

# Steno Diabetes Center

A Danish centre of innovation and excellence in clinical care  
with the ambition of combating diabetes globally



## Background

Two key processes were initiated during 2007 in response to the increasing need for structural and organisational innovation at Steno Diabetes Center (SDC). One was initiated by the Management Board of SDC. This included interviews with a large number of stakeholders within and outside SDC and Novo Nordisk. The purpose was to provide the Management Board with the best possible platform for preparing a revised strategy for SDC. The other key process was initiated by the Executive Management and R&D of Novo Nordisk (NN) to identify NN's expectations of SDC and develop a business plan for SDC that combines the interests of all major stakeholders. Revision of the legal status of SDC should be included in this plan.

Both processes lead to the conclusion that the strength of SDC is the ability to link patient care, education, research, and lifestyle intervention closely together with focus on the diabetic patient. This is summarised in the Mission and Strategy.

## Mission

SDC is a research hospital whose activities are determined by the primary needs of the individual patient (prevention and care) as well as the patients as a group. The ambition is to be a centre of excellence for innovation and care of patients with diabetes and to be a partner in the global fight against diabetes.

## Strategy

SDC shall be a center of excellence for prevention, treatment, clinical research, and education with focus on the patient. Consequently, the units that create the structure of SDC, the Hospital, Steno Life Style Center, The Research Laboratories, and Steno Education Centre shall be functionally integrated with the patient in focus.

## Implications of the strategy

Being a **leading center** for prevention implies that SDC incorporates existing knowledge and creates new knowledge that can be implemented in primary, secondary, and tertiary prevention programmes.

Being a **leading center for treatment** implies that SDC provides the best possible care for patients with diabetes.

Being a **leader in clinical research** implies that SDC constantly creates new knowledge that can contribute to prevention of diabetes and diseases associated with diabetes, and improve the prognosis and quality of life of the patient living with diabetes and his/her family.

Being a **leader in education** implies that SDC provides education and training programmes based on the SDC concepts, experience and working routines to raise the standards of diabetes care worldwide.

SDC will achieve this in close national and international collaboration with health authorities, universities, patient organisations, and other NGOs.

## **The mission. –Two strategies to combat diabetes**

One strategy is to establish a centre of excellence in clinical care that provides optimal medical care and psychological support, empowering the patient and his/her family to live with diabetes with maximal quality of life. The changes necessary to achieve this goal will be implemented over a period of two years.

The other strategy is to develop the necessary means for prevention of diabetes nationally and internationally. This requires a strong collaboration with international NGOs, the World Diabetes Foundation, universities, and other official institutions. The platform necessary to follow this strategy will be implemented over a five-year period.

## **The 2008 strategy – a new way in a new community**

Both strategies focus on the patient with diabetes and his/her family, and on individuals and groups at risk of developing diabetes. This requires activities based on dynamic and multidisciplinary teamwork. However, the increasing burden of diabetes regionally, nationally, and globally dictates that new and cost-effective ways must be developed to prevent diabetes as well as to treat patients and organise care.

1: Increased focus on measurable improvements in quality of care will be implemented, and the results will be benchmarked against other national and international centres to ensure that SDC provides the possible best care.

2: Optimal medical treatment of patients with diabetes will be maintained, and new modalities will be added by the activities of the new life style centre. This centre will focus on the lifestyle-related, behavioural and psychological elements in patient care. With its academic focus on lifestyle and behavioural change, the centre has the potential to open up new ways in a field where the current evidence is weak.

3: The research activity within SDC shall create new knowledge that can help preventing diabetes and can improve the prognosis and quality of life of the patient and his/her family living with diabetes. Consequently, research at an internationally competitive level will remain an essential activity within the centre.

4: Education remains a core activity at SDC. Its purpose is to disseminate knowledge about treatment of diabetes and team-building strategies that will lead to optimal treatment. To achieve this, it is the ambition to establish STENO-associated/-affiliated centres internationally, based on the concepts of treatment, quality development, and quality of care that are implemented at SDC. This would contribute to the globalisation of the SDC brand and ensure coherence with the revised mission and goals of SDC.

## **The 2008 strategy – implication for patient care**

Medical treatment must always be evidence based and at the cutting edge. To fulfil these requirements, SDC will not only implement new advances in treatment, but will in itself create new treatment modalities and regimens. SDC will actively participate in clinical trials and will ensure the immediate dissemination of knowledge from clinical trials into clinical practice through close interaction between patient care, research and the Clinical Research Unit.

Early diagnosis and treatment of late diabetic complications are essential for improving the prognosis. SDC has long lasting collaboration with relevant specialties such as ophthalmology, orthopaedic surgery, vascular surgery, paediatrics, and obstetrics, but closer collaboration with cardiology, nephrology and neurology will be established during 2009.

Increased focus on change of lifestyle, behavioural and psychosocial support will be an integral part of the clinical activity at SDC. Psychological assistance was established in 2006 via 'Stolpegaarden' to support patients and to guide and supervise the clinical staff at SDC. This will be developed further and expanded in relation to the Life Style Center in 2009.

