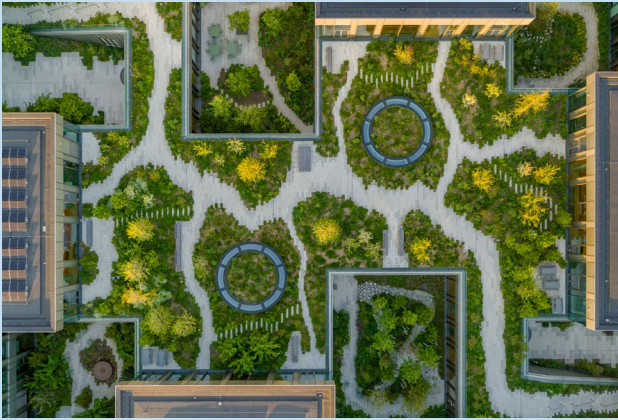


Steno Diabetes Center Copenhagen

Annual Report 2024



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Towards a New and Improved Care Pathway

At Steno Diabetes Center Copenhagen, we are on the move. We are moving towards a new and modern outpatient clinic, where we see our patients—our users—in an entirely new way.

We are doing this because a pressured healthcare system calls for new thinking, and because new digital health solutions make it possible. But above all, we are doing it because it is the smart thing to do.

Steno's core principle is that all care must be individually tailored. This means that going forward, we will increasingly ensure that our treatment is customised to each person with diabetes. We will consider factors such as comorbidities, psychosocial circumstances, and digital readiness, for example when using diabetes technology and at-home monitoring.

” The healthcare system of the future requires that we view users of the healthcare system as our closest partners.

That is why, in the outpatient clinic of the future, we will not offer everything to everyone. We will prioritise wisely. In practice, this means that users with the greatest needs will receive more attention than those with fewer needs. It may sound logical, but this is not how the healthcare system works today with frequent routine appointments.



This new reality requires adjustment—both for healthcare professionals and for users.

Fortunately, new technology can help. Just look at how technology has revolutionised diabetes treatment itself, with the development of ever-improving continuous glucose monitors and advanced insulin pumps. Now, technology must also revolutionise how we support our users, who are a long-overlooked and underutilised resource.

The healthcare system of the future must see users as its closest collaborators and as experts in living with chronic disease. At Steno, we have had the pleasure of hosting the first user-driven conference on how users can be active partners in interactions with the healthcare system. One example is that users should, of course, help plan their own visits to Steno. Perhaps four consultations can be reduced to a single visit each year, and perhaps a consultation with a nurse is more relevant than one with a doctor.

In 2024, Steno began rethinking the traditional outpatient care pathway, and we will continue to develop and improve our care pathways based on both research and user feedback. Among other things, we aim to expand the use of home monitoring and strengthen our local presence among particularly vulnerable groups—as is already the case today in the Copenhagen neighbourhood of Tingbjerg.

I am convinced that by daring to challenge and modernise our care pathways, we will, together with users, create a healthcare system that makes it possible to live an even better life with chronic disease.

Curious? Then read on about the development of the outpatient clinic of the future and our many other activities in research, treatment, and education in the pages that follow.

Magnus T. Jensen
CEO, Professor
Steno Diabetes Center Copenhagen

A New Care Pathway Transforms the Diabetes Outpatient Clinic

Steno is leading the way in developing innovative and progressive solutions in the healthcare sector and has introduced a new care pathway that leverages the opportunities within digital health and personalised medicine.

46.121
consultations completed
in 2024



11.991
people with diabetes are
affiliated with Steno



In 2024, being a user at Steno has become a different experience. In the autumn, we launched a brand-new care pathway that challenges traditional ideas about what it means to be a user and how consultations for people with chronic diseases should be conducted.

The focus is on an individualised, needs-based, and digitalised outpatient model. The days of providing the same care to everyone are long gone. As a result, people with diabetes are no longer routinely called in for several diabetes consultations each year at Steno.

Some individuals with diabetes may need to visit frequently during certain periods of their lives, while at other times, physical attendance may not be necessary at all. Perhaps the current three to four annual consultations can be replaced by a single virtual appointment.

Steno's core principle is that all care must be indi-

vidually tailored. Vulnerable individuals, or those who are temporarily vulnerable, must receive more support than users for whom everything is running smoothly. In this way, we individualise treatment and provide the best possible help and support to those who truly need it.

Our goal is to enable people to live as normal a life as possible—even while living with diabetes and possibly other conditions. With this new care pathway, Steno aims to transform and rethink the treatment of diabetes and other chronic diseases to achieve a more integrated, more equitable, and ultimately better healthcare system than we have today.

Steno's new care pathway directly contributes to the regional project **Outpatient Clinic of the Future** in the Capital Region of Denmark, where the experiences from



Chief Bioanalyst Evy Ottesen, Chief Nurse Mette Husum, and Chief Physician Frederik Persson lead the Department of Diabetes Care at Steno Diabetes Center Copenhagen, which in 2024 introduced a new care pathway. Photo: Jane Aunsbjerg Villadsen.

Steno are expected to play a crucial role—even beyond diabetes and across other chronic conditions.

Steno's CEO, Magnus T. Jensen, is chair of the regional steering committee and is leading this ambitious development effort, which involves all hospitals in the region. The **Outpatient Clinic of the Future** began as a pilot project in endocrinology in spring 2024, inspired by Steno's own development work on the new care pathway. Magnus T. Jensen also serves as chair of the **Health Professions Council for Endocrinology in the Capital Region**.

Together, the region's hospitals are developing individualised care pathways that take full advantage of digital opportunities, including virtual consultations and at-home testing.

The first new digital tools were introduced in hospitals in December 2024, with more to follow in 2025.

Using Data and Technology: Detektor and Stenopool

To support a more individualised, needs-based, and digitalised diabetes outpatient clinic at Steno, a tool called *Detektor* has been developed—and continues to be refined.

Detektor provides healthcare professionals with a health overview based on the data users at Steno submit in connection with their treatment. This can include test results, data from glucose sensors and insulin pumps, or samples taken at home using kits for measuring, for example, HbA1c (long-term blood glucose).

By identifying users who have good glycaemic control, we are able to allocate more consultation time to those who need additional guidance and support.

Detektor also enables Steno to take a more proactive approach to reaching out to users with offers of support—for example, after a hospital admission.



Patient Coordinator Trine Nissen Thøgersen and Chief Physician Jonatan Ising Bagger are discussing the possibilities of using Detektor, which is a tool for remote monitoring.

The *Detektor* system displays blood glucose levels, lab results, admissions, and other relevant information needed to monitor the individual.

In addition to targeted monitoring of clinical markers—which until now took place during regular in-person consultations—*Detektor* can notify staff of acute changes, such as when a user has had extremely high or low blood sugar over an extended period without noticing it themselves. This is possible because the data from continuous glucose monitors and insulin pumps is collected via *Stenopool*, a data-upload platform developed at Steno Diabetes Center Copenhagen.

Stenopool has been in use at Steno since 2021 to gather data from glucose monitors and insulin pumps used by people with type 1 diabetes. In 2025, *Stenopool* will be rolled out nationally in a pilot programme across all regions in Denmark. This follows a 2024 decision by Da-

nish Regions to use *Stenopool* as part of a project in which more than 4,400 adults with insulin-treated type 2 diabetes will be offered sensor-based glucose monitoring.

Users Categorised by Three Parameters

In the new care pathway, users are divided into three different groups based on their need for consultations—whether in-person or virtual. The categorisation is based on three pillars: biological, technical, and psychosocial.

The **biological triage** is based on a comprehensive clinical assessment that includes biochemical and clinical markers as well as the overall disease burden, such as the presence of comorbidities, general control of relevant biomarkers, and the individual's ability to manage their conditions.

The **technical pillar** assesses the user's digital competencies and their ability to interact with healthcare providers digitally—for example, through MinSP (*My Health Platform*) and the use of diabetes technology. Users registered in MinSP can book appointments up to 90 days in advance and see which healthcare provider is available. MinSP is the shared electronic health record system for hospitals in both the Capital Region and Region Zealand. Users can also upload relevant data to be used during consultations.

Psychosocial factors are the third aspect of the triage model. A specialised questionnaire is currently being developed to support this dimension.



"I want to help develop a healthcare system that can more compassionately care for people who fall through the cracks," says Kristoffer Marså, Chief Physician at Steno. "Through the new care pathway, we must be more personal in our interactions with users and support them based on the lives they actually live."

Targeted Efforts for Vulnerable Users

In developing the new care pathway—with its emphasis on digitalisation—particular attention has been paid to people in vulnerable situations, especially in relation to psychosocial factors.

A collaboration has been initiated with a social nurse from Herlev Hospital to provide support to users with diabetes who are particularly exposed or in vulnerable positions. Together with the social nurse, users are offered more flexible access to care at Steno.

The social nurse also contributes by providing training and consultation to interdisciplinary staff on specific cases and care pathways.

On 1 September, Kristoffer Marså joined Steno as a new Chief Physician. He will help establish a dedicated initiative for vulnerable individuals with diabetes and multiple health conditions through a person-centred and needs-based approach. Kristoffer Marså is also involved in establishing MDT conferences—multidisciplinary team meetings where specialists from different fields collaborate to provide the best possible support for people with multiple chronic conditions.

