In this issue

Education is a health supplement
Christian Kanstrup, Senior Vice President of Strategy, Access and Marketing, reflects on why improving health outcomes for people with diabetes requires more than innovative medicine.

A well-balanced approach to optimal diabetes management
Many factors play into the equation when it comes to diabetes management. This infographic shows some of them.

Learning how to make adherence ‘stickier’
When it comes to a chronic disease, adherence to treatment can be challenging. See the learnings that came out of a study in the US.

There are three sides to the story
What are the challenges, benefits and ethical dilemmas that can arise when healthcare professionals, patients and pharma companies collaborate around health education initiatives? Read three perspectives here.

Learning new ways to teach pre-pregnancy health
In Malaysia, they are taking an innovative approach to curbing the rise in obesity and type 2 diabetes by teaching young couples how to have healthier pregnancies and children.
Diabetes education at your fingertips
Learn about two new initiatives that are using digital technology to make diabetes education smarter.

Diabetes on the curriculum
In Pakistan, Novo Nordisk employee volunteers hit the road to educate school children about type 2 diabetes.

People driving sustainability – A career with focus on people and purpose
Søren Skovlund has dedicated his career to putting patients centre stage in global research and advocacy activities. Read about how he works to translate research insights into concrete projects, such as education initiatives.

A one-stop shop for patient education and care
In Algeria, specialised diabetes centres give patients access to highly qualified healthcare professionals and educational sessions at no cost.

Setting the record straight
All-diabetes pro cycling team, Team Novo Nordisk, is on a mission to teach everyone that living with diabetes does not change your ability to reach your hopes and dreams. Read two powerful stories here.

TBL is short for Triple Bottom Line. The Triple Bottom Line is how we at Novo Nordisk consider the financial, environmental and social impact of our business decisions. In each issue of TBL Quarterly, we bring you stories of what TBL looks like in the real world. Read more about TBL at www.novonordisk.com/tblquarterly
To Christian Kanstrup, the starting point of his job is to improve health outcomes for patients. For the Senior Vice President of Strategy, Access and Marketing, this is first and foremost done by making innovative medicine accessible to them, but he stresses that it also goes beyond the product and involves a healthy dose of education.

Health has both a societal and individual dimension. Whether you are trying to maintain your health in the face of a chronic disease or just trying to make adjustments to your diet or exercise routine, get ready to wade through an ocean of information, ranging from simple advice that pops up in your Facebook feed to cutting edge insights from leading research institutions.

The overwhelming amount of information available makes it a challenge to not only find the right information, but also to understand the information you find. In a 2013 WHO report on health literacy, nearly 50% of Europeans saw themselves as having inadequate or problematic health literacy skills.1

This is a barrier to improving both public and individual health. One of the most valuable tools at our disposal to break this barrier down is education, not just adding more information to the existing pool but finding ways to support the learning process. We need to make the right information accessible at the right time and in the right format – and make use of the opportunities that technology offers us.

The curriculum for optimal diabetes management
Living with diabetes is a life-long learning journey which is not only about adherence to medicine. It also involves attention to food intake, regular physical exercise and blood sugar monitoring (both with and without a healthcare professional) as well as dealing with the psycho-social aspects of living with a chronic disease. This can be a monumental task to manage.

We know from the Rule of Halves2 that few people living with diabetes are achieving recommended treatment targets related to blood sugar control3 and even fewer achieve their desired health outcomes and quality of life.4 Many factors are necessary to create a supportive environment for optimal diabetes management and a well-coordinated team of healthcare providers and diabetes self-management education can play a vital role here.

Research has shown that patient education has a positive impact on blood sugar control, also known as HbA..4 This must be tailored in a way that fits the patient to have long-term benefits. For example, we know that the most effective interventions are focused on diabetes self-management, delivered by a team of educators with regular follow-up and tailored to the target population’s culture.

In this issue of TBL Quarterly, we set focus on diabetes education, looking at what works, what is being learned and where new and innovative approaches could come from. Helping people with diabetes become experts in their own self-treatment is not just about creating more information. It’s about getting to know the personal challenges that they face and the time and resource constraints healthcare professionals must work under.

For more than 90 years, Novo Nordisk has built its business by learning how to improve the treatment of diabetes and other chronic diseases. However, there are still too many people struggling with their condition and we believe we can continue to make an impact through science, clinical trials, supporting education initiatives and engaging with patients. And we are continually learning how to better turn this experience into solutions that can improve health outcomes.

Christian Kanstrup, Senior Vice President of Strategy, Access and Marketing, Novo Nordisk

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1 WHO, 2013: Health Literacy, the solid facts. Available at: http://www.euro.who.int/__data/assets/pdf_file/0008/190655/e96854.pdf
2 The Rule of Halves is a statistical model showing that half of those with diabetes are diagnosed, half of those diagnosed received care, half of those receiving care achieve treatment targets, and finally half of those achieving targets also achieve desired outcomes. Hart JT. Rule of Halves: implications of increasing diagnosis and reducing dropout for future workload and prescribing costs in primary care. Br J Gen Pract. 1992;42(316):116-119.
A well-balanced approach to optimal diabetes management

People might think that medication is all you need when you have diabetes. However, education as well as many other factors play into the equation. Here are some:

- **PATIENT EDUCATION**
  To facilitate self-management of diabetes

- **REGULAR HEALTH CHECK-UPS**
  With skilled healthcare professionals for early detection of complications

- **PSYCHO-SOCIAL SUPPORT**
  From friends, family and healthcare professionals

- **MEDICATION**
  To manage blood sugar levels, cholesterol and blood pressure

- **LIFESTYLE**
  To support and promote healthy living

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Adherence means ‘sticking to’ or ‘being faithful to’, such as your adherence to your diet even when an extra slice of pizza is still around. When it comes to a chronic disease, adherence to treatment can be anything but sticky. At Novo Nordisk US, a new approach shows that the stickiest behaviours are ones we already have.

