Forskningssession III: Patientens stemme: PRO

Bente Glintborg
Malene Glud
Niels Ejskjær

Sundhedsvæsenets Kvalitetsinstitut

DSKS ÅRSMØDE 2027

FRA SILO TIL SAMMENHÆNG

HVAD KAN DU GLÆDE DIG TIL?

- Oplæg fra førende danske og internationale eksperter
- Masterclasses med fordybelse, ekspertise og netværk
- Cases om bl.a. AI, patientdata, forandringsledelse og tværgående kvalitet

14.–15. JANUAR 2027

HOTEL NYBORG STRAND

Se programmet og tilmeld dig

Patientens stemme: PRO

- *Patients with rheumatic diseases evaluate their disease activity differently from physicians – results from a large quality registry* v **Bente Glintborg** | Overlæge | Klinisk forsker | Rigshospitalet Glostrup
- *Balancing Treatment Goals and Person-Centred Care in Secondary Prevention of Atherosclerotic Cardiovascular Disease: A Qualitative Study from Danish General Practice* v **Malene Glud** | Ph.d.-studerende | Karkirurgisk Forskning, Regionshospitalet Viborg
- *The use of diabetes technology, glucose sensors and automated insulin delivery, lead to significant improvements in self-management, glycaemic worries and burden of diabetes in persons with diabetes. First clinical report from the DiaProfil PROMS Research Group* v **Niels Ejskjær** | Klinisk professor | Aalborg Universitetshospital | Endokrinologisk afdeling | Steno Diabetes Center Nordjylland
- **Chair:** Søren Paaske Johnsen | Vibe Bolvig Hyldgård

Patients with rheumatic diseases evaluate their disease activity differently from physicians

– results from a large quality registry

Bente Glintborg, overlæge Dr. Med. Ph.d.

COPECARE, Rigshospitalet, Glostrup

Dansk Reumatologisk Kvalitetsdatabase

Sundhedsvæsenets kvalitetskonference, Oktober 2026

Hvordan ser gigtsygdom ud?














Hvordan behandler vi?

Tidlig, aggressiv behandling
Treat-to-target

- Immunhæmmende lægemidler (DMARDs), prednisolon
- Strategi
  - Inflammatorisk kontrol
  - Forebygge kroniske skader (led, ryg)
  - Forbedre langtidsprognose

Hvad er behandlingsmålet?

- Ingen inflammation
- Ingen smerter
- Ingen bivirkninger

PRO – patient rapporterede outcomes

- En essentiel del af patientbehandlingen

1. Hvor mange gigtsmerter har De for tiden?

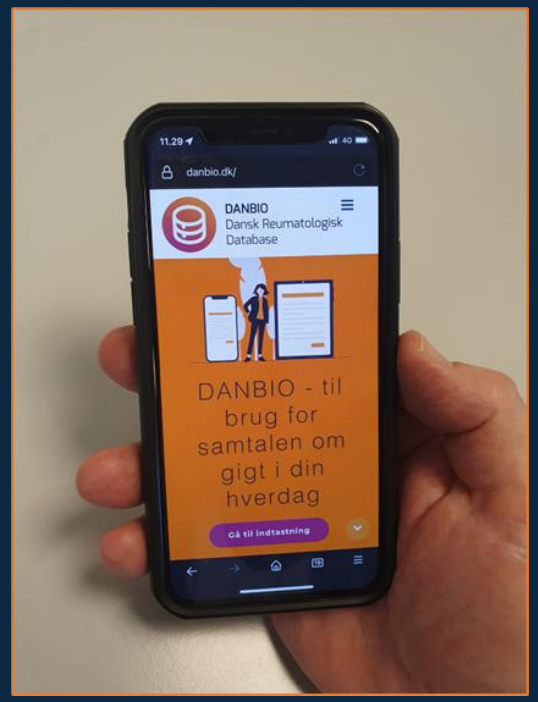
Ingen gigtsmerter _____ *Uudholdelige gigtsmerter*