New Unit: Clinic for Precision Medicine

The new care pathway also brings increased focus on personalised medicine—that is, tailoring medical treatment to the individual. By examining each user's genetic and clinical profile, it is now possible to better predict which complications they may be at risk of developing, and which treatments will be most effective for them. In other words, care that is both personalised and precise.

To support this, Steno has established a Clinic for Precision Medicine. The new clinic is tasked with developing new methods for early detection, diagnosis, and risk assessment of diabetes and its complications, and ensuring that treatments are targeted to those who will truly benefit from them. Led by Chief Physician Simone Theilade, the clinic is responsible for creating strong links between research and clinical implementation.

Users can read more about the care pathway at Steno by visiting sdcc.dk/minbehandling

The site includes practical information about, for example, how to book appointments in the Health Platform and what changes are expected for children and youth services in 2025.

How can diabetes treatment take advantage of digital technology? Jakob Skriver Routhe has type 1 diabetes and helps answering that question being part of a new user panel at Steno.



” We Have to Seize the Opportunities of Digital Technology

The traditional diabetes outpatient clinic is undergoing a transformation—and users are helping shape how it happens.

“What are we even supposed to talk about?”

That’s a question Jakob Skriver Routhe, who has type 1 diabetes, has often asked himself on his way to a diabetes consultation. His diabetes levels are fine, and every-day life with diabetes is under control—so why go to the hospital?

“I get continuous data about my blood glucose from my sensor, and that gives me a huge sense of security. But it also changes the role of my healthcare provider,” he says.

Jakob Skriver Routhe is a member of a new **user**

panel at Steno, which is exploring how diabetes care can evolve to make the most of the new digital reality.

“We have to seize the opportunities that technology gives us. I’m being monitored by my sensor 24/7—why not use that data? I want to contribute to that,” says Jakob, who is a civil engineer working with technology and digitalisation in healthcare.

The user panel is tasked with continuously providing ideas and input for new digital tools to support home-based care. The initiative is part of Steno’s new framework for care and user interaction.

Additional Initiatives in the Department of Diabetes Care

- A coherent and reassuring care pathway for families of children newly diagnosed with diabetes, supporting the transition from inpatient admission at Herlev Hospital to outpatient care at Steno Diabetes Center Copenhagen. Preliminary evaluation results indicate that families experience greater continuity and reassurance throughout the process. Additionally, the average length of hospital stay was reduced by 1.5 days during the project period.
- Two supplementary treatment initiatives aimed at children and adolescents with type 1 diabetes:
 - Steno Child:** A play-based, needs-driven approach designed to engage younger children in their care.
 - Steno Youth:** A structured educational programme combined with social-pedagogical support for adolescents with poor glycaemic control.
- A culturally adapted, person-centred care offer aimed at supporting individuals with type 2 diabetes who speak Arabic, Urdu, or Turkish.



Several initiatives targeting children and adolescents were planned in 2024.

As chairman of the steering committee for the Future Outpatient Clinic in endocrinology within the Capital Region of Denmark, Steno's CEO, Professor Magnus T. Jensen (in blue shirt sleeves) is leading an ambitious development effort with the potential to transform the Danish healthcare system.







Developing the Outpatient Clinic of the Future

What are the hopes and visions of staff and users for the outpatient clinic of the future at Steno? Creativity has been in full flow during the many workshops and innovation camps held to explore new and forward-thinking ways of conducting diabetes consultations.

In the photo, Chief Physician Frederik Persson reads aloud from some of the many ideas and suggestions that decorate a meeting room at Steno—proposals that reflect both imagination and a shared ambition to rethink care.

Steno Partnerships Strengthen the Diabetes Effort

Knowledge exchange, joint research projects, and shared educational initiatives with the other Steno Diabetes Centres contribute to a strengthened diabetes effort for the benefit of the entire healthcare system.

DEBATE

A Joint Front at the People's Meeting on Bornholm

The five Steno Diabetes Centres in Denmark joined forces for a collective presence at the 2024 People's Meeting on Bornholm. The goal was to contribute to the public dialogue on needs-based care and to lay the groundwork for new partnerships.

The centres hosted two events: The debate *“Who Should Have a Seat at the Doctor's Table?”* on the Altinget stage explored how we should prioritise treatment for people with chronic illness in a strained healthcare system.

The second debate, titled *“Can the Patient Save the Danish Healthcare System?”*, was hosted by Danish Regions and focused on differentiated care and the patient's role—and responsibility—in the healthcare system of the future.

The five centres compiled a shared portfolio of experts and leaders who participated in the People's Meeting. From Steno Diabetes Center Copenhagen, Head of Department Ulla Toft, Chief Physician Frederik Persson, and Head of Research Paul Bloch took part. These three profiles participated in discussions and debates hosted by organisations such as the Red Cross, BL – The Danish Social Housing Association, and the Danish Scouts.



Head of the Department for Prevention, Health Promotion and Society, Ulla Toft, speaks at the People's Meeting.

Photos: Nils Meilvang

Steno Diabetes Centres profiler på Folkemødet 2024

Skal vi debattere fremtidens sundhedsvæsen på Folkemødet?

 Andreas Rudkjøbing Direktør, Steno Diabetes Center Sjælland Speciallæge i samfundsmedicin, ph.d.	 Ulla Toft Afslutningschef, Steno Diabetes Center Copenhagen Klinisk professor i sundhedsfremme og forebyggelse
 Lene Borgen Esmann Chefregionaldirektør, Steno Diabetes Center Odense Regionsrådsmedlem i Odense region	 Troels Krarup Hansen Direktør, Steno Diabetes Center Aalborg Klinisk professor i diabetes
 Jan Erik Henriksen Direktør, Steno Diabetes Center Odense Speciallæge i endokrinologi, ph.d. og lektor	 Anneli Sandbæk Erhverbschef, Steno Diabetes Center Aalborg Klinisk professor, Aarhus Universitet
 Frederik Persson Chefregionaldirektør, Steno Diabetes Center Copenhagen Speciallæge i endokrinologi, dr.med.	 Mette Wallbohm Olsen Endokrinolog og leder af Diabetisklinikken, Steno Diabetes Center Sjælland Organisationsmedie og læringsprocesser
 Ellen Bjerre Zacho Sekundær og ledende klinisk chef, Steno Diabetes Center Odense Clinical scientist, master i public governance	 Peter Bindslev Iversen Projektleder for Sårhælb, Lige Adgang og Forebyggelse, Steno Diabetes Center Sjælland, Ph.D. i sundhedskonomi
 Paul Bloch Forebyggelsesprofessor, Steno Diabetes Center Copenhagen Seniorforsker i sundhedsfremme og forebyggelse, ph.d.	 Jane Nautrup Østergaard Projektleder, Steno Diabetes Center Aalborg, Ph.D.



Top: The joint Steno portfolio.

Top right: TV doctor Peter Qvortrup Geisling facilitated a debate on prioritization in the healthcare system.

Middle: Research leader Paul Bloch participated, among other things, in a debate at Denmark's Public Housing.

Right: Mads Fly-Hansen participated as a representative of Steno's users in several debates at the People's Meeting.



Researchers across Denmark, Greenland, and the Faroe Islands have joined forces to reduce the risk of complications from type 1 diabetes. The study, called Steno 1, was initiated at a meeting at Steno Diabetes Center Copenhagen.

RESEARCH

Researchers Hope for a Breakthrough in Preventing Complications from Type 1 Diabetes

All Steno Diabetes Centres in Denmark, Greenland, and the Faroe Islands have joined forces in the largest study of its kind: The Steno 1 Study.

A better life with type 1 diabetes—that is the shared vision driving this effort. Launched in 2024, the Steno 1 Study investigates whether a set of new medications and more ambitious treatment targets can reduce the risk of complications from type 1 diabetes, especially cardiovascular and kidney diseases.

Specifically, the researchers aim to determine whether the risk of complications can be reduced by:

- Introducing more ambitious and targeted treatment for blood glucose, high blood pressure, and elevated cholesterol.
- Using new medications that have shown beneficial effects in people with type 2 diabetes: SGLT2 inhibitors (sotagliflozin), GLP-1 receptor agonists (semaglutide) and Finerenone

The study aims to include 2,000 participants and is a collaborative effort involving all diabetes outpatient clinics

in Denmark, Greenland, and the Faroe Islands—making it the largest of its kind in Denmark.

The name *Steno 1* is inspired by the well-known Steno 2 study from the 1990s, in which researchers showed that a more ambitious treatment strategy combining medication and lifestyle changes significantly reduced complications in people with type 2 diabetes.

The researchers now hope for a similar breakthrough in type 1 diabetes.

Learn more about the study at www.sdcc.dk/steno1

Lead investigator: Chief Physician and Professor Peter Rossing, Acting Director of Research at Steno Diabetes Center Copenhagen.

The study is funded by a Steno National Collaborative Grant from the Novo Nordisk Foundation.

Specific medications are also donated by pharmaceutical companies: Lexicon (sotagliflozin), Bayer (finerenone), and Novo Nordisk A/S (semaglutide).