Sticking to a task, goal or rule is generally considered to be a good thing. Having stuck to an exercise plan, the agenda in a meeting or a dietary change are all indications of success. When it comes to taking medicine to treat a health problem, ‘adherence’ is the wording of choice. In other words, follow what your doctor, nurse or pharmacist has instructed you to do.

The problem with adherence is that often these instructions do not ‘stick’. This can be especially challenging when the treatment is for diabetes and other serious chronic diseases that can involve daily injections, monitoring (e.g. testing blood sugar levels) and diet and exercise. That’s a lot to stick to.

A public health challenge
Non-adherence is a public health challenge. In the United States, it has been estimated that half of chronic disease medications are not taken as prescribed.¹ In a survey of people living with type 2 diabetes, one out of three reported not adhering to their medication.² In the same survey, nearly three out of four physicians reported that some of their typical patients do not take their insulin as prescribed.²

For people living with diabetes non-adherence can result in a progression of disease symptoms and complications.² These complications, such as vision problems, kidney issues, cardiovascular disease, nerve damage, and toe and foot amputations, occur when blood glucose levels remain elevated and untreated.²

Improving adherence cannot only benefit health outcomes, but a study conducted among veterans in the United States showed that improving adherence could result in annual estimated cost savings of up to 1.16 billion USD.³ With so much at stake, what has been done to improve the state of adherence?

Martin Jernigan, Vice President, GLP-1 Diabetes Portfolio, and Christine Sakdalan, Vice President, Patient Centric Strategy and Solutions, wanted to dig deeper into the issue, and to find it they had to take a new approach that got them closer to people living with diabetes.

**Too many factors**

Since the mid-1900s, researchers have studied why patients are adherent or not. In the 1950s, the research was around the ‘Health Belief Model’. Martin and Christine describe how it works.

“The Health Belief Model is a psychological model that attempts to explain and predict health behaviours,” says Martin. “A person’s motivation to undertake a healthy behaviour, such as injecting insulin or GLP-1 to treat diabetes, can be divided into three main categories: 1) individual perceptions that deal with the importance of health to the individual, 2) modifying behaviours and cues to action influenced by demographics and socio-economic factors and lastly, 3) likelihood of action which is about the probability of incorporating adherent behaviour into daily life.”

These three categories put context on what could be helping or hindering a person’s ability to stick to treatment. These range from a perception of how severe the disease is and how susceptible a person feels, to ‘controlling’ their own health.

However, in practice, using the model can be a bit of a puzzle.

“There are many factors that can disrupt adherence: ability to pay, real or perceived seriousness of the disease as well as commitment to stay with therapy over time,” says Christine. “With so many variables, it is hard to identify where and how best to provide support.”

Though the Health Belief Model offers many good starting points, adherence continues to be an issue. Martin and Christine wanted to try something different, something that went beyond the ‘obvious’ reasons.

**Getting beneath the surface**

Martin and Christine turned to behavioural psychology, bringing in a team from ReD Associates, a consulting company, to gain a deep understanding of what drives treatment adherence. ReD’s interviews, observations, exercises and daily diaries involved 31 type 2 diabetes patients, their families and eight healthcare professionals.

“We wanted to understand the behavioural and attitudinal barriers and motivations beyond the common ‘stated causes’ for non-adherence,” say Martin and Christine. “We wanted to get beneath the surface as they say.”

As researchers spent more time getting to know patients’ habits, beliefs and routines, observations began to form into ideas for how to drive stronger adherence.

**What drives adherence?**

People with diabetes that were adherent tended to have a visceral (bodily) reaction to performing or not performing treatment. In other words, they felt something in the presence or absence of treatment. For example, one of the study participants felt that when she took her medication, she had more energy, much like a cup of coffee.

Another strong predictor of adherence was whether treatment had been anchored to an existing routine, such as taking insulin just after showering or before getting dressed.

Lastly, those people who shared feelings and experiences related to diabetes with people beyond their intimate circle were more adherent.

“We hadn’t thought to keep it that simple,” says Martin. “We throw so many tools and information at patients instead of stopping a moment and asking – how can we simplify and focus our efforts?”

The outcome of the research was a lesson in stickiness. Christine explains, “the one very simple thing we can do is to anchor medication adherence to a ‘positive routine’ that a person has each day, celebrating small victories with them and connecting them to other people with diabetes.”

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4 GLP-1 (Glucagon-Like Peptide-1) is a natural hormone and is part of the body’s own system for controlling blood sugar levels. It stimulates the release of insulin only when blood sugar levels become too high. Source: [http://www.novonordisk.com/medictionary.html](http://www.novonordisk.com/medictionary.html)
There are three sides to the story

Different healthcare education initiatives will often entail interactions between healthcare professionals, patients and pharma companies, but what are the challenges, benefits and ethical dilemmas related to these interactions? We have interviewed three people representing each stakeholder group to shed light on this.

RISE OF THE ‘EXPERT PATIENT’
Interview with Kawaldip Sehmi, CEO at IAPO (International Alliance of Patient Organizations).

Who are some of the most valuable stakeholders supporting patient and healthcare professional education?
Amazingly, they are first and foremost the ‘expert patients’. I learnt this lesson long time ago when a professor of medicine working on thalassemia and other rare blood disorders said that when you have lived with blood transfusions for over 18 years, you should have a professorship for having undertaken such a lengthy ‘study’ of your condition.

In contrast, post medical students graduate with under one or two days covering thalassemia. So I believe that expert patients can motivate and develop capacity in other patients as well as healthcare professionals.

In your opinion, what role should pharma companies have when it comes to patient and healthcare professional education?
I think it is logical to collaborate with and develop the capacity of expert patients to engage on health literacy, health promotion and education. Maybe even to recruit expert patients in your frontline!