2. Hvor træt er De for tiden?

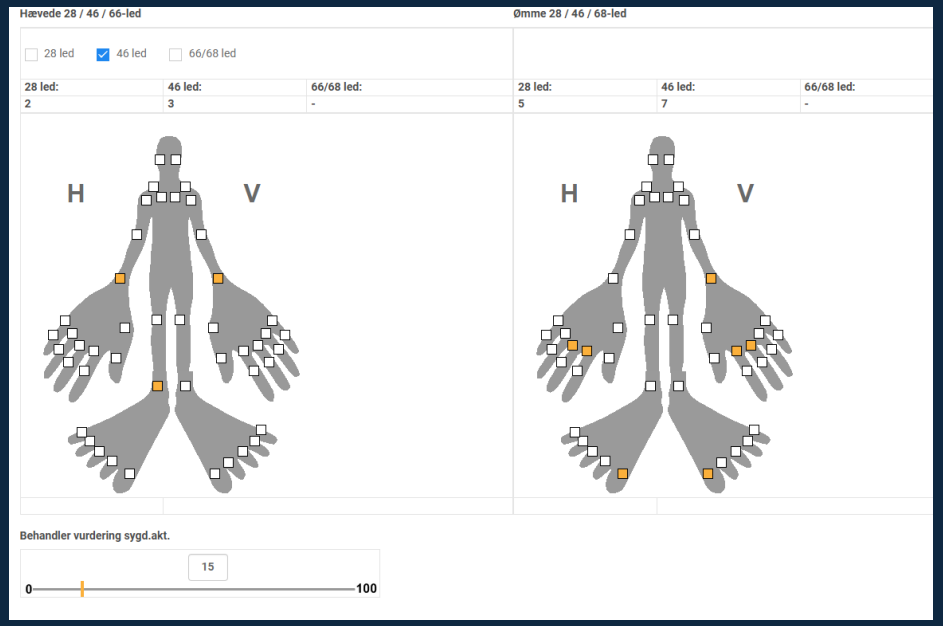
Slet ikke _____ *Uudholdeligt meget*

3. Hvor meget påvirker gigten som helhed Deres tilværelse for tiden?

Slet ikke _____ *Uudholdeligt meget*



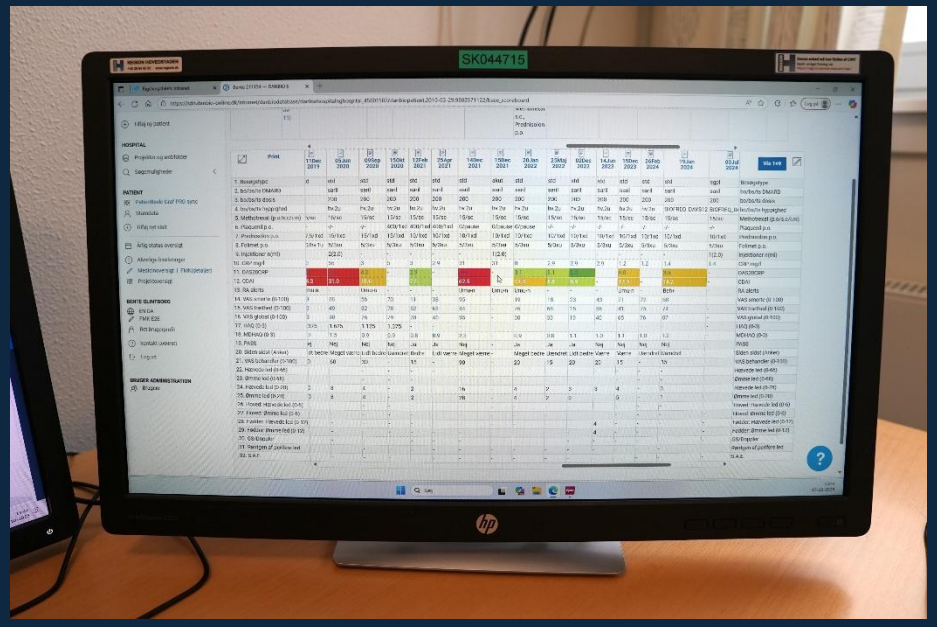


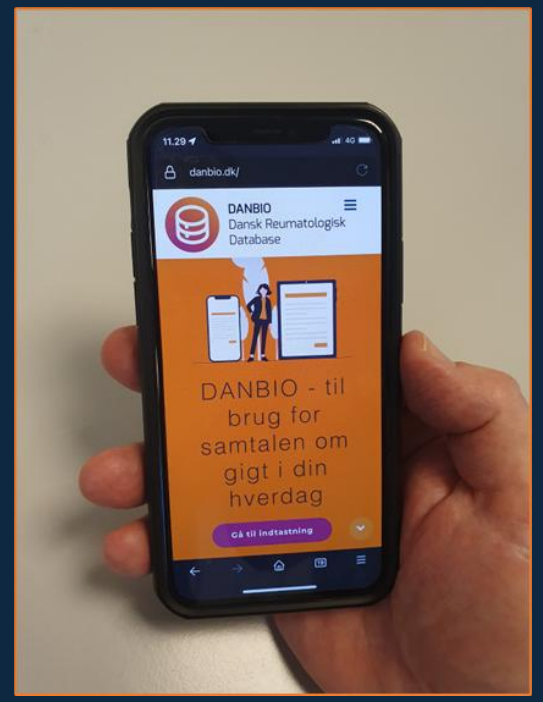


DANBIO
Dansk Reumatologisk Database

>25 år
100.000 patienter
>1.3 million kontakter







Opfatter læger og patienter sygdommen ens?



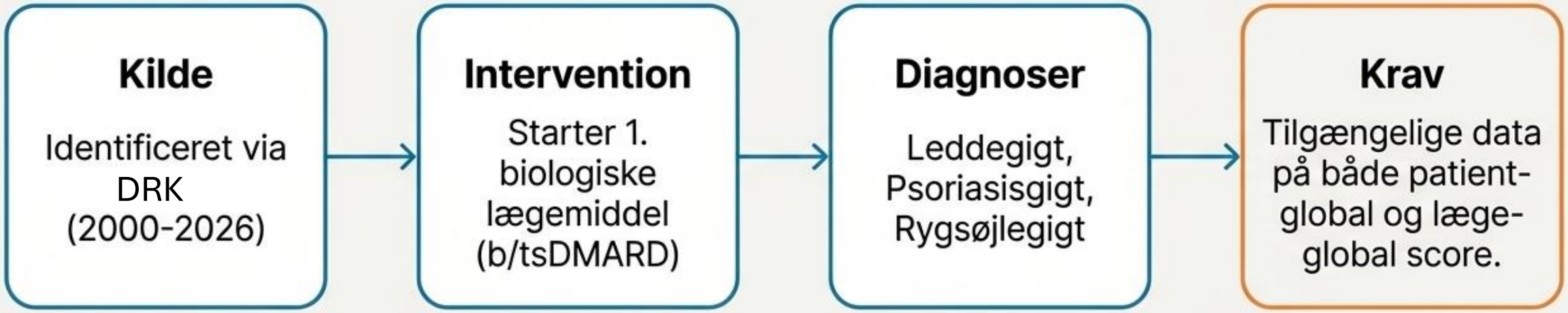
Formål

Hos patienter med leddegigt (rheumatoid artrit), psoriasis gigt og rygsøjlegigt (axial spondylartrit), som starter deres første biologiske lægemiddel (b/tsDMARD):