More Insight and Better Treatment for the Genetic Diabetes Type MODY

An often overlooked cause of diabetes is a mutation in one or more genes. A joint Steno project aims to shed light on this frequently misdiagnosed form of diabetes.

Maturity-onset diabetes of the young (MODY) is a hereditary and relatively rare form of diabetes caused by a mutation in one or more genes. Typical characteristics include a strong family history of diabetes, ongoing insulin production by the pancreas, and a lean body type. Despite these features, some individuals with MODY are diagnosed with type 1 diabetes, while others are diagnosed with type 2. Preliminary data from Steno Diabetes Center Copenhagen show that individuals with MODY may live with an incorrect diabetes diagnosis for anywhere from 1 to 28 years.



The research leader is Chief Physician and Professor Tina Vilsbøll, Steno Diabetes Center Copenhagen.

The research project The Steno MODERN MODY Project aims to change this by generating the world's most comprehensive knowledge on the prevalence, treatment, and consequences of MODY.

Launched in 2024, the project is a national collaborative effort involving all Steno Diabetes Centres in Denmark and Greenland, partner hospitals, and researchers from the University of Copenhagen.

Due to its high heritability, MODY often presents at a young age. The most common gene defects occur in HNF4A (MODY1), GCK (MODY2), HNF1A (MODY3), and HNF1B (MODY5).

Across the five Steno Diabetes Centres in Denmark and at Steno Diabetes Center Greenland, nearly 450 people with MODY are followed—of which about 170 are at Steno Diabetes Center Copenhagen.

The project aims to establish the world's largest cohort of individuals with monogenic diabetes, enabling better understanding of prognosis and treatment. It also explores whether medications typically used in type 2 diabetes—such as GLP-1 receptor agonists and SGLT2 inhibitors—can improve glycaemic control in people with MODY who have not achieved treatment targets using sulfonylureas or insulin.

The goal is to improve outcomes for a group that is often misdiagnosed and therefore not receiving optimal care—including treatments that have shown to improve prognosis for kidney and cardiovascular disease.

The project is anchored in the Cardio-Metabolic Prevention (CMP) research group. Several team members also work directly with people diagnosed with MODY in the Department of Diabetes Care at Steno, helping ensure strong links between research and clinical practice.

The first results are expected in 2027.

The study is funded by a Steno National Collaborative Grant from the Novo Nordisk Foundation.

Other Research Projects

- Complications from type 1 diabetes in children and adolescents** remain an under-researched area. The DetectChild study has so far enrolled 250 children and adolescents, with an average age of 14.6 years, from the Capital Region and Region Zealand—monitored respectively at Steno Diabetes Center Copenhagen and Steno Diabetes Center Zealand. The findings show that 16% exhibit signs of increased arterial stiffness and subclinical neuropathy—early nerve damage without symptoms—after just four to five years with type 1 diabetes. The goal is to include about 400 participants and follow up after five years to assess disease progression.

A shorter Time in Range (TIR)—defined as time with blood glucose between 4–10 mmol/L—is associated with greater risk of vascular stiffness.

904

children are affiliated with Steno. Of these, 829 have type 1 diabetes, 19 have type 2 diabetes, 56 have MODY or unspecified diabetes



- “Men’s Health Program II”** is a project under the Strategic Prevention Forum. It is a collaboration between Steno Diabetes Center Copenhagen and Steno Diabetes Center Aarhus, aiming to prevent the development of cardiometabolic diseases and promote physical, mental, and social health among men at high risk of diabetes. The project is conducted in collaboration with the municipalities of Køge and Aarhus and the professional football clubs HB Køge and AGF..





EDUCATION

- 110 nurses from all five Steno Diabetes Centres took part in the first national **nursing symposium** titled “*Nursing in the Diabetes Pathways of the Future*.” The symposium was planned by the centres’ five chief nurses in collaboration with clinical nurse specialists and academic nurses across the centres. The aim was to inspire best practices in diabetes nursing through knowledge sharing, peer exchange, and the creation of new synergies and relationships.
- The Danish Diabetes Knowledge Centre offers its **web platform** for use by all Steno Diabetes Centres. In 2024, Steno Diabetes Center Zealand launched a one-year pilot website for sharing educational materials with healthcare professionals. The other centres will have the opportunity to do the same.
- Two **joint Steno webinars** were held for general practitioners, covering the latest knowledge on pharmacological treatment of type 2 diabetes and gestational diabetes (GDM) – the latter attended by 150 online participants.
- Since 2021, Steno Diabetes Center Copenhagen has collaborated with **the Danish Podiatrists Association** and the **Podiatry School in Copenhagen** on a diabetes continuing education programme for practicing podiatrists. Steno Diabetes Center Aarhus has been involved throughout. In 2024, the course became part of a formal agreement offering from the Danish Podiatrists Association and was delivered for the first time by Steno Aarhus and the Podiatry School in Randers. The next course will take place in Copenhagen in 2025.

At Steno, users can have a gait analysis performed in the foot clinic. The continuing education programme for podiatrists, developed in collaboration with the Danish Podiatrists Association and the Podiatry School in Copenhagen, became part of a formal offering in 2024.

Photo: Jørgen True

Research That Makes a Difference

Steno holds strong expertise in clinical research, prevention, and health promotion. With an increased focus on the cardiometabolic field, efforts have intensified around topics such as obesity, cardiovascular disease, and damage to the central nervous system.

6.948

people with type 1 diabetes
are affiliated with Steno
Of these, 829 are children



4.288

people with type 2 diabetes
are affiliated with Steno
Of these, 19 are children



755

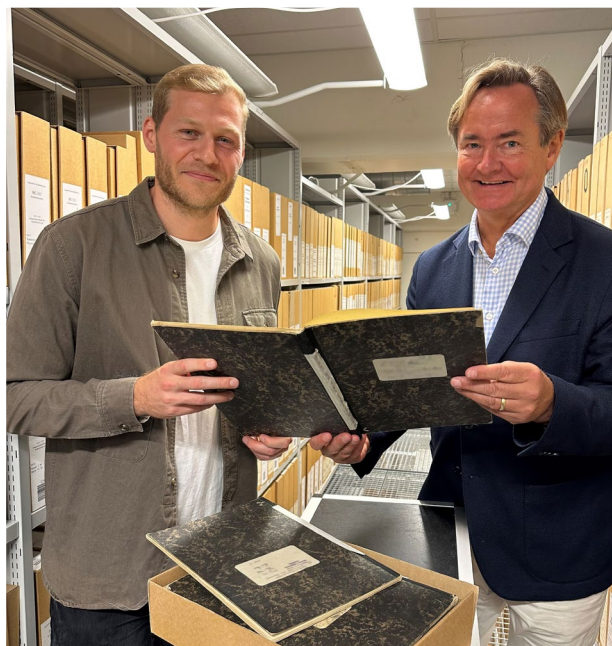
people have MODY
or unspecified diabetes



A New Historic Medical Birth Register to Uncover Hidden Diseases

A new digital register covering all individuals born in Denmark between 1926 and 1973 may provide new insights into the link between birthweight and later health outcomes. Researchers at Steno Diabetes Center Copenhagen have previously demonstrated a strong correlation between low birthweight and the development of, among other conditions, type 2 diabetes—published in *Diabetologia*. That research inspired the digitisation of millions of handwritten midwife records, linked with national ID numbers, to create an electronic historical medical birth register that will cover approximately 4 million Danes.

The project is unprecedented in size, level of detail, and historical span. It is led by Jennifer Baker (Bispebjerg and Frederiksberg Hospital) and Jeppe Klok Due (Danish National Archives), and is funded by the Novo Nordisk Foundation. From Steno, Chief Physician and Professor Allan Vaag (co-applicant) and Physician and Ph.D. student Aleksander Lühr Hansen are participating.



Physician and Ph.D. student Aleksander Lühr Hansen and Chief Physician and Professor Allan Vaag from Steno.



Pictured from left: Senior Consultant Jeppe Klok Due, National Archivist Morten Ellegaard, Research Lead Jennifer Baker, and Chief Physician and Professor Allan Vaag.

Photos: Danish National Archives

The FLOW Study: Semaglutide Protects Against Kidney Disease and Mortality

Groundbreaking data from the FLOW study were published in May in the *New England Journal of Medicine*. The study shows that semaglutide—the active ingredient in Ozempic—not only lowers blood glucose in people with type 2 diabetes and reduces weight in people with obesity, but also protects the kidneys in people with type 2 diabetes.

Three sub-analyses of the data further indicate that semaglutide appears to have a protective effect across all stages of kidney disease, a protective effect against hospitalisation due to heart failure and a protective effect against death, including death related to COVID-19. Due to these convincing results, the study was terminated early in February 2024.

Chief Physician and Professor Peter Rossing, one of the lead investigators behind FLOW, presented the findings at the European Renal Congress in Stockholm, the European Association for the Study of Diabetes (EASD) conference in Madrid and at Kidney Week, the annual congress of the American Society of Nephrology (ASN).