With diabetes care, it is my experience that where pharmaceutical companies have invested in expert patient programmes, they have had a great impact in shaping not only the behaviour of the patient community, but also in shaping the health literacy and education of healthcare professionals.

I believe that pharmaceutical companies should provide the tools and then the expert patient community will do the rest.

What are the risks with having pharma companies involved in patient engagement and healthcare professional education?
I think this is a common misunderstanding. As long as pharma companies remember that patient engagement and healthcare professional education is not an extension of their marketing and sales force, then the risks are low. This can be avoided by ensuring real participation, transparency and accountability when interacting.

Do you foresee any changes in how pharma companies interact with healthcare professionals and patients in the future?
Companies need to be ‘consumer centric’ which for the pharma industry is ‘patient centric’. Apple and other forward thinking companies believe that ‘consumers’ are full partners and drivers of product design and business strategy. They are not just beneficiaries or users.

I believe pharma has to bring patients into their management Boards at a high level, and install patients at each decision-making level within the company.

Could you highlight any examples that didn’t work optimally?
There are many but the common feature of them all was that someone forgot that patients are affected by and can also affect the industry. Like the elephant that shapes its environment, patient movements are doing so now.

COLLABORATING WITH CONSCIENCE
Interview with Professor Dr A K Azad Khan, President of the Diabetic Association of Bangladesh and Professor at the Department of Public Health, Bangladesh University of Health Sciences in Dhaka.

Who are some of the most valuable stakeholders supporting patient and healthcare professional education?
In a developing country setting, the biggest hindrance to effective patient and healthcare professional education initiatives is the lack of manpower. And since healthcare systems here are traditionally geared towards infectious diseases, knowledge of a chronic disease like diabetes is often limited.

To address this, I believe it is crucial that we have

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1 The International Alliance of Patients’ Organizations (IAPO) is a global alliance representing patients of all nations across all disease areas and promoting patient-centred healthcare across the world. It has 276 member organisations from 71 countries representing 50 disease areas.
2 Thalassemia is a genetic blood disorder.
collaboration between healthcare providers, patients and the pharma industry. Unless doctors are educated in diabetes care, they are not able to provide the proper treatment leading to poor health outcomes for patients.

In your opinion, what role should pharma companies have when it comes to patient and healthcare professional education?

I think the pharma industry should contribute to creating the appropriate manpower. Pharma companies have significant resources and can assist with financing initiatives, however, they should not have a say when it comes to execution.

Take the example of the Diabetic Association of Bangladesh, a non-profit, volunteer socio-medical service providing organisation that serves people living with diabetes in Bangladesh. Our organisation is dedicated to improving physician knowledge about diabetes and quality of care, and Novo Nordisk has helped fund the education initiatives that we have started, but these are run independently by our organisation and have over time become self-sustaining.

What are the risks with having pharma companies involved in patient and healthcare professional education?

There might be initial scepticism from physicians because they are not convinced about the value of training diabetes educators, but when they see the difference it makes to patients, the attitude changes.

I believe the benefits of collaborating outweigh the risks and by working together we can achieve more. Although the Diabetic Association of Bangladesh provides services to three million patients, there is still more work to be done since 7.1 million people are estimated to live with diabetes in Bangladesh, according to the International Diabetes Federation.

What are some ways pharma companies, patients, and healthcare professionals can set up procedures to avoid ethical dilemmas?

There is scope for improvement, but when it comes to ethical dilemmas I believe it cannot only be solved by setting up more rules and procedures. To a large extent, you should be guided by your conscience and not only consider ‘what is legal?’, but also always ask the question ‘what is ethical?’

I work closely with pharma companies in my job and I am very conscious of this. The only way to go is to be 100% transparent about it, e.g. by publically disclosing all interactions between our organisation and the industry.

Could you highlight any examples that didn’t work optimally?

It should be obvious that initiatives where the industry only sponsors education on the condition that physicians will prescribe the company’s products is an absolute no go!

GUIDED BY TRANSPARENCY AND INDEPENDENCE
Interview with Kristine Aachmann Bethe, Team Leader in Novo Nordisk’s Business Ethics Compliance Office.

How does Novo Nordisk handle interactions with patients?

Whenever we interact with patients and patient organisations, it is important to follow relevant international and local codes and guidelines and always live up to general principles of transparency and independence. This means that we should always clearly define the purpose and scope of our interactions with patients and patient organisations and ensure that patients are equal partners and free to collaborate with other pharmaceutical companies. The interaction must never be based on the condition that patients will use our products.

The Business Ethics Compliance Office is right now working with different cross-functional networks across the Novo Nordisk value chain to establish what will serve as our key global requirements on interactions with patients and patient organisations. These requirements will be made available as part of the launch of the Business Ethics Compliance Framework on 1 January 2017.

How does Novo Nordisk handle interactions with healthcare professionals?

Novo Nordisk believes that interactions with healthcare professionals have a profound and positive influence on the quality of patient treatment and the value of future innovations. For this reason, we engage the healthcare community in various ways to advance scientific knowledge as well as to provide important information about our medicines.

All of our activities are driven by our core values of ensuring high business ethical standards, a patient centred focus, and transparency in our interactions with stakeholders. We never give or offer anything of value to a healthcare professional to unduly influence their prescribing or purchasing decisions. These are the key principles that apply globally to all employees across the value chain.

From a Business Ethics perspective, it is important that our interactions with healthcare professionals are based on a valid scientific/business purpose and comply with all laws and industry codes – and that we document this! For example, when we support healthcare professionals’ attendance at educational events, it should be based on the scientific relevance of the event and the educational value for the healthcare professional considering their expertise, qualifications, and experience.

In short, our integrity as a company must never be questioned.
Learning new ways to teach pre-pregnancy health

In the Malaysian state of Negeri Sembilan, the department of health is taking a bold and innovative approach to curbing the rise in obesity and type 2 diabetes. Key to their approach is upgrading the skills of community health promoters (CPH) to teach young couples how to have healthier pregnancies and children.