At undersøge uoverensstemmelse (diskordans) mellem patient global og læge global

- Hvor hyppigt er det?
- Hvilke kliniske faktorer er associeret med diskordans

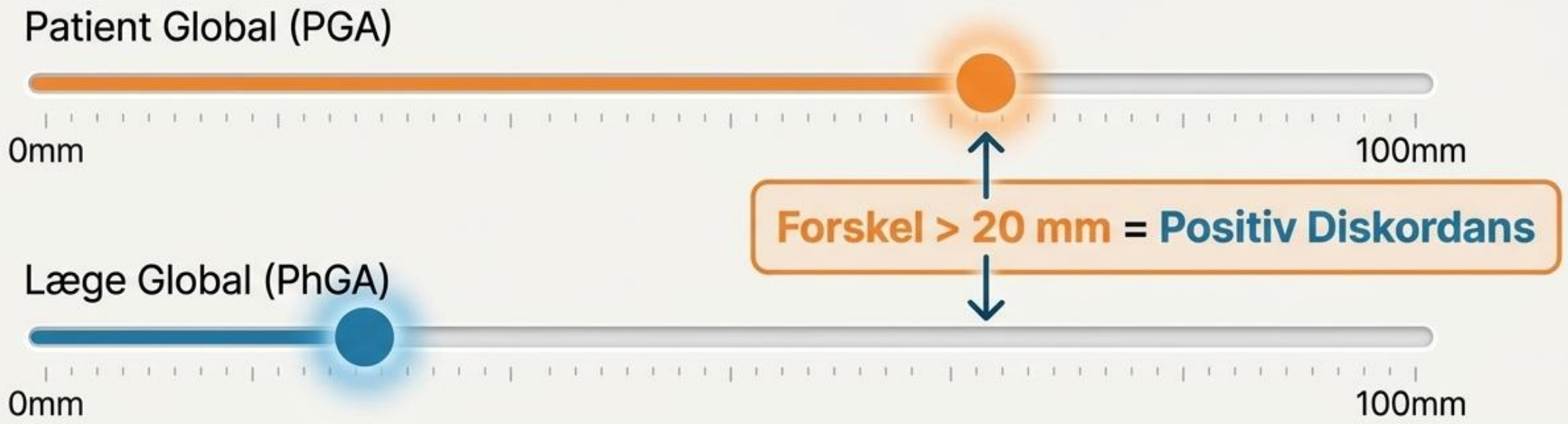
Studie- og inklusionskriterier



DRK: Dansk Reumatologisk Kvalitetsdatabase

Gemini Notebook

Definition af Diskordans



Konkordant:
Forskel < 20 mm
(PGA = PhGA)

Positiv Diskordant:
Patient scorer > 20 mm højere end lægen (PGA ≠ PhGA)

(Negativ diskordant: Forskel < 0 mm)

Gemini Notebook

Metode

- Sammenligning af diskordante og konkordante patienter: Pearson chi2 test og Mann-Whitney U test
- Faktorer associeret med diskordans: multivariable logistiske regressions analyser (odds ratio)

- Stratifieret efter diagnose (leddegigt, psoriasisgigt, rygsøjlegigt)

Resultater


Klinisk relevant uoverensstemmelse er hyppig
58%
Leddegigt
Diskordant
61%
Psoriasisgigt
Diskordant
57%
Rygsøjlegigt
Diskordant
I mere end halvdelen af tilfældene vurderer patienten sygdommen markant sværere end lægen.
Gemini Notebook

Diskordans, patient karakteristika og sygdomsaktivitet

	Leddegigt N=14585		Psoriasisgigt N=6015		Rygsøjlegigt N=6081	
	Konkordant	Diskordant	Konkordant	Diskordant	Konkordant	Diskordant
Total	42%	58%	39%	61%	43%	57%
Patient global, VAS, 0-100	12 (4-23)	61 (25-80)	11 (4-20)	66 (48-82)	10 (4-19)	62 (45-80)
Læge global, VAS, 0-100	5 (1-14)	9 (3-20)	5 (1-11)	9 (3-20)	3 (1-9)	7 (2-16)

Resultater

Hvad driver forskellen?

Faktorer associeret med diskordans (baseret på multivariabel logistisk regression).

Objektive Fund (Driver Lægens Score)	Subjektive Symptomer (Driver Patientens Score)
Hævede led ↓	Smerte (VAS) ↑
C-reaktivt protein (CRP) ↓	Træthed (VAS) ↑
	mdHAQ / Funktionsevne ↑

Alder er en faktor ved rygsøjlegigt. Køn og sygdomsvarighed var ikke signifikante.

Gemini Notebook

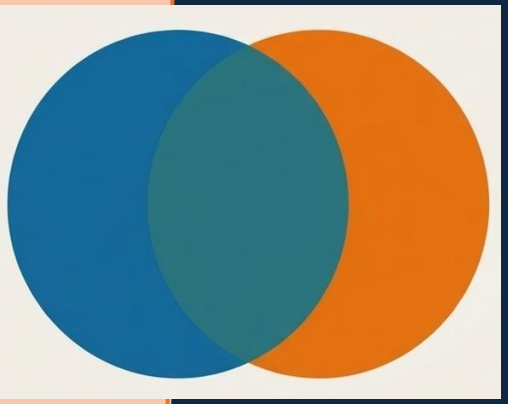
Fortolkning og betydning

- Klinisk relevant uoverenstemmelse er hyppig (>50% af ptt)
- Patienten scorer oftere højere end lægen
- Associeret med høj smerte, høj fatigue, lav funktion
- Associeret med lav inflammation

Fortolkning og betydning

- Udfordring for kliniske beslutninger
  - Patienter og læge opfatter sygdom forskelligt
  - Potentiel overbehandling?