Chief Physician and Professor Peter Rossing, Steno Diabetes Center Copenhagen

General Practices Clinics Improved in Achieving Treatment Goals

Data Sam is a quality improvement project involving Steno Diabetes Center Copenhagen, the Department of Endocrinology at North Zealand Hospital, and organisation and data consultants from Quality in General Practice in the Capital Region (KAP-H). A total of 19 general practices and six control clinics participated in this supplementary care initiative targeting general practice. The participating GPs received support in working with care plans, clinic organisation and their own diabetes data. Each clinic selected which quality parameters to focus on. The project demonstrated that participating practices improved their achievement of treatment goals in accordance with clinical guidelines. It also showed that much of the quality work can be effectively handled by clinic staff.

Early Detection of Type 1 Diabetes, Coeliac Disease, and Thyroid Disorders Initiated

Through the DiaUnion collaboration, Steno has launched a screening programme targeting first-degree relatives under the age of 40 of people with type 1 diabetes. The initiative aims to detect three autoimmune diseases: type 1 diabetes, coeliac disease, and autoimmune thyroid disease. The intention is to explore the future implementation of national early detection efforts. As of the end of 2024: 765 people had registered interest in participating. 545 had been contacted and enrolled in the project database. 337 blood samples had been collected, where 274 samples had been analysed. Nine individuals tested autoantibody-positive for type 1 diabetes, four individuals for coeliac disease and 33 individuals for autoimmune thyroid disease. 228 individuals tested autoantibody negative.

The Lack of Mealtime Insulin in Children with an AID-pump Have Significant Effect

When children and adolescents with type 1 diabetes miss a mealtime insulin dose (known as a bolus) while using an automated insulin delivery (AID) system, it significantly impacts their glycaemic outcomes. The lack of bolus insulin significantly impacts the percentage of time a child's blood sugar remains within the target range (TIR: time-in-range).

According to a study from Steno, missing insulin for just one meal reduces TIR by 9.7%. These results emphasize the importance of maintaining focus on bolus behavior to achieve higher TIR and support the need for further research into technological or behavioral support tools.



New research shows that Asta, 26 years old, who uses both a sensor and an insulin pump, doesn't need to fear hypoglycaemia while climbing.

New Technology Makes It Easier to Exercise

Many people with type 1 diabetes fear low blood sugar (hypoglycaemia) during physical activity, making it difficult to exercise regularly. In a new study from Steno, researchers found that simply adjusting the insulin pump 15 minutes prior to activity, setting a temporary target glucose level of approximately

8.3 mmol/L, allowed participants to exercise at moderate intensity for 45 minutes without experiencing low blood sugar—neither during nor after exercise. The study also investigated whether administering glucagon, a hormone that prompts the liver to release stored sugar, could help prevent hypoglycaemia. However, the researchers found no need for glucagon under the study conditions.



First Steps Toward Understanding Sex Differences in Type 2 Diabetes and Cardiovascular Disease

In the general population, women develop cardiovascular disease less frequently than men. However, among individuals with type 2 diabetes, this female advantage disappears. In fact, women with type 2 diabetes are more likely to develop cardiovascular disease than their male counterparts. The DiaHeart study, a collaboration

between Steno Diabetes Center Copenhagen and Steno Diabetes Center Zealand, shows a difference in myocardial flow reserve (MFR) between women and men with type 2 diabetes who do not have known cardiovascular disease. MFR is a marker of the heart's ability to increase blood flow when needed. This difference in MFR may help explain the sex disparity in cardiovascular risk. The research was presented at Kidney Week, the annual congress of the American Society of Nephrology (ASN).

Children with Type 1 Diabetes Continues to Improve in Regulation

Children with type 1 diabetes today are achieving significantly better glycaemic control than they did just a decade ago. A registry study including data from more than 100,000 children across several European countries, the USA, and Australia shows that in 2013, the average HbA1c (long-term blood glucose) among children under 18 with type 1 diabetes was 66 mmol/mol (8.2%). By 2022, the average had decreased to 58 mmol/mol (7.6%). Chief Physician Jannet Svensson, from Steno Diabetes Center Copenhagen, co-authored the article published in *The Lancet Diabetes & Endocrinology*. She also serves on the steering committee of the Danish Diabetes Database (DDiD) under the Danish Clinical Quality Program (RKKP), and she welcomes the international collaboration. Danish children rank fourth for best glycaemic control—after Sweden, Norway, and the Czech Republic. Contributing factors to this progress are believed to include increased use of continuous glucose monitoring, effective communication at diabetes onset, and a shared treatment goal of low HbA1c levels.



Chief Physician Jannet Svensson is one of the researchers behind the registry study.

Foot Complications: High-Risk Individuals Can Be Identified Using a Simple Method

In Denmark, current guidelines recommend that everyone with diabetes receives an annual foot examination. But is that always necessary? According to researchers at Steno Diabetes Center Copenhagen, the answer may be no. A new study involving more than 14,000 people with both type 1 and type 2 diabetes shows that it is possible to categorise individuals into low or high risk for developing serious foot complications—such as ulcers, amputation,

or even death—using two simple methods: Vibration Perception Threshold (VPT)—a measure of sensation in the feet, and Palpable foot pulses—to assess blood flow. These simple measurements proved to be effective tools for risk stratification, as they corresponded with the actual development—or absence—of foot problems over time. Steno hopes the study can help challenge current guidelines and pave the way for more targeted and efficient foot screening.

Time-Restricted Eating Did Not Lead to Weight Loss

The main findings from the RESET study were published in the scientific journal *The Lancet Healthy Longevity*. RESET was a randomised controlled trial investigating whether three months of time-restricted eating could lead to weight loss and improved cardiometabolic health in 100 people at high risk of type 2 diabetes. The

intervention was followed by a three-month follow-up period. The results showed that time-restricted eating did not result in clinically meaningful changes in weight or cardiometabolic risk markers compared to the control group. Among participants who adhered to the time-restricted eating regimen for more than 80% of the intervention period, there was an average weight loss of one kilogram compared to the control group.



Women with Prior Gestational Diabetes and Overweight Benefit from Family-Based Intervention

The Face-it research project has helped women with a history of gestational diabetes gain a better understanding of their risk of developing type 2 diabetes later in life. The study included 277 women in a randomised controlled design. Two-thirds of the participants received support to change or maintain healthy habits, tailored to their family's needs and resources. After one year, the effect of the intervention was evaluated. The primary outcome was body mass index (BMI). Among the two-thirds of women who were overweight at baseline, the intervention group showed a significantly lower BMI one year postpartum compared to the control group. There was also a reduction in risk factors for type 2 diabetes, including triglyceride levels and increased fasting plasma glucose.

Women, with prior gestational diabetes have in the research study Face-It achieved understanding of their risk for developing type 2 diabetes.



Senior Researcher Karoline Kragelund chaired a session on gestational diabetes at the European diabetes conference EASD, where she presented the Face-it project.

Photo: Jonas Vandall



Dentist Ava Azar is employed at Steno to screen the dental health of selected individuals with diabetes.

Steno Establishes Its Own Dental Clinic

As the first diabetes hospital in the world, Steno Diabetes Center Copenhagen has established an in-house dental clinic.

Can diabetes management be improved by focusing on oral and dental health? That's the central question behind a new research project at Steno Diabetes Center Copenhagen. Untreated periodontitis - a gum disease that affects the connective tissue and jawbone holding the teeth in place - can lead to loose teeth and eventually tooth loss. People with diabetes are at increased risk of developing gum problems, and in recent years, periodontitis has been recognised as a complication of diabetes in both international and Danish studies.

"But we need to learn even more," says Research Director, Chief Physician, and Professor Peter Rossing, who leads the new research project.

"How widespread is the problem among people with diabetes? Should regular dental check-ups be offered? And if so, to whom?"

The project aims to identify whether poor dental status is associated with worse glycaemic control and a higher risk of diabetes complications, including cardiovascular disease. If so, it would make sense to offer all individuals with diabetes the opportunity for regular dental assessments.

As part of the study, selected users will undergo dental health screening to explore links between oral health and diabetes and to help develop potential care pathways. To support this, Steno has invested in a dental chair and set up its own dental clinic. The study will include approximately 600 people with type 1 diabetes and 600 people with type 2 diabetes. These are the same individuals who participated in the "Thousand & 1" and "Thousand & 2" studies over a decade ago, where they were examined for heart disease at Steno and the cardiology department at Herlev and Gentofte Hospital.

Now, those same individuals will be examined for oral, dental, and cardiovascular health, based on the hypothesis that periodontal disease is linked to poor glucose control and other diabetes-related complications, such as heart disease.

People with Type 2 Diabetes on Insulin Benefit Greatly from Sensors

Continuous glucose monitoring -also known as sensors- can significantly improve treatment for people with type 2 diabetes who use insulin. So much so that sensors should become the standard of care for this group, according to Chief Physician and Research Director Kirsten Nørgaard, who led the study published in *Diabetes Care*. The study showed that people using a CGM spent 61.7% of the time within the target blood glucose range. In contrast, those using finger-stick testing were within range only 46.5% of the time.