It’s time to rethink maternal health.

For many couples, starting a family begins with pregnancy. The future hopes, dreams and health of the new addition to the family come after. Research has turned this model on its head. The health of your child can be influenced much earlier, even before conception.

Putting the brakes on type 2 diabetes, before it starts

For more than two decades, research has been pointing to an opportunity to prevent some chronic diseases like type 2 diabetes. The research, under the heading ‘Developmental Origins of Health and Disease’ argues that the risk of developing type 2 diabetes and other chronic diseases is set up not just during pregnancy, but before.¹

In 2011, four partners – Steno Diabetes Center Denmark, University of Southampton UK, the University of Witwatersrand Johannesburg and Novo Nordisk – contacted the Malaysian Ministry of Health to explore the possibility of Malaysia as the pilot site. Malaysia had a high incidence of type 2 diabetes and often starting a family takes place not too long after marriage, important when targeting the right people for the intervention. The Malaysian Ministry of Health joined as the fifth partner and the initiative was given the name Jom Mama (‘Come on Mama!’ in Malay).

Julius Cheah, Jom Mama project manager, Novo Nordisk, explains how Jom Mama builds on the efforts to diagnose and treat gestational diabetes.2

“Early life plays an important part in future disease risk. Maternal lifestyle and conditions such as gestational diabetes and obesity affect the risk of type 2 diabetes in the next generation,” says Julius. “So we have to ask ourselves, why wait until pregnancy when we could also address these health risks before conception.”

As of September 2016, more than 200 couples are enrolled in Jom Mama and recruitment strategies, including health fairs, state radio promotion and public activities continue to attract young couples.

“Jom Mama has helped strengthen our relationship with the Ministry of Health and together we believe we can address type 2 diabetes prevention in a concrete way,” says Julius.

But getting there has been a learning experience.

Creating an environment of empowerment

One of the key challenges for the Jom Mama project was getting young couples to make changes to their diets and levels of exercise. For that, the team conducted more than a year of on the ground research to identify what makes change difficult and how they could go about making it easier.

The next step was to ensure that the community health promoters (CHPs)3 working face-to-face with the couples had the knowledge, tools and skills to support change and improve pre-pregnancy health. This meant empowering CHPs to educate and motivate young couples to make healthier life choices.

Dr Zainudin Ali, deputy director of Public Health for the Negeri Sembilan state health department, explains the initial challenge of making this change.

“Our nurses were trained in general methods for patient education covering general issues in health but not for specific non-communicable diseases (NCDs)4 intervention methods,” says Dr Ali. “They had limited patient education methods exposed to them, and when they did, these tools were usually done in groups of patients and by more senior staff, which may not necessarily provide a conducive environment for all nurses, especially the community nurse, to build confidence on the scope on NCDs.”

2 Gestational diabetes is a type of diabetes that appears during pregnancy and can lead to serious health risks for both the mother and child if untreated. Source: International Diabetes Federation. IDF Diabetes Atlas, 7th edn. Brussels, Belgium: International Diabetes Federation, 2015.

3 Community Health Promoters (CHP) are certified nurses tasked to assist trained staff nurses who typically have more experience and higher qualifications, e.g. diploma or degree.

4 Non-communicable diseases (NCDs) are medical conditions or diseases that are not-infectious or non-transmissible. NCDs can refer to chronic diseases which last for long periods of time and progress slowly, including autoimmune diseases, heart diseases, stroke, cancers, diabetes and chronic kidney disease.
The Jom Mama initiative began conducting more personal training programmes for the nurses. Though much of the education was related to pre-pregnancy health and the prevention of NCDs, a critical component of the training was focused on building confidence and communication skills.

Doing it in a modern way helped too as Dr Ali explains. “The community health promoters have been trained in using mobile technologies, tablets and mobile apps, to educate the young couples,” he says. “This was a considerably new learning platform for the Ministry of Health staff in patient education and interactions at the primary care level.”

As it turned out, the digital platform also helped boost the confidence of the nurses in their health promotion efforts with couples, leading to a positive improvement in their communication and engagement with couples. The e-health platform has also been rolled out to the young couples so there is the possibility for two-way interaction. The couples get updates, reminders and are able to track progress on their goals.

“When we joined Jom Mama, it was our first time using a tablet and the patients saw that nurses have skills in IT,” says one of the CHPs working at the Seremban health clinic. “Although the tablet looks simple, it is more convenient and interesting. We only used physical files before this. By using the tablet, we can get lot of information and learn about nutrition, food calories, etc. It is easier to teach the patients.”

**Motivation, the key element of learning**

Jom Mama Project Manager, Julius, is encouraged by how well the training has been received and the positive support of the e-health platform from the community health promoters. What goes into the platform is what he attributes to the future success of Jom Mama.

“The tablets are not only used to teach fundamental knowledge about nutrition, physical activity, and pre-conception health,” explains Julius. “They are a way for nurses to use Motivational Interviewing to guide, encourage and track progress.”

Motivational Interviewing is a method that works on facilitating and engaging self-driven motivation within the patient (in Jom Mama’s case the young couple) in order to change behaviour. It is a goal-oriented, patient-centered counselling style that helps to motivate and give meaning to changes.

“What we have found is that Motivational Interviewing has been a strong tool for the nurses to effectively communicate and encourage changes such as dietary habits, levels of exercise and coping with stress,” says Julius.

Change is not easy, but Jom Mama is already seeing positive steps and the team members believe pre-pregnancy health will offer a new way to reduce the rising number of people living with type 2 diabetes. And sometimes the answer can be quite simple, as one of the young couples participating in the pilot expressed.

“I like it [Jom Mama] because I receive digital reminders. I never had any experience with health apps before so when I joined the programme, it was the first time I have been introduced to e-health. I felt positive as it can remind us about the healthy lifestyle such as physical activity and nutrition.”