- Patienten og patientopfattelse skal inddrages
- To perspektiver – en fælles sandhed
- Kliniske kvalitetsdata har stor betydning



Tak for opmærksomheden

Bente Glintborg
Post. Doc. Kasper Yde Jensen
Professor Merete Hetland







bente.glintborg.01@regionh.dk

Patientens stemme: PRO

- *Balancing Treatment Goals and Person-Centred Care in Secondary Prevention of Atherosclerotic Cardiovascular Disease: A Qualitative Study from Danish General Practice* v **Malene Glud** | Ph.d.-studerende | Karkirurgisk Forskning, Regionshospitalet Viborg
- *The use of diabetes technology, glucose sensors and automated insulin delivery, lead to significant improvements in self-management, glycaemic worries and burden of diabetes in persons with diabetes. First clinical report from the DiaProfil PROMS Research Group* v **Niels Ejskjær** | Klinisk professor | Aalborg Universitetshospital | Endokrinologisk afdeling | Steno Diabetes Center Nordjylland
- **Chair:** Søren Paaske Johnsen | Vibe Bolvig Hyldgård

Region Midtjylland

Evidens, mål og mennesker.

Når sekundær forebyggelse af hjerte-kar-sygdom skal fungere i den virkelige verden

Et interview studie i Almen Praksis

Støttet af: KUF Rehabilitering - Multipraksis fonden, MPU - Region Midtjyllands Sundhedsvidenskabelige Forskningsfond - Rosa og Asta Jensens fond

Ph.d.-studerende

Malene Glud

BSc. i idræt (AAU) | Cand.scient. i human ernæring (KU)

Karkirurgisk forskningsenhed
Viborg Regionshospital

Institut for Klinisk Medicin
Aarhus Universitet

Vejledergruppe

Hovedvejleder



Marie Dahl
Ph.d., lektor,
forskningsansvarlig sygeplejerske

ved karkirurgisk forskning, Viborg Regionshospital

Institut for Klinisk Medicin, Aarhus Universitet

Institut for Klinisk Forskning, Syddansk Universitet

Nikolaj Thure Krarup
Ph.d., kardiolog, postdoc,
afdelingslæge

ved afsnit for hjertesygdomme, Viborg Regionshospital

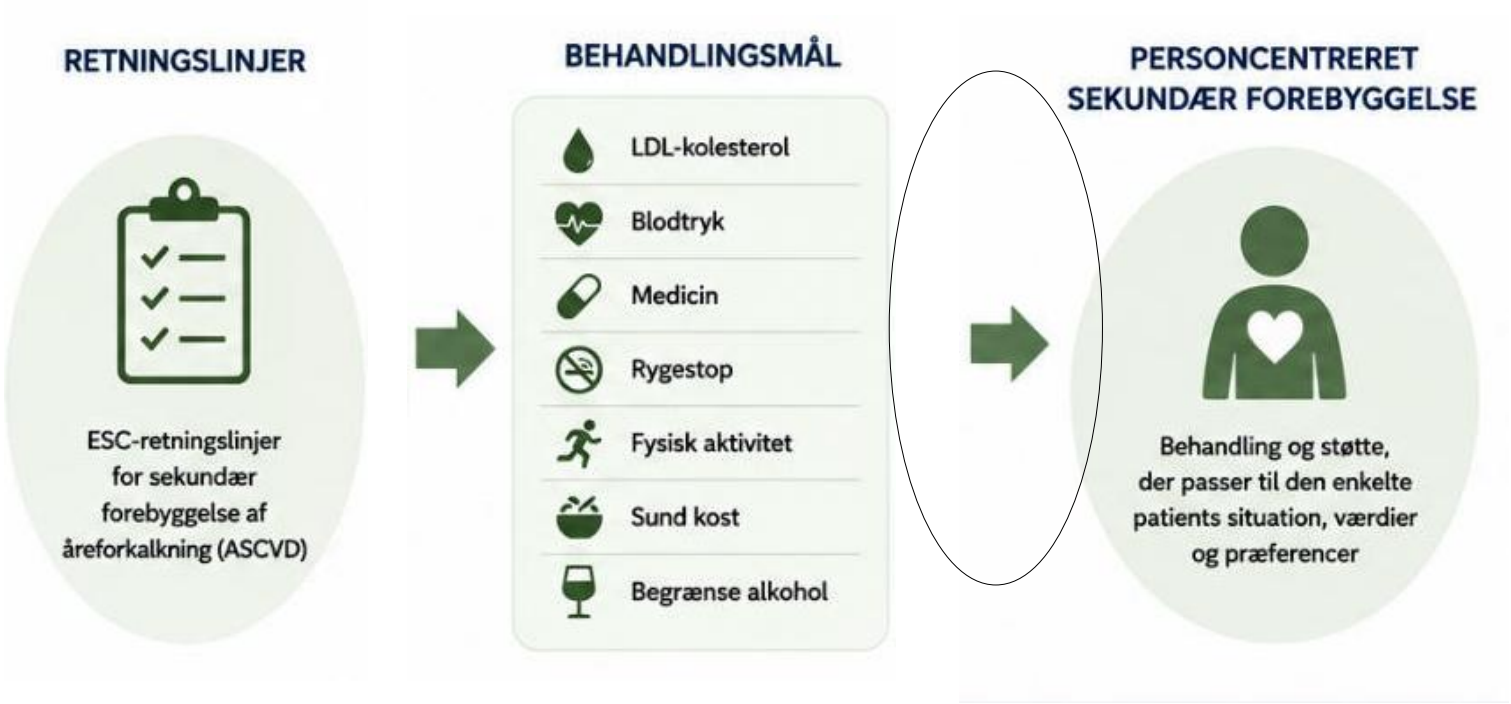
Lene Kongsgaard Nielsen
Ph.d., klinisk lektor,
overlæge, hæmatolog

ved Medicinsk Afdeling, Regionshospitalet Gødstrup

Institut for Klinisk Medicin, Aarhus Universitet

Institut for Klinisk Medicin, Syddansk Universitet

Hvorfor er det svært at opnå behandlingsmålene med patienterne?



Interviewstudie i Almen praksis



At undersøge praktiserende lægers og konsultationssygeplejerskers perspektiver på implementeringen af retningslinjer for sekundær forebyggelse af åreforkalkning i almen praksis.



