. Therefore, the majority of Novo Nordisk’s BoP partner countries are in Africa.

NOTE: Africa is defined as per the International Diabetes Federation Africa Region and includes 49 diverse sub-Saharan countries and territories.

SOUTH-EAST ASIA²
India is home to the second-largest number of adults living with diabetes worldwide, after China.

Estimates indicate that 8.5% of the adult population has diabetes. This is equivalent to 78.3 million people living with diabetes. More than half (52.1%) of them are undiagnosed.

NOTE: The South-East Asia Region comprises India, Bangladesh, Nepal, Sri Lanka, Mauritius, Bhutan and the Maldives.
**ABOUT DIABETES**

In resource poor countries, diabetes is often only detected once complications occur, increasing an overall poor disease outcome. For this reason, diabetes is called ‘the silent killer’.

There are two main types of diabetes: type 1 and type 2. Type 1 diabetes often occurs at a young age. It is a lifelong disease where the body no longer produces insulin. People with type 1 diabetes are dependent on daily insulin injections in order to survive.

More common is type 2 diabetes, which accounts for around 90% of all cases of diabetes.² People with type 2 diabetes may still produce insulin, but either they do not produce enough or the body cannot use the insulin correctly. Insulin helps sugar to enter the cells; without it, sugar builds up in the bloodstream.

Most of the long-term health complications associated with diabetes are due to persistently high blood sugar levels. Diabetes-related complications account for much of the social and financial burden of diabetes.

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**Potential complications of uncontrolled diabetes**

- **STROKE**: Strokes are up to four times as likely.
- **HEART ATTACK**: Heart attack is three times as likely and heart disease is up to four times as likely.
- **TOTAL KIDNEY FAILURE**: Total kidney failure is three times as likely.
- **BLINDNESS**: Diabetes is a leading cause of blindness.
- **AMPUTATION**: Diabetes is a leading cause of non-traumatic lower-limb amputations.

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Novo Nordisk is a global healthcare company with more than 90 years of innovation and leadership in diabetes care. This heritage has given us experience and capabilities that also enable us to help people defeat other serious chronic conditions: haemophilia, growth disorders and obesity. Headquartered in Denmark, Novo Nordisk employs approximately 41,600 people in 75 countries and markets its products in more than 180 countries.

Novo Nordisk’s strategy for global access to diabetes care was renewed in 2013 and entails a scaling-up of activities in three specific areas: improving health for the next generation, reaching the base of the pyramid and building healthcare capacity.

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**References**