One more important lesson learned in Malaysia.
There is one thing people living with diabetes need to learn – possibilities do not vanish after diagnosis. All-diabetes pro cycling team, Team Novo Nordisk, is on a mission to show that if you are living with diabetes, you are still able to live life the way you’d hoped.

STEPHEN CLANCY
Stephen is a professional rider for Team Novo Nordisk and has type 1 diabetes
At 19 years old, Stephen Clancy was diagnosed with type 1 diabetes. Stephen was a competitive cyclist and had just come off the best cycling season of his life. At the time of his diagnosis, his medical team told him that type 1 diabetes was one of the most difficult conditions to manage, and cycling, especially endurance cycling, is going to be almost impossible.

His doctor’s recommendation on that day was “you can do a mile”. For a painful and tearful 24 hours, Stephen thought he was never going to be a cyclist anymore.

Then Stephen remembered watching Team Novo Nordisk racing on TV. He did some research, learned more about the team and its all-diabetes cyclists, and it stood out to him that “if these guys can do it, why can’t I?”

“I was immediately inspired and motivated to face this new challenge head on,” says Stephen. “And with the support of the right healthcare team, I was able to cycle much more than just one mile!”

Today Stephen is a member of Team Novo Nordisk, not only as a rider but as an advocate on a mission to inspire, educate and empower people affected by diabetes.

Defeating discrimination
People with diabetes, especially those treated with insulin, face discrimination. According to a 2013 study (Diabetes Attitudes, Wishes and Needs), one in five people with diabetes feel discriminated against due to their condition.1 An even higher number, one in three of healthcare professionals were concerned about discrimination and said there was a “major need” for improvement in the acceptance of people with diabetes as equal members of society.3

The study showed that the perception of being discriminated against is associated, wherever it occurs, with a highly negative impact on relationships with family, friends or peers, work/studies, financial situation and psychological well-being.4

Knowledge is power and in an effort to fight discrimination, Team Novo Nordisk conducted its own survey to gather the perspectives of people living with diabetes, their partners and family members. In the ‘Setting the Record Straight’ survey, they asked questions targeted to the most commonly held myths and misconceptions.

One of the questions looked into the misconceptions that are the most frequently encountered. Figure 1 shows that food is a strong driver of ‘untruth’ when it comes to diabetes. As many of the Team Novo Nordisk riders attest to in myth busting videos, they can eat anything, despite living with diabetes, as long as they take their consumption into consideration when they take insulin.

A positive result from the survey was the perception that having diabetes does not stop people from pursuing their goals.

Figure 1: Questions from the ‘Setting the Record Straight’ survey

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In the case of Stephen, this myth is busted. Here’s another. Read 19 year-old Karolina Witek’s story of her struggle and triumph to do what they said could not be done. Karolina is from Poland and was inspired by Team Novo Nordisk when she came across a video of them on Facebook.
Karolina's story

Before my diagnosis, I was training as a cyclist – mountain biking, cross-country and road racing.

One day after training, when I came home, I felt bad and fainted. The next morning I went with my parents to the doctor and he looked at me and immediately measured by blood sugar.

Now I don’t wonder why he reacted the way he did but it made no sense to me at the time. I was 13 years old, 168cm (5' 6'') and weighed 31kg (68lbs). I looked like death and felt like it too. I knew that I was a very skinny but I thought it was normal since I biked a lot.

My sugar levels after fasting were 580 mg/dl. The doctor told me and my parents that the matter is very serious and it was a miracle that I'm not in a coma. He sent me directly to the hospital where I spent two weeks just after Christmas and into New Year, 2012.

Those were the worst days of my life, my little "end of the world." As a young girl I didn't know what a pancreas was and I had never heard of such a disease as diabetes. Nobody in my family had diabetes. I was first.

Additionally, the diabetes department at the hospital was being renovated so I had to stay in the surgery ward where the operations took place. One failed and I heard crying parents after the death of their child. I was afraid that soon I would die too.

Only later did the nurses explain to me what diabetes is. Then the doctors told me that exercise was bad for people with type 1 diabetes, meaning that I had to give up my cycling. I was very depressed.

Both my doctors and nurses said that my life will change by 180 degrees. It was too much for a 13-year old girl. The first month I constantly weighed, calculated and tried to make sense of everything. I had to give myself advice alone.

Then a cycling friend shared a Facebook video where he said that he also has diabetes. I immediately wrote to him with many questions and he told me about Team Novo Nordisk. He was preparing to join their Talent Identification Camp. I was amazed. I thought that I was the only one who was different.

Nowadays, I meet a lot of people having the same problem as I. I'm stronger and I don’t give up. In the beginning, I was depressed. Now I am eternally cheerful and enjoying a full life.

I have been told a lot of things about living with type 1 diabetes. Things, like, people with diabetes can't play sports, can’t drive a car, can’t eat like normal person, can’t lose weight, have difficulty in finding a job. I think that all of this is strange. A person with type 1 diabetes is not any worse off, on the contrary, they are careful and diligent. These myths must be overthrown!

I am grateful for people who show what is possible. Team Novo Nordisk riders are amazing people who don’t give up. Thanks to them I know that diabetes doesn’t limit anything. I also have down days with severe hypoglycaemia and hyperglycaemia, but my bike is my love and diabetes won’t prevent me riding on it.

1 Normal fasting blood glucose numbers. Normal for person without diabetes: 70–99 mg/dl
Official ADA recommendation for someone with diabetes: 80–130 mg/dl.

I try everything, diabetes doesn’t limit me
Diabetes education at your fingertips

You catch up with friends online, you handle personal banking online, you do your shopping online – so why not go digital when it comes to diabetes education? Here are two new initiatives that are using digital technology to make diabetes education smarter.

1) When diabetes care goes digital
Healthcare professionals play an important role in ensuring that patients are enabled to effectively manage their diabetes. However, in many parts of the world – particularly in low- and middle-income countries – there are an insufficient number of well-trained professionals to handle a rapidly increasing number of people with diabetes.