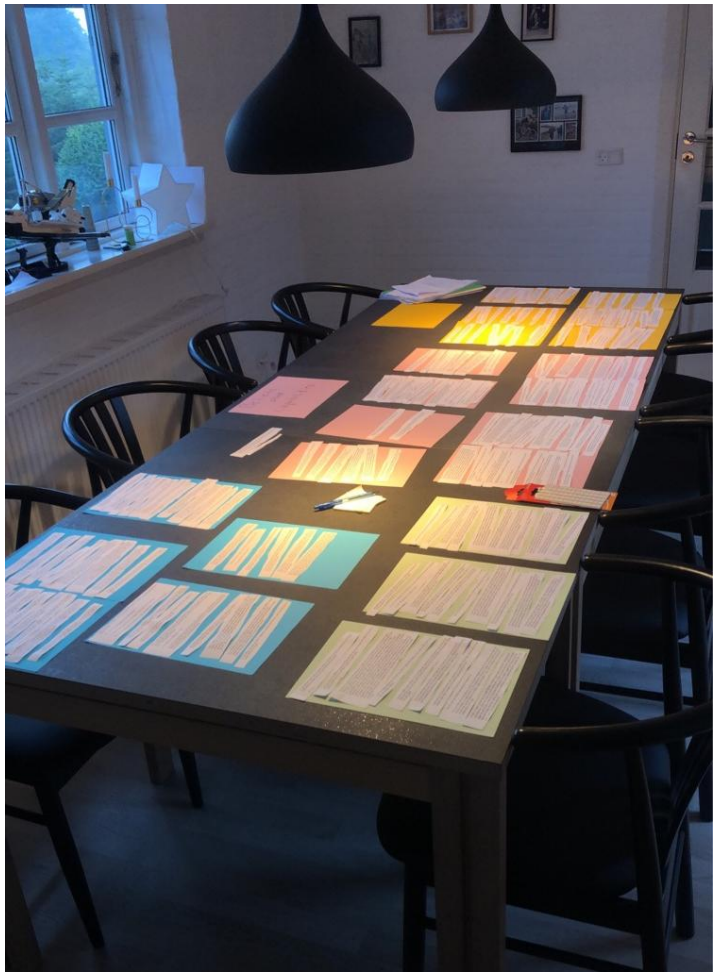
6 Praktiserende læger
6 Konsultationssygeplejersker



Semistrukturerede interviews.
Induktiv indholdsanalyse

Analyse proces







Kategorier

Usynlig professionalisme

Når klinisk dømmekraft går tabt i oversættelsen

> "Nej, måske mere bare det, at nogen gange kan vi jo komme til at blive udstillet fordi vi er dumme forstået på den måde, at hvis vi har truffet én beslutning sammen med patienten ... og hvis patient så bliver indlagt ... så kommer der en overruling, fordi de **ikke kan se vores rationelle** for at vi har gjort som vi har gjort."



Behandlings-alliance er afgørende for patientens engagement

> Så hvis jeg føler, at jeg har givet grundig information og personen på kvalificeret grundlag vælger, så er jeg jo nød til at **respektere det valg.** Tvangsbehandling det er kun inde for psykiatrien."



At navigere mellem faglig integritet og klinisk virkelighed

> Ja, det er jo lidt fint at have haft en blodprop i hjertet, hvis det nu endelig skulle være, ikke ... Det gør en AMI eller en apopleksi eller whatever, mens **claudicatio den rykker ikke nær det samme**, det er hellere ikke nogen fin sygdom."



At navigere i udfordringerne ved at opnå behandlingsmål i en personcentreret praksis

> … hvis man skal flytte folk, som Kirkegaard siger, fra ét sted til ét andet, så skal man **møde dem der, hvor de står**, ikke. Så hvis ikke de er inddraget, så kan man næsten opgive på forhånd."



> … magtløshed, som jo så kan blive til knyisme … Så det er i hvert fald en af de barrierer, som jeg er meget OBS på over for mig selv og huske det der med, at man hele tiden skal **være nysgerrig på, hvorfor er det patienten så ikke gør det jeg gerne vil."**

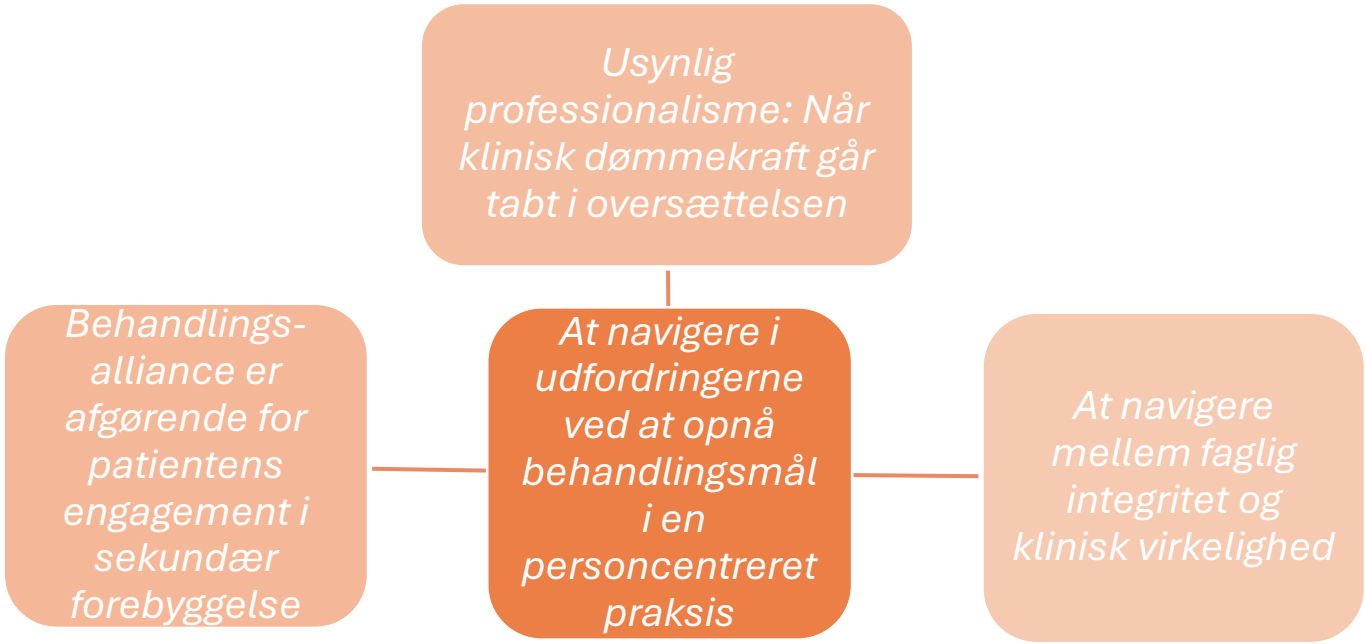
> Men retningslinjerne er kasser, og herude behandler jeg ikke kasser – **jeg behandler mennesker."**