Whether these changes lead to improvements in quality of care will be evaluated continuously. A local organisation with necessary IT support was established in 2007. Relevant clinical indicators, which are internationally approved will be used in this process. Benchmarking against other leading international diabetes centres should be in place no later than 2009 as part of SDC's goal to be a global frontrunner in quality of care.

## **The 2008 strategy – establishing a Life Style Center**

Intervention in lifestyle including physical activity, dietary habits, smoking etc. has proven to be very effective in preventing diabetes and its vascular complications as well as a large number of other chronic diseases. Despite the therapeutic potential, this is a field with a large number of challenges. Several important questions remain unanswered: what is the true impact on the risk of disease? Which intervention programmes are the most successful? Why are effective intervention programmes not implemented in clinical practice? Why are they not systematically evaluated and implemented in local treatment guidelines?

It is the goal and ambition of the new Steno Life Style Center to facilitate the implementation of a change of lifestyle in primary, secondary and tertiary prevention. The activity will involve implementation of existing knowledge in clinical practice research with focus on developing and evaluating methods and strategies that can support a change of lifestyle. The activity will be multidisciplinary, but with a strong focus on behavioural science. The possibility of combining a patient oriented focus with primary prevention and the possibility of focusing on one chronic disease will clearly distinguish this centre from other existing or planned activities in the Danish healthcare system. The life style center will have activities related to patients in the clinic as well as to institutions, private or public companies and the community/municipality. It will be active in primary, secondary and tertiary prevention. It will be active in treatment as well as research and education and will therefore need to interact with all other sections at SDC.

## **The 2008 strategy – implications for research**

Basic and translational research with a long-term perspective for bringing innovations from 'bench to bed' will be concentrated at the Hagedorn Research Institute (HRI) to strengthen the interaction between the research groups searching for a "cure for diabetes". Thus, the research within beta-cells and genetics will be relocated to the Hagedorn Research Institute. In areas where a close interaction between HRI and SDC is needed, research groups within HRI will have access to patient-oriented research activities at SDC.

Research activities at SDC will be patient-oriented and have a perspective for discovery to implementation that is counted in years rather than decades. The research will include elements of basic and clinical science, epidemiology/public health and behavioural research.

The following research activities will remain or will be established at SDC:

1. Complications
2. Pathophysiology
3. Clinical trials
4. Behavioural science
5. Epidemiology and public health

A closer collaboration will be established between SDC, the World Diabetes Foundation, and the groups within Novo Nordisk working with health economy and burden of diabetes in a global perspective. The possibility of 'subdividing' the responsibilities between WDF, NN and SDC should be considered where the market-oriented activities remain within NN, while some of the more 'academic type' activities are transferred to an epidemiology/public health/health economy unit at SDC.

### **The 2008 strategy – implications for the Steno Education Centre**

The existing practical courses will continue but will include the experience from the Steno Life Style Center.

The activity related to establishing Steno-affiliated/associated clinics will be upgraded. A formal set of requirements to obtain the status including educational programmes, monitoring protocols for quality of care and minimal requirements for standard of care will be ready by the end of 2008, and the first clinics should enrol in the programme during the second half of 2009.

The activities in Denmark will focus on establishing educational programmes for the municipality region where SDC has been assigned the central diabetes education unit, but the activity will have a clear national ambition.

The STAR activity will continue in a revised form reflecting the revised mission of SDC. Details will be negotiated with the Novo Nordisk Foundation before the end of 2008.

### **The 2008 strategy – a global ambition**

While the short-term goal is to establish SDC as a centre of innovation and excellence in clinical care, the long-term goal is to establish SDC as important player in the global fight against diabetes. As part of this, SDC will take the initiative to establish a strong network between centres of excellence within patient care and patient-oriented research. This network will set the standards for care in the Western world, and it will set up and organise educational activities and workshops that facilitate implementation of these standards of care in a broader perspective. The network will constitute a platform for benchmarking and international comparison of quality of care.

### **The 2008 strategy – implications for the structure and organisation of SDC**

The legal status of SDC will be changed, and SDC will become a fully NN-owned, independent legal entity. This will ensure transparency in relation to external partners and maintain SDC as an independent entity. This structure will provide the level of independence in relation to patient care and academic activities that is essential for fundraising through public and private funds and for maintaining the contract with the Capital Region.

This new legal unit will take over all legal responsibilities related to SDC including contracts with the Capital Region, the Novo Nordisk Foundation and other external partners as well as contracts with individual employees at SDC currently held by NN. The new legal entity will be fully operational by 1 January 2009.

This new legal entity will be controlled by a board which will be headed by a representative of Executive Management of Novo Nordisk and will include representatives from key stakeholders (eg. the Novo Nordisk Foundation) and representatives of the employees, in accordance with existing rules for legal entities fully owned by a company registered on the stock market. Furthermore an advisory board of visionary specialists will be established that can provide inspiration for the future development at SDC. All consequences of this will be analysed and implemented before 1 January 2009.

The board appoints the managing director of SDC.

The managing director of SDC appoints the directors of the units in SDC:

- Steno Patient Care
- Steno Education Center
- Steno-NN Life Style Center
- Steno Research
- Steno Administration

The managing director and the unit directors constitute the Management Board (Steno-ledelsen) that assists the managing director in the management of SDC. The unit directors are responsible for the implementation of the strategy for SDC within their own area.