In 2025, a national pilot programme will offer CGMs to more than 4,400 individuals with insulin-requiring type 2 diabetes

New Cognitive Test Highlights Challenges in Type 2 Diabetes

A newly developed, validated cognitive test from Steno can effectively identify cognitive challenges in people with type 2 diabetes. Preliminary studies at Steno have documented that some individuals with type 2 diabetes experience cognitive difficulties that require special attention. The test provides an objective measure that can be used both in clinical practice and potentially extended to general practice. The test was presented at the Steno-Lund Cardiometabolic Precision Medicine Symposium. Beyond its clinical applications, the test will be a valuable tool for research into the development of cognitive problems related to diabetes.

Other Research Initiatives

- **Professor Mikael Rydén and Associate Professor Niklas Mejhert from Karolinska Institutet** have joined Steno to strengthen research on adipose tissue and its role in the development of cardiometabolic diseases. Together with Senior Researcher Charlotte Brøns, they are leading the DIASPAX study, which investigates how three different medications affect adipose tissue metabolism in people with type 2 diabetes. Steno Diabetes Center Aarhus (Research Director Niels Jessen) is also involved in the project, along with Professor David S. Ludwig, a paediatrician and nutrition expert at Harvard University and endocrinologist at Boston Children's Hospital.
- **“My Life – My Choice”** (*Mit Liv – jeg bestemmer*) is a school-based initiative aimed at developing, testing, implementing, and evaluating the effects and mechanisms of a health-promoting intervention for 10th

grade students. The goal is to improve both physical and mental health and overall wellbeing. The project is a collaboration with Vallensbæk Municipality, the Sector-Free Prevention Laboratory, and Hello Kitchen, with additional partnerships across ten municipalities in the Capital Region (Vestegnen and South Amager).

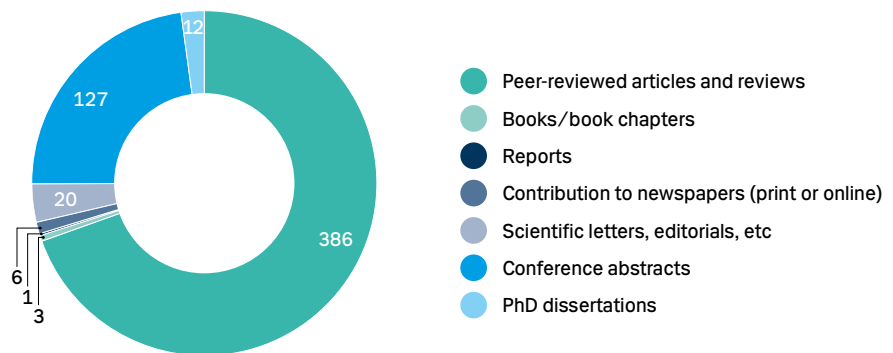


Students and health consultants gathered at a shelter site in Vallensbæk Municipality during a pilot activity as part of the school-based health promotion programme.

Scientific Output

Steno's researchers have never published as many scientific articles as in 2024.

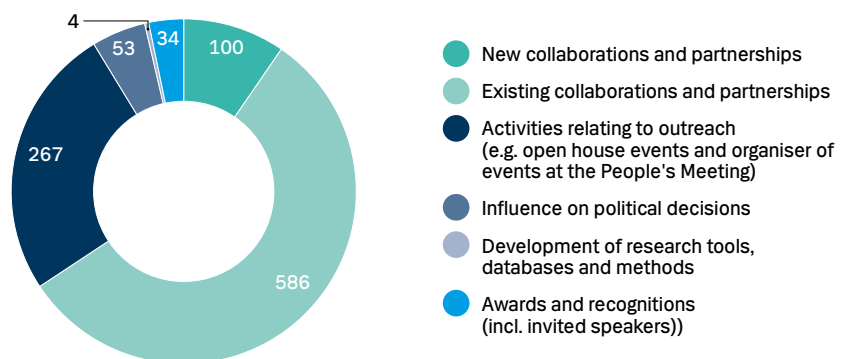
Number of publications in 2024 by type



A total of 555 publications in the form of scientific articles, conference abstracts, and PhD dissertations were published by Steno's researchers in 2024. Several of the scientific articles were published in some of the most renowned

journals. Two articles were published in The Lancet, one article in NEJM (New England Journal of Medicine), one in JAMA (Journal of the American Medical Association), six articles in Nature Medicine, and two in Nature.

Knowledge sharing and development activities in 2024



Knowledge is Shared and Created Across Boundaries

Steno frequently hosts meetings and conferences. The centre serves as a natural venue for symposia, user engagement activities, and professional healthcare debates.



Outpatient Clinic of the Future in Endocrinology – what should it look like, and how do we get there? Concentration is high at a Capital Region working meeting.

Great Diabetes Day for General Practice was held for the first time in 2024, this in-person afternoon event gathered around 130 doctors and practice staff from across the Capital Region. The event was organised in collaboration with Quality in General Practice in the Capital Region (KAP-H). Its purpose was to update general practitioners and clinic staff on new aspects of diabetes care and life with chronic illness. The event will be held again on 19 March 2025.

Diabetes at Eye Level was a symposium which welcomed 100 participants, primarily healthcare professionals and

caseworkers involved in diabetes care. The programme offered broad insights into life with diabetes, and provided opportunities for networking, professional exchange, and informal dialogue.

Webinar: “Diabetes and Psychiatry – Together and Apart” was a two-day course with 17 participants, mostly nurses and social educators, focusing on people living with both diabetes and psychiatric illness. It was the first time the course also included a range of digital learning activities as part of the programme.



Professor Allan Vaag (Lund University and Steno), Professor Olle Melander (LUDC), Chief Physician Simone Theilade (Head of the Clinic for Precision Medicine at Steno), and CEO Magnus T. Jensen during the Steno–Lund Cardiometabolic Precision Medicine Symposium.

Swedish and Danish Collaboration on Precision Medicine

The Steno–Lund Cardiometabolic Precision Medicine Symposium, hosted by Steno, brought together Swedish and Danish researchers and clinicians to kick-start a new collaboration around precision medicine in the Øresund region. The symposium was organised by Lund University Diabetes Centre (LUDC), Skåne University Hospital, and Steno. The goal is to strengthen focus on individualised care and ensure a direct line from research to implementation in clinical practice.

More than 140 researchers and clinicians from both sides of the Øresund attended the symposium in person or online to share insights into tailored and individualised care.

The symposium is a partnership between Lund University Diabetes Centre LUDC, Skåne University Hospital and Steno.



Participants from both Denmark and abroad attended the Steno Frontiers in Diabetes conference either physically or online.



The European Diabetic Nephropathy Study Group's annual meeting in May, held at Steno, attracted over 100 participants from around the world. The meeting featured the presentation of new data on diabetes and kidney disease. The program covered a wide range of topics, from animal experimental studies to clinical trials investigating new treatment methods or mechanisms of action.

Education

The Department of Education is working to increase the use of **digital learning** formats, including webinars and e-learning, supported by blended learning (a mix of digital and in-person activities). This applies to both healthcare professionals and people living with diabetes.

The new learning platform **www.sdcc.dk/laering** makes it easier for course participants and others to find relevant educational content.

A range of videos and interactive digital **elements** have been developed for use in both e-learning and in-person courses.

Many people with type 1 diabetes are on waiting lists for education programmes, especially those who want to switch from insulin pens to insulin pumps.

To reduce waiting times, Steno has introduced a **digitalised educational programme**. Early results show that participants are satisfied with the digital format, and that fewer staff hours are required for instruction. The initiative will be further expanded in 2025.

Steno Frontiers in Diabetes was held in April 2024 and brought together 56 in-person participants and approximately 100 online attendees. The symposium targeted international physicians who work with diabetes in their daily clinical practice. Its purpose was to provide insights from researchers and clinicians at Steno, while also giving Danish doctors an opportunity to informally learn about developments in diabetes care and research beyond Denmark.

All departments across hospital in the Capital region of Denmark in endocrinology, gastroenterology, and neurology are participating in a project to ensure that people with diabetes receive optimal care when admitted to non-endocrinology departments. The initiative includes e-learning programmes for hospital staff and follow-up training sessions at each participating hospital. In all hospitals **mobile diabetes teams** have been established.

These consist of a physician and a nurse, available to support non-endocrinology departments in managing inpatients with diabetes. Furthermore, a dashboard tool has been developed to provide hospital staff with an overview of inpatients with diabetes, including their blood glucose levels.

In 2024, the website **videncenterfordiabetes.dk** (**The Danish Diabetes Knowledge Centre**) received nearly 450,000 visits. Of all visits from Denmark 45% came from the Capital Region, 17% from the Central Denmark Region, 12% from Region Zealand and 9% from the North Denmark Region.

The Danish Diabetes Knowledge Centre, housed within the DDepartment for Education, collaborates with the Research Innovation Office (RIO) to provide methodological support for systematic reviews. Researchers at Steno can receive assistance with concept development, literature searches, screening, quality appraisal, data extraction, synthesis and reporting in order to ensure high-quality. In 2024 six supported reviews were published and twenty-five were in progress. In addition, the team supported literature searches for PhD projects, scientific presentations, book chapters and grant applications.

As a special initiative, an internal website with guides covering the entire review process was developed in 2024.



Around 130 participants from general practice in the Capital Region attended Great Diabetes Day.