> Jeg har ingen problemer med at overtræde retningslinjer, hvis jeg synes, det der står der er totalt ved siden af i forhold til **den praksis virkelighed."**

At undersøge praktiserende lægers og konsultationssygeplejerskers perspektiver på implementeringen af retningslinjer for sekundær forebyggelse af åreforkalkning i almen praksis.

6 Praktiserende læger
6 Konsultationssygeplejersker

Semistrukturerede interviews.
Induktiv indholdsanalyse



Forebyggelse af åreforkalkning blandt praktiserende læger og konsultations-sygeplejersker var kendetegnet ved en personcentreret tilgang, hvor retningslinjeanbefalinger blev integreret gennem behandlingsalliancen og fælles beslutningstagning.

Balancing Treatment goals and Person-Centred Care: Challenges in Implementing Guidelines for **secondary prevention of atherosclerotic card**iovascular disease in Danish General Practice

Glud, M.[1,2], Krarup, N. T.[3], Nielsen, L. K.[4], Dahl, M.[1,2,5,6]

[1] Vascular Research Unit, Department of Vascular Surgery, Viborg Regional Hospital, Viborg, Denmark
[2]Department of Clinical Medicine, Aarhus University, Aarhus, Denmark
[3]Department of Cardiology, Viborg Regional Hospital, Viborg, Denmark
[4]Quality of life Research Center Department of Hematology, Odense University Hospital, Odense, Denmark and Department of Clinical Research, University of Southern Denmark, Odense, Denmark and Department of Medicine, Gødstrup Hospital, Herning, Denmark
[5]Department of Cardiothoracic and Vascular Surgery, Odense University Hospital, Denmark
[6]Department of Clinical Research, University of Southern Denmark, Denmark

In Review
Journal of Vascular Nursing



Billede: https://jyllands-posten.dk/debat/kronik/ECE10877369/vi-oensker-at-bygge-bro-og-sikre-sammenhaeng-for-patienten/



Patientens stemme: PRO

- *The use of diabetes technology, glucose sensors and automated insulin delivery, lead to significant improvements in self-management, glycaemic worries and burden of diabetes in persons with diabetes. First clinical report from the DiaProfil PROMS Research Group* v **Niels Ejskjær** | Klinisk professor | Aalborg Universitetshospital | Endokrinologisk afdeling | Steno Diabetes Center Nordjylland
- **Chair:** Søren Paaske Johnsen | Vibe Bolvig Hyldgård

NORTH DENMARK REGION

DANISH REGIONS

NATIONAL DANISH HEALTH DATA BOARD

AALBORG UNIVERSITY HOSPITAL

STENO DIABETES CENTER NORTH DENMARK

AALBORG UNIVERSITY
DENMARK

The use of Diabetes Technology, Glucose Sensors and Automated Insulin Delivery, lead to Significant Improvements in Self-Management, Glycaemic Worries and Burden of Diabetes in Persons with Diabetes. - First Clinical Report from the DiaProfil PROMS Research Group

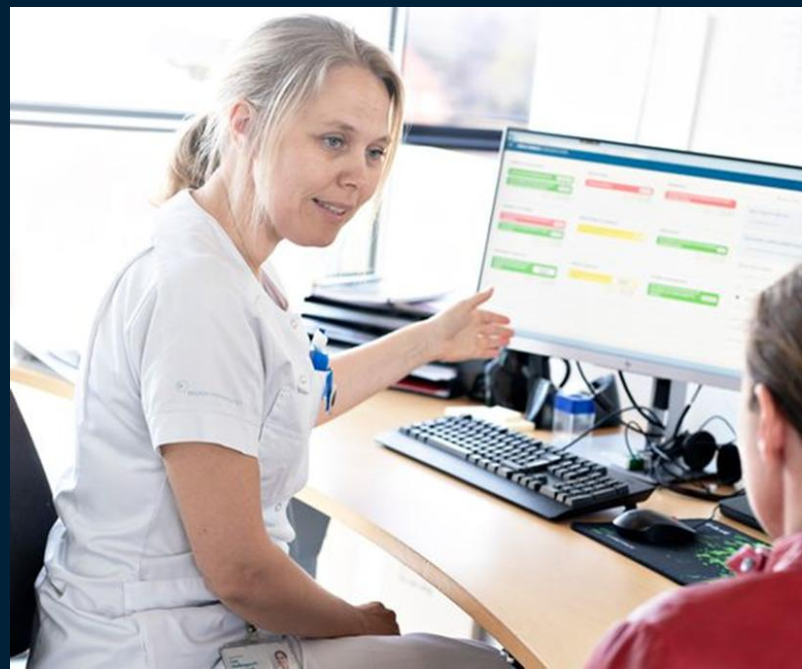




Nikontovic A, Gustenhoff P, Nørgaard LM, Troelsen LH, Pietraszek A, Larsen HR, **Ejskjaer N**