To Ulla Bjerre-Christensen, digital technology is a useful way to address this treatment gap. She is heading up Steno Education, a unit under Steno Diabetes Center1, which among other things focus on developing programmes that enable local healthcare professionals to provide patient-centred diabetes health services at the primary care level.

Together with her team, she has recently introduced new online courses in diabetes management as well as an app. The content has been developed in collaboration with clinicians and researchers at Steno Diabetes Center and consists of a variety of learning tools for use in daily practice.

For example, tools have been developed for prevention, screening and treatment of foot ulcers and prevention of diabetic eye diseases.

In the past months, the online courses have been tested by a group of healthcare professionals in Malaysia in collaboration with the local healthcare authorities. It has been done through a team based learning approach where doctors and nurses have participated in a combination of online and face-to-face training sessions.

The tools will be made available for the public medio October in a short course version and Ulla looks forward to disseminating them more widely.

“Going digital gives us the opportunity to make knowledge more accessible and thereby reach a much larger audience,” says Ulla. “And with the digital format, we can give the users an interactive experience with animations, video demonstrations and educational games.”

Interested in the course or using the app yourself? Watch a demo here: https://vimeo.com/169227936
Find the online courses here: courses.iboook.steno.dk. The Steno education app can be found in App Store.

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1 Steno Diabetes Center is specialised in patient care, research, and prevention of diabetes, and in education of health care professionals within diabetes. Steno is a not-for-profit organisation owned by Novo Nordisk A/S but on 1 January 2017, the center will be transferred to the Capital Region of Denmark to become part of a new visionary diabetes center for the entire Region.
2) Addressing diabetes in cities?

In China, there’s an app for that

With 11 million people, Tianjin is the fifth largest city in China and a rapidly expanding industrial hub. In fact, the city’s GDP per capita surpasses that of many countries, including Russia and Brazil.²

But Tianjin also has less flattering numbers. Among the adults over 18 years old, 38% is overweight, 15% is obese, and 15% have type 2 diabetes. All these figures are higher than the average level across China.³

Qualitative research carried out as part of the global Cities Changing Diabetes partnership programme shows that diabetes literacy was identified as a cause of its increasing prevalence in China.

Insights from interviews with people with type 2 diabetes in Tianjin showed that insufficient education ultimately endangers the health of people with diabetes, who are vulnerable to misleading advice, advertisements or compromised treatment avenues.⁵

To address this, the Cities Changing Diabetes programme now aims to complete health education for 8,000 people with diabetes within the next year in the form of both an online ‘Diabetes Care App’ and on-site education initiative across 50 large and medium-sized hospitals in Tianjin.

The project is a collaboration between Tianjin Medical Association, Tianjin First Central Hospital, Tianjin Diabetes Prevention Association and Novo Nordisk China.

With the app, patients can access seamless education on their smartphone anytime and anywhere. The app can also be used to monitor their blood sugar, blood glucose data records, and other information about diet, exercise and BMI values. Patients can get prompt reply from online doctors on daily diabetes management problems.

For the patients leading busy city lives, the app offers convenience and at the same time it has the potential to reduce the workload of the healthcare professional as it offers the possibility to monitor patients remotely.

“The introduction of the ‘Diabetes Care app’ aims to help patients, especially those relatively young, smartphone users with a more convenient access to self-management of diabetes,” says Jiang Xia, Chairman of Tianjin Diabetes Prevention Association.

“It breaks through the limitations of face-to-face preaching or distributing promotional materials and follows the trend of smartphone based online and on-site patient education.”
In Algeria, specialised diabetes centres give patients access to highly qualified healthcare professionals and educational sessions at no cost. Here is how it works and what is in scope for the future.

In Bouzaréah, a suburb of Algiers, the capital of Algeria, lies a clinic. From the outside, it may look like any other clinic in Algeria with its light coloured walls and scattered medical posters written in French and Arabic but what goes on inside is not ordinary.

In the building you will find a medical hub with doctors, nurses and educators, all specialised in diabetes and put in place to help patients better manage their health.

The clinic is part of an initiative called Changing Diabetes® Barometer, a project co-organised by the Algerian Ministry of Health and Novo Nordisk. It is one of so far 26 centres across the country where people with diabetes have access to high-quality care.

One of the people who come here is Fatiha Cherki. Fatiha is a 47-year old woman with type 2 diabetes who works as a cook at University of Algiers. “I felt angry and sad when I found out that I had diabetes,” she recalls. “But I also had to accept it.” Still, she sometimes found it hard to cope with her situation and eventually she was referred to the clinic in Bouzaréah by her local hospital.

One out of many
Fatiha is not alone. In Algeria 1.7 million people are living with diabetes1. The good news is that the majority of people diagnosed receive care in Algeria. However, what is less good is that only few of those people achieve recommended treatment targets. In fact, the average HbA1c – a measure of blood sugar control – for a person with diabetes in Algeria is 9.2%,2 which is far higher than the recommended target of 7% or lower.3

This is a challenge since a level higher than 7% is associated with an increased risk of diabetes-related complications, such as cardiovascular disease, stroke, kidney disease, amputations and blindness.1

Here, access to highly skilled healthcare professionals can make a difference. Data from Algeria for example shows that patients who routinely visit a specialist are generally in better control of their diabetes and tend to achieve treatment targets more often than those who are treated by a general practitioner.2

A multi-disciplinary approach
The centre in Bouzaréah was established in November 2014 in an existing public hospital and the first patients were enrolled in the beginning of 2015. Today, five doctors specialised in diabetes and approx. 900 patients form part of the Barometer centre.

When a patient comes to the clinic for the first time, he or she is examined to make sure that the diagnosis is right. Next step is to establish a medical journal where all information about the patient is gathered and afterwards the patient will receive free regular follow-up with consultations on e.g. medication and diet. Medication and glucometers are also provided at no cost.