When Granddad Was Young

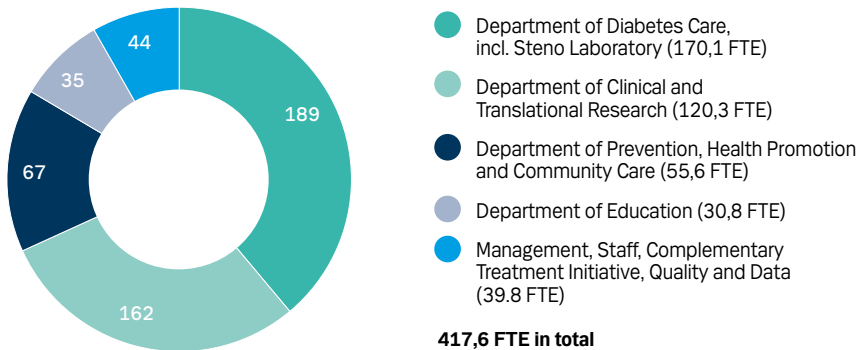
Carsten Berger, aged 67, has lived with type 1 diabetes since he was 16. Back then, he was told he probably wouldn't live past 55. Luckily, that prediction didn't come true—otherwise, Carsten would have missed out on spending time with his 9-year-old granddaughter Mie, with whom he enjoys daily life. Carsten uses both an insulin pump and a glucose sensor, but he clearly remembers the early days with reusable needles that had to be boiled and urine test strips for measuring blood glucose. "I think I've done so well because I accepted early on that I had diabetes and adjusted my life accordingly—even as a young person," he says. "That meant deciding early not to smoke and only drink very small amounts of alcohol—today, maybe just six drinks a year."



Operations

High patient satisfaction and high employee satisfaction were two pieces of good news internally. The press and media focused on world-class research and Steno's collaborations with the pharmaceutical industry.

Employee breakdown by departments



89% among the users at Steno, either to a high degree or a very high degree, are satisfied with their treatment. This was shown by this year's National Survey of Patient Experiences (LUP) from the Center for Patient

Involvement. Employee satisfaction in 2024 was similarly measured as being the highest among employees at hospitals in the Capital Region. This was shown by this year's APV report (workplace assessment).

Finances

Cost-based accounts

Million DKK.	Budget 2024	Accounts 2024	Deviation
Regional framework	245,9	244,8	1,2
Grant from the Novo Nordisk Foundation	190,3	164,4	25,9

Financing from other external funding bodies *

Million DKK.	Expenditure 2024	Grants 2024-2027	Of which new grants in 2024
Steno Diabetes Center Copenhagen in total	76,6	348,8	104,0

* There were 235 active external research projects at year-end

USERS ORGANISED THE CONFERENCE

What could a strained healthcare system become if users were seen - and treated - as valuable resources rather than burdens? That was the opening remark from Walther Jensen at the CODIAC2 Conference, held at Steno in September. The conference was developed and led by users, bringing together “everyday experts”, researchers, and healthcare professionals. The ambition was to co-create a new and better healthcare system with the user at

the centre. Over two days, dreams, ideas, and solutions poured forth. Several will be further developed and realised in 2025. One idea—to employ educators at Steno to support children, youth, and their families—has already been implemented.

CODIAC stands for *Copenhagen Diabetes Consensus*, named after the first user-driven conference in 2021.



Walther Jensen, who has type 2 diabetes, was one of the users who organised CODIAC2.

COMMUNICATION AND MEDIA

External communication at Steno is guided by four key principles, aligned with the centre's strategic focus areas (see page 42):

- Steno is an expert in life with chronic illness
- Steno applies its expertise across the cardiometabolic field
- Steno shares knowledge with relevant stakeholders
- Steno develops innovative care pathways

The social media LinkedIn, Facebook, and X (formerly Twitter) are Steno's key communication channels. These platforms are used to share news about research, innovation, partnerships, and events, and to engage in dialogue

with the public. The channels are also important for staff and the organisation.

In 2024, several initiatives were launched to enhance the social media presence, including a stronger visual identity and more active use of analytics.

In the media, the main focus was on the link between low birthweight and type 2 diabetes and early detection of type 1 diabetes among first-degree relatives. A big focus was also on new findings about semaglutide's protective effects against kidney disease and mortality (see page 20). Furthermore, a big focus was drawn to Steno's collaborations with the pharmaceutical industry in the media. An internal process with increased awareness and focus on Steno's integrity and reputation has been a significant activity over the past year. Internally, a major communication effort focused on informing and involving employees in the new care pathway and related changes to workflows.



Research Director, Professor, and Chief Physician Flemming Pociot presented Steno's early detection programme for first-degree relatives under age 40 with a family history of type 1 diabetes on the regional TV channel Kosmopol.



Chief Physician Eva Hommel received both Clinician of the Year Award from The Danish Diabetes Association (Diabetesforeningen) and the employee prize The Golden Apple from Steno.

AWARDS

Several employees at Steno received prestigious national and international awards in 2024.

Chief Physician Eva Hommel received both the **Clinician of the Year Award** from the Danish Diabetes Association and Steno's **Employee Award: The Golden Apple**, established in 2023.

Professor Peter Rossing, Chief Physician and Acting Research Director will receive the **Hagedorn Award** in 2025.

Physician and PhD Anna Korsgaard received the Bagger-Sørensen Young Researcher Award.

PhD and Researcher Pii Lindgreen received the Early Career Researcher Science Award from the Psychosocial Aspects of Diabetes (PSAD) Study Group at the ISPAD Conference (International Society for Pediatric and Adolescent Diabetes).

Researcher Emilie Bundgaard Lindkvist received the Best Oral Presentation Award at ISPAD.

Physician and PhD student Henrik Maagensen received the Early Career Academy Best Abstract Prize at the Euro-

pean Association for the Study of Diabetes (EASD) conference.

Physician and PhD student Aleksander Lühr Hansen received a travel grant from the Danish Diabetes Association.

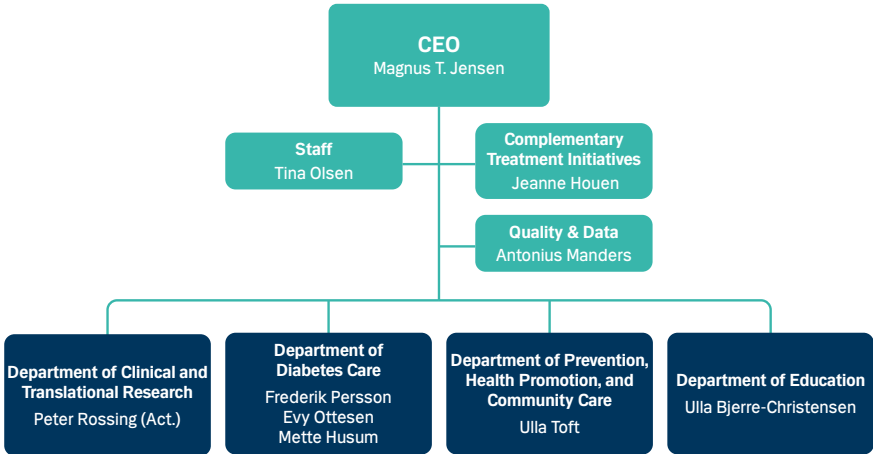
The Danish Diabetes Association's Research Council awarded two grants of DKK 600,000 each to Steno researchers:

Head of Nutrition, PhD, and Researcher Bettina Ewers will investigate whether sensor-based glucose data can inform future dietary counselling for people with type 2 diabetes.

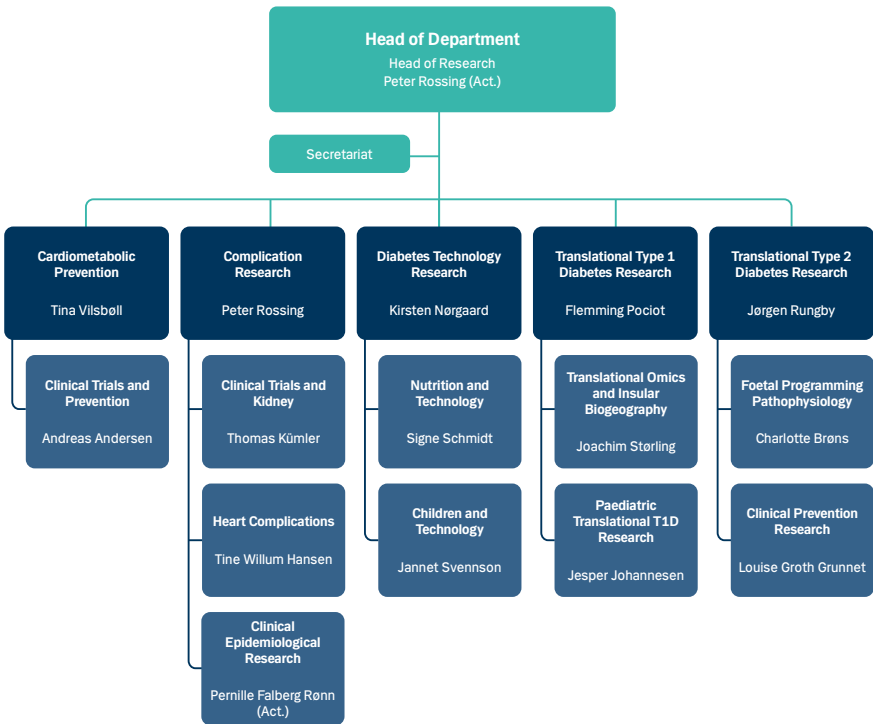
PhD and Researcher Julie Hviid Klæbel received funding to develop a programme that monitors and supports individuals at high risk of developing type 1 diabetes, with a view to early treatment with insulin. Participants will be recruited from Steno's screening programme (see page 20).