Steno Diabetes Center North Denmark
Department of Endocrinology
Department of Clinical Medicine
Aalborg University Hospital, Denmark

Kvalitetskonference 28-29 Oktober 2026



Disclosures 1 October 2026

No industry renumerations 52 months

Off-label prescriptions for severe symptomatic diabetes complications

No AI in this presentation



Overall Background

2016 National Danish Strategy for Value-based Healthcare Innovation VBHC-i

Production Focus

- Quality perceived as the quality of the specialty - **clinicians perspectives**
- Focus on **production**
- Encourages **increased production**

Value-based Focus

- Quality perceived as patients ”pathways and health” - **patient perspectives**
- Focus on **outcomes**
- Encourages **value creation**

2016 Danish Government and Regions



DiaProfil project
”Value for adults with diabetes?”

Grant 1.0 mio Euro from North Denmark Region

National ”PROMS-questionnaire + ”one-click IT”

Identifies unmet needs + suggests actions

Connects patients, GP, municipalities and hospitals

Uploads to Clinics , BI-RN, DiDD, SundK, SundhedDK

Implemented all 4 hospitals and 3/11 municipalities RN

Response rate +70% over 5 years

Accepted all 98 municipalities, a few GP’s

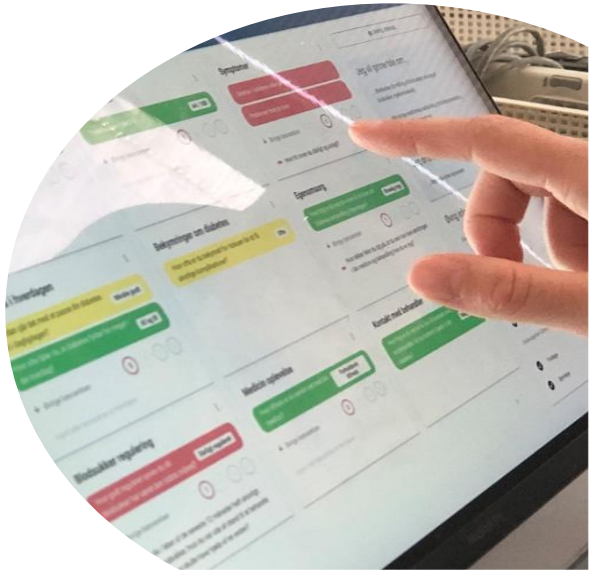
PROMS FROM HOME TO CLINIC - DASHBOARD



Person with diabetes answers questionnaire at home on smartphone, Ipad, pc (5-12 minutes)



The Dashboard provides a 360 overview of problems and referral options



Dashboard shows problem areas and solutions
(all data registered nationally)

LINK VIDEO: www.DIAPROFIL.dk

92 questions in 9 domains

- 20 non-variable
- 72 variable (green – yellow – red)