The patient will be offered a two-week education programme that takes place in the building next door which is run by nurses who have undergone specialised training. And before the month of Ramadan, they will be offered education on how to deal with your diabetes during the month of fasting.

“Diabetes requires multidisciplinary care because there are so many components to its management and this is the approach that we take at the centres,” says doctor Bourezane. “However, many people with diabetes are not getting the needed foot care or eye exams.”

At the centre, patients therefore are regularly referred to a foot specialist, an eye doctor and also a dentist to ensure an integrated care of their diabetes.

The treatment at the centre not only deals with the physical aspects of diabetes, it also takes psycho-social issues into account. According to the DAWN2 study,4 among Algerians with diabetes, 20% had signs of likely depression and a full 65% experienced diabetes-related distress.5

The Changing Diabetes® Barometer centres have therefore integrated routine psychological assessment, which includes aspects such as quality of life measurements to assess emotional wellbeing and taking into account a patient’s social support, health beliefs and coping style.

Sharing best practices beyond Bouzaréah
After coming to the clinic, Fatiha says that besides taking her medications, she is now more active, eats differently and feels that her life is not affected by diabetes to the same degree any longer. “I like going here and doctors are giving really good advice. In many ways, my life is the same as before,” she says.

In addition to ensuring better treatment for the patients at the centre, one of the objectives of the Changing Diabetes® Barometer project is to obtain a more systematic evaluation of what works and what does not work in diabetes care.

In collaboration with the Ministry of Health, the project has established performance indicators to measure quality of care and identify unmet needs through a registry and tracking system installed at all Barometer centres. Currently the project tracks 12,000 people with diabetes across Algeria and the ambition is to follow 24,000 people within the next years.

“In this way, we hope to improve the quality of diabetes care by identifying and actively spreading good practices on diabetes and inspire others to adopt good practices – also beyond Bouzaréah,” says doctor Bourezane.

Read more about how Novo Nordisk works with partners to help people with diabetes lead healthier lives in Algeria: http://bit.ly/2dlTNP2

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26 Barometer
Centres
in 20 cities

12,000 patients
currently receive
regular follow-up at
Barometer Centres

More than 150
GPs, specialists,
nurses and diabetes
educators work
at the centres

DATA AS PER APRIL 2016.

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4 With more than 15,000 people participating across 17 countries, DAWN2 is the largest study ever conducted to understand the psychosocial issues and needs of people with diabetes. The study was conducted in collaboration between the International Diabetes Federation, the International Alliance of Patient’s Organizations, Novo Nordisk and others. For more information, see dawnstudy.com

In Pakistan, Novo Nordisk volunteers hit the road to visit schools across the country to raise awareness of type 2 diabetes among younger generations.

A road trip is not to be taken lightly, but with the right purpose, the trip is worth it. Last year, a group of Novo Nordisk employees undertook just such a purposeful mission – to change diabetes among some of the youngest members of the country.

On a risky road of development?
Today, the prevalence of diabetes in Pakistan has increased to almost 7% which equals 7 million people. This number is expected to increase to 14.4 million in 2040.1 And the condition is starting to touch the lives of much younger people than previously.

On top of that, data shows that around a quarter of the population are suffering from obesity, a known risk factor for developing type 2 diabetes. In fact, Pakistan is the 9th most obese country in the world.2

Contributing factors to this development is a sedentary lifestyle, unhealthy eating and lack of exercise. However, in Pakistan there is generally a lack of awareness about diabetes, its risk factors, and how to improve quality of life for people already living with the condition, especially among the middle-to-low socio economic groups.

Furthermore, many find it challenging to change their lifestyle and adapt healthy eating habits and exercise in daily routines. So why not start educating people from an early stage of life?

Using the most powerful weapon: education
“As said by Nelson Mandela, education is the most powerful weapon for changing the world,” says Rana Azfar Zafar, General Manager at Novo Nordisk Pakistan. “Education is key if we want to change diabetes. So we decided to volunteer some of our hours to educate children about healthy eating, exercise and diabetes to prevent diabetes in our future generations.”

The initiative was carried out as part of TakeAction, Novo Nordisk’s volunteering programme which gives employees the opportunity to demonstrate the company’s commitment to the Triple Bottom Line by engaging in volunteer activities that are supporting social, environmental or health objectives.

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A total of 18 colleagues planned an ‘Educating Future Generations’ month, and embarked on a mission to visit schools in a number of regions, organising workshops to teach children and their teachers about diabetes, healthy living, diet and exercise. To do this, they collaborated with The Citizens Foundation (TCF), a leading NGO in the country that focuses on social responsibility and education, and runs schools in underprivileged areas across Pakistan.

A curriculum was planned with the individual schools for teachers and children in secondary classes. The employees had several meetings with a TCF representative and also with a certified trainer of the IDF center of excellence in Pakistan to make sure that it would fit well with the target audience.

The curriculum comprised of a short presentation, including information about body parts, their functions, healthy eating habits, the importance of exercise and their link to diabetes. The children were also handed over a diabetes booklet that could help them remember what they learnt in the session.

Sharing personal experiences
In the course of a month, a total of 5,433 people, including both students and teachers, took part in the education sessions.

“This session helped us and our students understand how diabetes is and will be affecting us, but a good thing is that changing our daily chores like diet and lifestyle can help us to avoid the problem,” said a teacher at one of the schools. Also the employees that had set aside time for volunteering felt that they had benefited from the initiative:

“I got the opportunity to attend an activity at a TCF School as volunteer and felt proud to be part of the project. It’s a fantastic opportunity to educate the kids from a grass roots level. These kids will become the ambassadors of diabetes education in Pakistan,” said Aftab Ahmed Khan who worked as CMR Manager at Novo Nordisk Pakistan.