Organisation

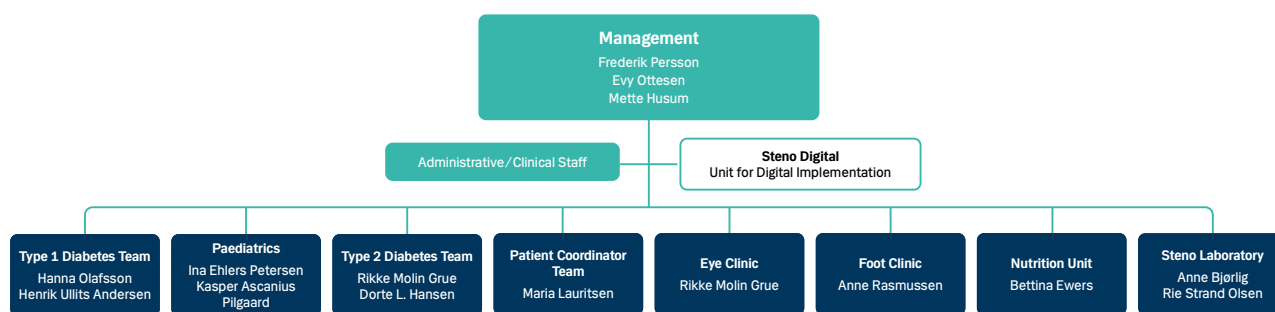
Steno is organized in four departments. Steno Digital is the newest team in the Department of Diabetes Care.



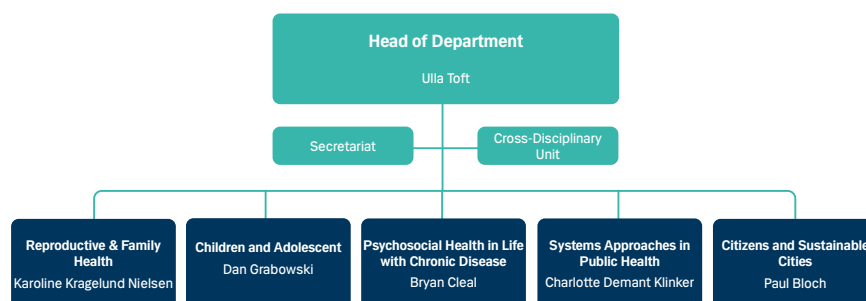
Department of Clinical and Translational Research



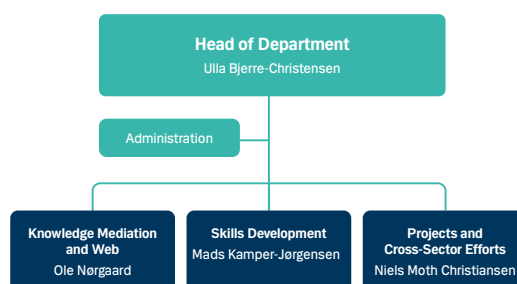
Department of Diabetes Care



Department of Prevention, Health Promotion, and Community Care



Department of Education



Board of Directors

Erik Jylling (Chair), group director in The Capital Region of Denmark

Niels Würgler Hansen, director at Herlev and Gentofte Hospital

Bente Stallknecht, dean at The Health Research Faculty at Copenhagen University

Per Bennetsen, managing director of The Health and Care Administration at the city of Copenhagen

Stig Sonne-Larsen, general practitioner

Marie-Louise Hartoft Nielsen, vice president at Novo Nordisk

Trine Riis, appointed user representative

Christian Collin, appointed user representative

Anne Rasmussen, chief podiatrist at Steno Diabetes Center Copenhagen, employee representative

Quality Indicators

ADULTS

An increasing number of people with diabetes are affiliated with Steno.

Demography

Indicator	2024	2023	Target (DVDD)
Number of people with diabetes	11.087	10.665	
People with type 1 diabetes	6.119 (55,2%)	5.811 (43,5%)	
People with type 2 diabetes	4.269 (38,5%)	4.243 (39,8%)	
People with other types of diabetes*	699 (6,3%)	611 (5,7%)	
Patient pathways (number including telephone and video consultations)	46.121	52.927	
Gender distribution (number, % of all adults)			
Men	6.277 (56,6%)	6.053 (86,8%)	
Women	4.810 (43,4%)	4.612 (43,2%)	
Average age (years)	53,9	54,3	
Body mass index (kg/m2)			
People with type 1 diabetes	26,1	26,1	
People with type 2 diabetes	29,4	29,4	
Diabetes duration (median)*			
People with type 1 diabetes	24	21	
People with type 2 diabetes	18	17	

Metabolic or glycaemic regulation

Indicator	2024	2023	Target (DVDD)
Proportion of people with diabetes who have HbA1c ≤ 53 mmol/mol (%)			
People with type 1 diabetes	37,1%	35,1%	
People with type 2 diabetes	41,9%	41,9%	
Proportion of people with diabetes who have HbA1c ≥ 70 mmol/mol(%)			
People with type 1 diabetes	19,0%	19,5%	Max. 25%
People with type 2 diabetes	19,4%	20,2%	Max. 25%
Proportion of people with type 2 diabetes with HbA1c ≥ 53 mmol/mol, who are not on antidiabetic treatment	0,64%	1,00%	Max. 5%
Long-term haemoglobin - HbA1c (mmol/mol)			
People with type 1 diabetes	59,5	59,9	
People with type 2 diabetes	58,6	58,6	

Lipids

Indicator	2024	2023	Target (DVDD)
Proportion of people over 30 years of age who have had their LDL cholesterol measured within the last 12 months (±3 months)			
People with type 1 diabetes	91,8%	85,6%	Min. 95%
People with type 2 diabetes	95,8%	91,7%	Min. 95%
Proportion of people with diabetes with LDL cholesterol ≤ 2.5 mmol/l			
People with type 1 diabetes	66,6%	68,8%	
People with type 2 diabetes	85,1%	86,2%	Min. 90%
Proportion of people with diabetes over 40 years of age with LDL cholesterol > 2.5 who are not on lipid-lowering treatment (%)			
People with type 1 diabetes	51,9%	51,5%	
People with type 2 diabetes	32,4%	32,6%	
LDL-cholesterol (mmol/l)			
People with type 1 diabetes	2,3	2,3	
People with type 2 diabetes	1,8	1,7	

Hypertension

Indicator	2023	2022	Target (DVDD)
Proportion of people with diabetes who have had their blood pressure measured within the last 12 months (±3 months)			
People with type 1 diabetes	90,1%	94,1%	Min. 95%
People with type 2 diabetes	96,6%	98,5%	Min. 95%
Proportion of people with diabetes with blood pressure ≤ 140/90			
People with type 1 diabetes	68,9%	72,1%	Min. 85%
People with type 2 diabetes	61,2%	63,6%	Min. 85%
Proportion of people with diabetes with blood pressure ≤ 140/90, who are not on antihypertensive treatment (%)			
People with type 1 diabetes	51,4%	49,6%	
People with type 2 diabetes	24,9%	26,0%	
Proportion of people with diabetes on antihypertensive treatment (%)			
People with type 1 diabetes	36,7%	32,3%	
People with type 2 diabetes	82,9%	71,1%	
Blood pressure (systolic/diastolic – mmHg)			
People with type 1 diabetes	131 / 78	130 / 77	
People with type 2 diabetes	134 / 77	133 / 76	

Albuminuria

Indicator	2024	2023	Target (DVDD)
Proportion of people with diabetes who have been examined for albuminuria within the last 12 months (±3 months)			
People with type 1 diabetes	89,7%	85,8%	
People with type 2 diabetes	94,1%	91,9%	
Proportion of people with diabetes with 1 U-albumin/creatinine measurement > 30, who are not on ACE inhibitors/ATII receptor antagonist treatment			
People with type 1 diabetes	36,3%	34,8%	Max. 20%
People with type 2 diabetes	20,6%	21,7%	Max. 20%

Eye Examination

Indicator	2024	2023	Target (DVDD)
Proportion of people with diabetes who have undergone eye screening within the last 4 years (%)			
People with type 1 diabetes	91,0%	91,3%	
People with type 2 diabetes	87,2%	87,0%	
Retinopathy (no)			
Retinopathy	NA	NA	
Maculopathy	NA	NA	
Blindness prevalence (%)	NA	NA	

*MODY or unspecified diabetes

Comments:

NA = No available data.

All data obtained from Sundhedsplatformen.