Most importantly, the responses from the children were positive and they actively engaged with the facilitators and shared many personal experiences of family members living and dealing with diabetes. As one of the students put it:

“Now I have understood what diabetes is and how this is affecting my father’s health. I will ensure to guide him about healthy eating, exercise and precautions to manage diabetes so he could live a better quality of life.”

Novo Nordisk Pakistan now looks forward to continue its journey of educating more young people about diabetes in the upcoming year in collaboration with different stakeholders.

3 For more information, see http://www.tcf.org.pk/
People driving sustainability – A career with focus on people and purpose

Søren Skovlund has dedicated his career to putting patients centre stage in global research and advocacy activities. In the past years, Søren has spearheaded DAWN2™, a global study1 to improve access to person-centred diabetes care. Read about how he works to translate research insights into concrete projects, such as education initiatives.

Tell about your role as Global Senior Manager within Global Access in Novo Nordisk?
I help ensure that we understand and actively consider the unmet needs of patients. I work to identify shared objectives for improving access to quality, evidence-based care and potential for partnerships and patient-centred initiatives that may speed up better care for patients to ultimately lead to our overall long-term goal: Better health outcomes.

Right now, I am finalising research across 15 countries to understand how patient organisations are involved in healthcare policy and how patient-reported outcomes (quality of life studies) are being considered by authorities and payers when deciding on what treatments to cover or not. There appears to be potential to improve the value from investments in healthcare around the world by involving patient communities more in the design of care delivery and policies.

Why is education important when it comes to optimal diabetes management?
Diabetes is essentially a self-treatment disease. 98% of the time it is up to the person with diabetes and his/her family or close ones to manage diet, exercise, blood sugar monitoring, stress, well-being, avoiding risky behaviours and taking and managing medications. So a critical factor for treatment success is that people are actively engaged and supported in finding their personal way to integrate diabetes in their life so they achieve optimal health as well as quality of life.

Diabetes is a complex disease so ongoing training and education of healthcare professionals – not only in the clinical aspects but also in the challenges that people living with the condition face on a daily basis – is a critical part of enabling access to quality care. Real progress has been made but we are still far from our goal of ensuring that all people with diabetes get the medical care and support that they need.

You have for many years been driving the work with DAWN2™ – could you describe what was unique about DAWN2™?
From the outset in 2010, our ambition was to create a truly innovative project by putting people with diabetes and their needs and priorities at the centre. So DAWN2™ became unique to us in many ways.

Working from global patient centred principles, we involved people with diabetes and all their key stakeholders as equal partners from the very start. We collaborated on the scope, design, and implementation of the study to co-create a new scientific, holistic understanding of diabetes.

The global scale was unique as our global multi-stakeholder study committee was mirrored in all 17 study countries to consider cultural differences. To capture qualitative perspectives of people with diabetes, their family members and healthcare professionals as well as deliver quantitative benchmarks of care, we combined multiple scientific methods in a new 360° chronic care research design.

DAWN2™ showed that 81% of people with diabetes regarded the diabetes education programmes that they had attended as helpful but only 49% were participating in such programmes. What are the barriers?
A key barrier has been the lack of funding. We now have the opportunity to apply our new evidence and experiences with diabetes education over the past years to make a strong case for evidence-based patient education as part of standard care.

Another important barrier to education is the stigma that is still associated with type 2 diabetes in many countries. We need to work together across sectors to overcome this so diabetes education can be better co-designed by people with diabetes and their families.

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1 With more than 15,000 people participating across 17 countries, DAWN2™ (Diabetes, Attitudes, Wishes and Needs) is the largest study ever conducted to understand the psychosocial issues and needs of people with diabetes. The study was conducted as a collaboration between the International Diabetes Federation, the International Alliance of Patient’s Organizations, Novo Nordisk and others. For more information, see dawnstudy.com
Why is the role of family members important in diabetes education programmes?
The DAWN2™ study taught us that family members can play a significant - either negative or positive - role in the management of a person’s diabetes. We know that family conflicts or living alone for example can be associated with emotional distress and worse self-management.

We understand better now how healthcare professionals can consider the family to improve outcomes. They can ensure that family members can get help with psycho-social distress or diabetes education and they can facilitate team work in the family and inspire to minimise diabetes related conflicts in the home.

Do you think the sources of education for people with diabetes will change considering the rapid technological development?
I believe that the delivery method for each part of diabetes care is likely to be redefined in the years ahead, ranging from how people seek care, how they are diagnosed, how the decision on treatment is made and how the individual treatment plan is co-created and followed up on.

My hope is that healthcare sectors will truly come together to use new technologies to create seamless solutions for care that take individual needs into account and involve patients in doing so.

What tools came out of this process?
Over the years, DAWN has facilitated sharing of several of tools and better practices to improve care by putting the person at the centre. Two examples were the WHO-5 well-being Index and the PAID (Problem Areas in Diabetes) dialogue tools which were developed based on existing questionnaires to make it easier for patients and healthcare professionals to discuss psycho-social challenges. These have now been applied widely globally.

Another series of tools were designed to stimulate an active and positive involvement of people with diabetes in their own care and in decisions about their treatment. We have also come to learn that many of our insights, tools and models for involving patients are highly relevant for use in other chronic illnesses.

What do you find most motivating in your job?
It is to find and strengthen the deeper purpose and meaning of what my responsibilities are and to involve key partners and stakeholders in a shared mission. And it’s about always trying to find innovative approaches to further ramp up the scale of positive impact we can have on the lives of people affected by chronic illnesses within our therapy areas.

We brought together people with diabetes, family members, patient advocates, doctors, nurses, psychologists, researchers, health economists, and policy-makers to identify concrete solutions to the key challenges identified by the DAWN2™ study. As part of the process, each of the 17 countries developed specific action plans to meet their local challenges.
Headquartered in Denmark, 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.

We believe that a healthy environment, society and economy are fundamental to long-term value creation. This is why we manage our business in accordance with the Triple Bottom Line business principle and consider the financial, environmental and social impact of our business decisions.

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