Foot Examination

Indicator	Value 2024	Value 2023	Target (DVDD)
Proportion of people with diabetes who have undergone foot screening within the last 12 months (± 3 months) (%)			
People with type 1 diabetes	59,0%	73,6%	
People with type 2 diabetes	78,4%	83,5%	
Proportion of people with diabetes with an amputation within the last 12 months (± 3 months)	0,48%	0,41%	

Target (DVDD)

Indicator	Value 2024	Value 2023	Target (DVDD)
Proportion of daily smokers (%)			
People with type 1 diabetes	16,3%	15,1%	
People with type 2 diabetes	17,3%	15,7%	

CHILDREN

The glyceimic control among children continues to improve.

Demography

Indicator	2024	2023	Target (DVDD)
Number of children with diabetes (number)			
Children with type 1 diabetes	829	843	
Children with type 2 diabetes	19	15	
Børn med anden diabetes *	56	57	
Patient pathways (number of appointments performed, incl. telephone and video consultations, excl. appointments with bioanalysts)	3.862	3.775	
Gender distribution (number, % of all children)			
Boys	466	467	
Girls	438	448	
Average age (years)	12,3	12,3	
Body mass index (kg/m²)	20,4	20,3	
Diabetes duration (median)	5,6	5,0	

Albuminuria/Creatinine

Indicator	2024	2023	Target (DVDD)
Albuminuria/ Creatinine	77,0%	87,3%	Min. 95%

Eye Examination

Indicator	2024	2023	Target (DVDD)
Proportion of children with diabetes who have undergone eye screening within the last 36 months (on reaching 14 and 17 years of age) (%)	65,9%	73,9%	Min. 80%
Retinopathy			
Proportion of screened patients with diabetes where no retinopathy changes were observed	NA	NA	
Prevalence of the different degrees of retinopathy (0, 1, 2, 3, 4) and maculopathy (yes/no)	NA	NA	

Metabolic or Glycaemic Regulation

Indicator	2024	2023	Target (DVDD)
Proportion of children with type 1 diabetes who have HbA1c ≤ 53 mmol/mol (%)	48,8%	47,3%	Min. 40%
Proportion of children with type 1 diabetes who have HbA1c ≥ 70 mmol/mol (%)	9,2%	11,6%	Less than 20%
Long-term haemoglobin – HbA1c average (mmol/mol)	55,6	56,5	

Hypertension

Indicator	2024	2023	Target (DVDD)
Proportion of children with diabetes who have their blood pressure measured at least once a year	52,5%	49,4%	
Blood pressure (systolic/diastolic – mmHg)			
Children with type 1 diabetes	112/68	111/68	

Other

Indicator	2024	2023	Target (DVDD)
Proportion of newly diagnosed children who were screened for coeliac disease up to 1 years post diagnosis	88,3%	81,8%	
Proportion of newly diagnosed children who were screened for coeliac disease up to 1 years post diagnosis	91,7%	89,1%	
Proportion of children who have a BMIs over plus 2	16,0%	15,9%	

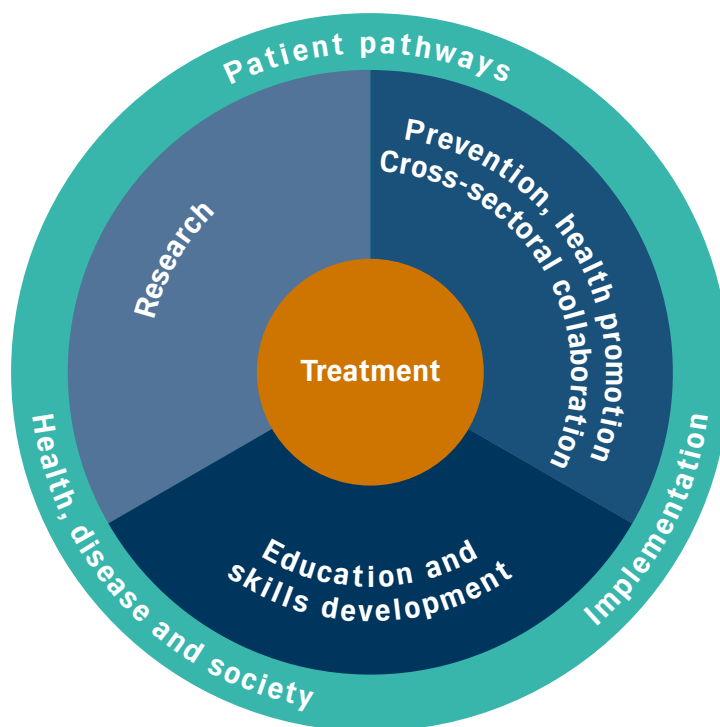
*MODY or unspecified diabetes

Comments:

NA = No available data.
All data obtained from Sundhedsplatformen.

Steno's Focus Areas

The Steno Wheel illustrates the managerial tasks at Steno. At the heart of the work at Steno Diabetes Center Copenhagen is, of course, treatment.



Steno's 9 Strategic Focus Areas Towards 2027

1. Internationally renowned diabetes hospital
2. Research and development hospital that benefits the entire healthcare service, and the area of chronic illnesses in particular
3. Relevance for the entire chronic area and how to live a good life with a chronic illness
4. Strengthen focus on the cardiometabolic area
5. Innovative and progressive patient pathways
6. Establish a Trial Unit and focus on practice-changing clinical research
7. Strengthen focus on communication
8. An arena for exchange and development of knowledge
9. Steno as a national voice for an integrated health service.

Editor

Journalist Helen H. Heidemann, Steno Diabetes Center
Copenhagen

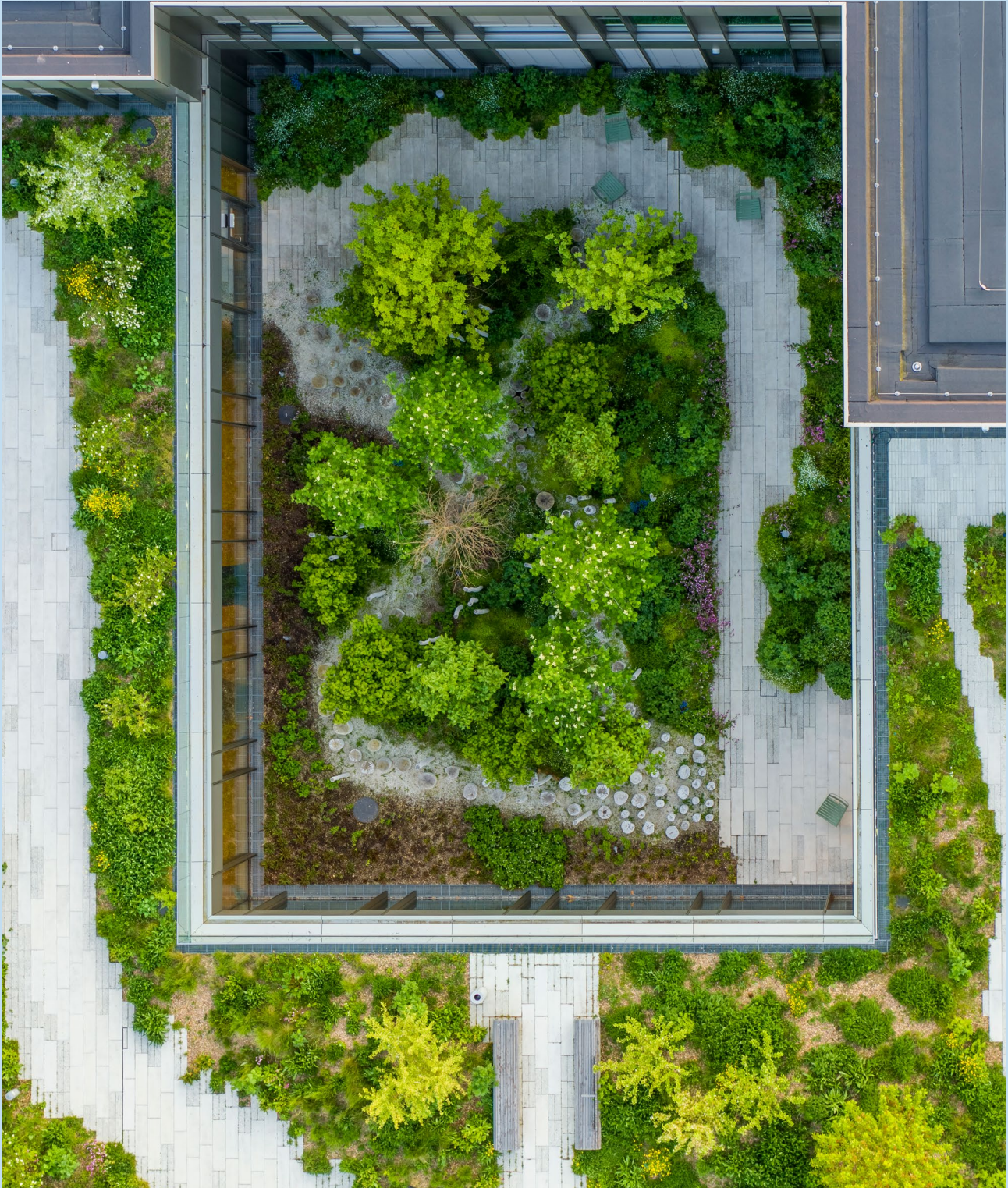
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April 2025



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