Deadline 7 days to report results to patient

Regular use in

- Clinical practice
- BI - CEO levels

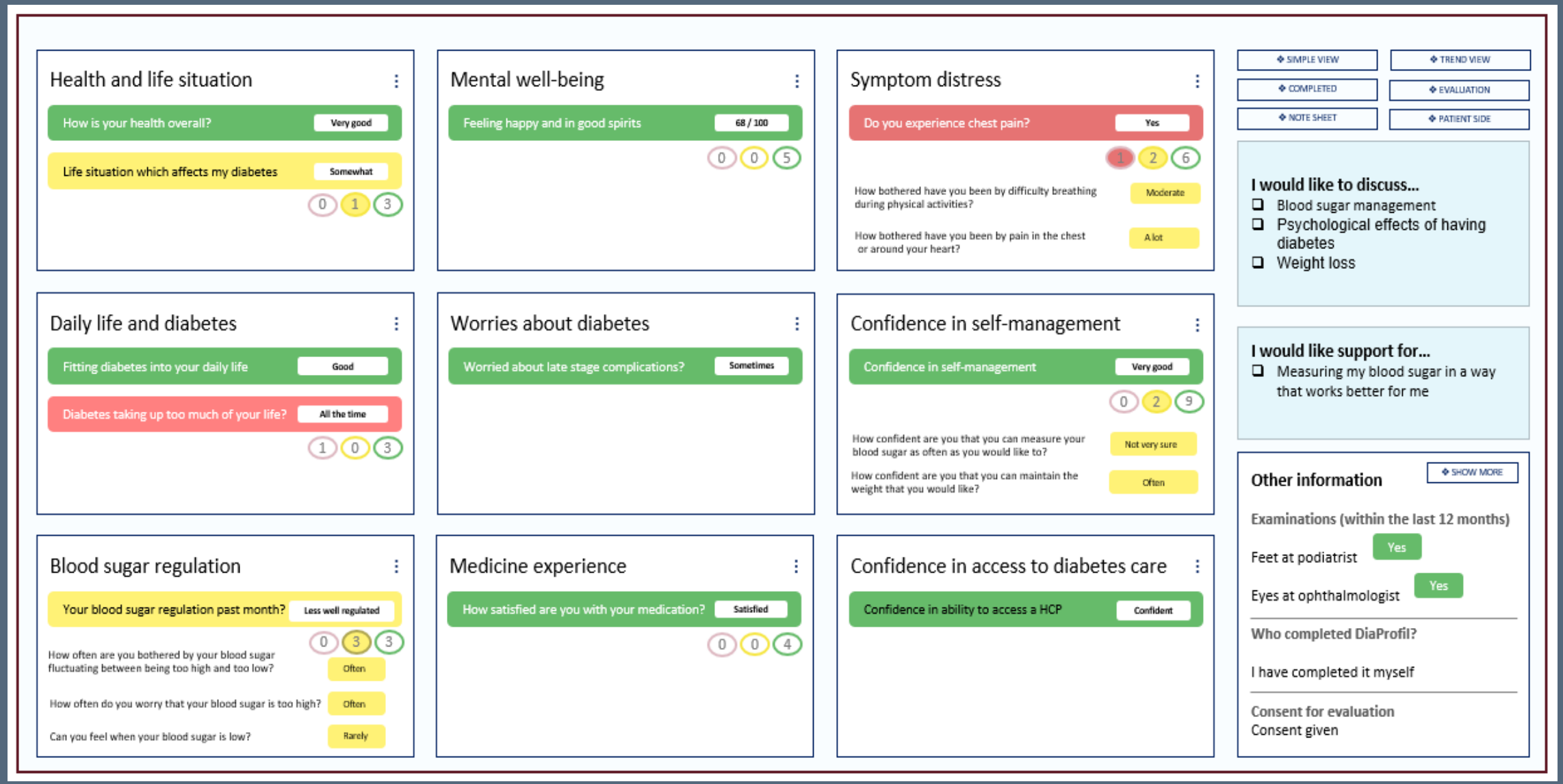


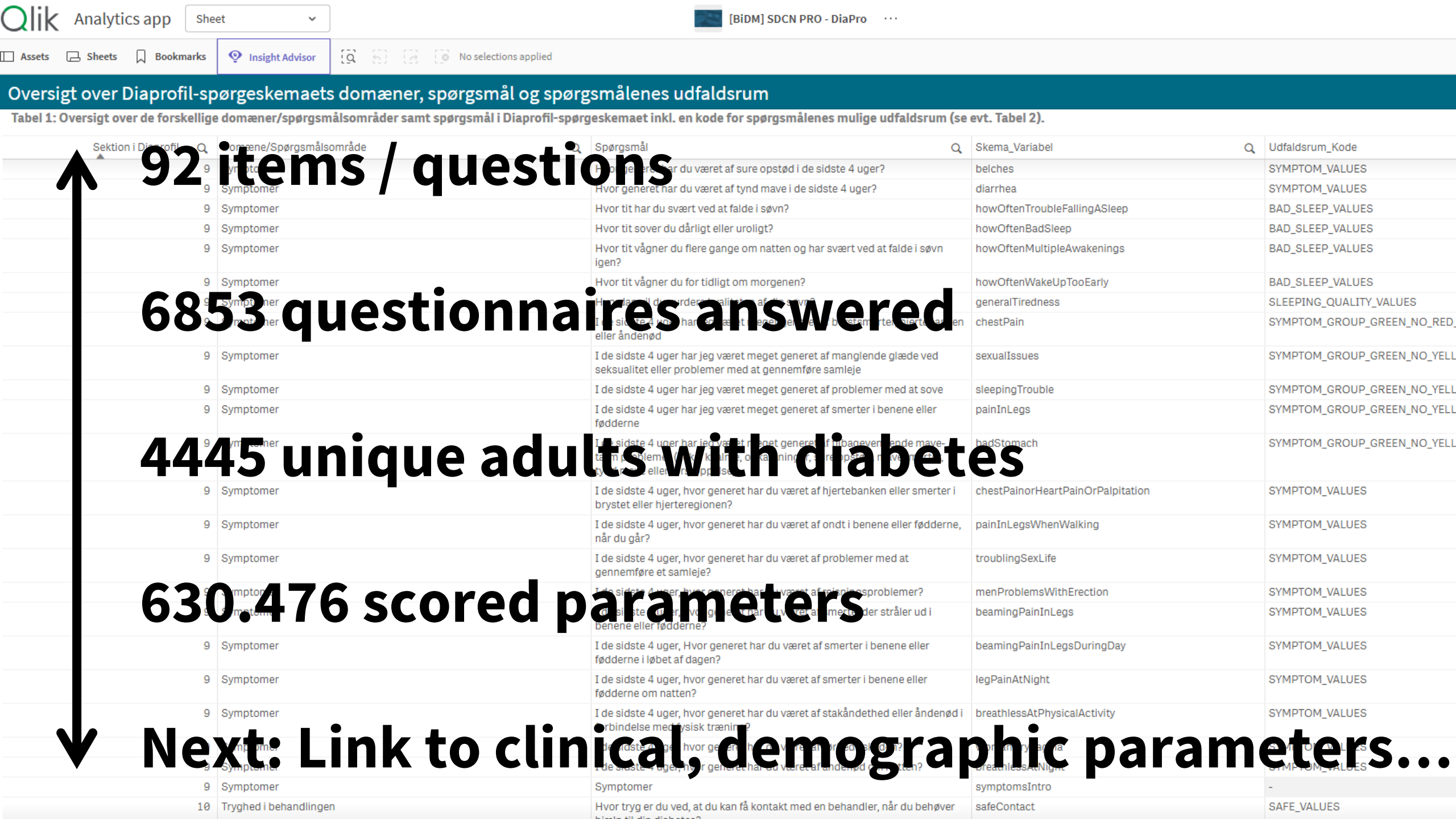
Domains

1. Health and life situation
2. Mental well-being
3. Symptom distress
4. Daily life with diabetes
5. Worries about diabetes
6. Confidence management
7. Blood sugar regulation
8. Medicine experience
9. Confidence access treatment



9 QUESTIONNAIRE DOMAINS - CLINICIAN AND PATIENT DASHBOARD





92 items / questions

6853 questionnaires answered

4445 unique adults with diabetes

630.476 scored parameters

Next: Link to clinical, demographic parameters…

Business Intelligence Regional Healthcare: Answered April 2021 - July 2026

+70 % response
21.6 % poor perceived health
24.9 % constant diabetes worries
28.7 % not confident management
49.3 % severe sleep disorders
…….
Action planning and ressource allocations



This Study

BACKGROUND

KNOWN

Clinical implact of Diabetes-Technology is well described

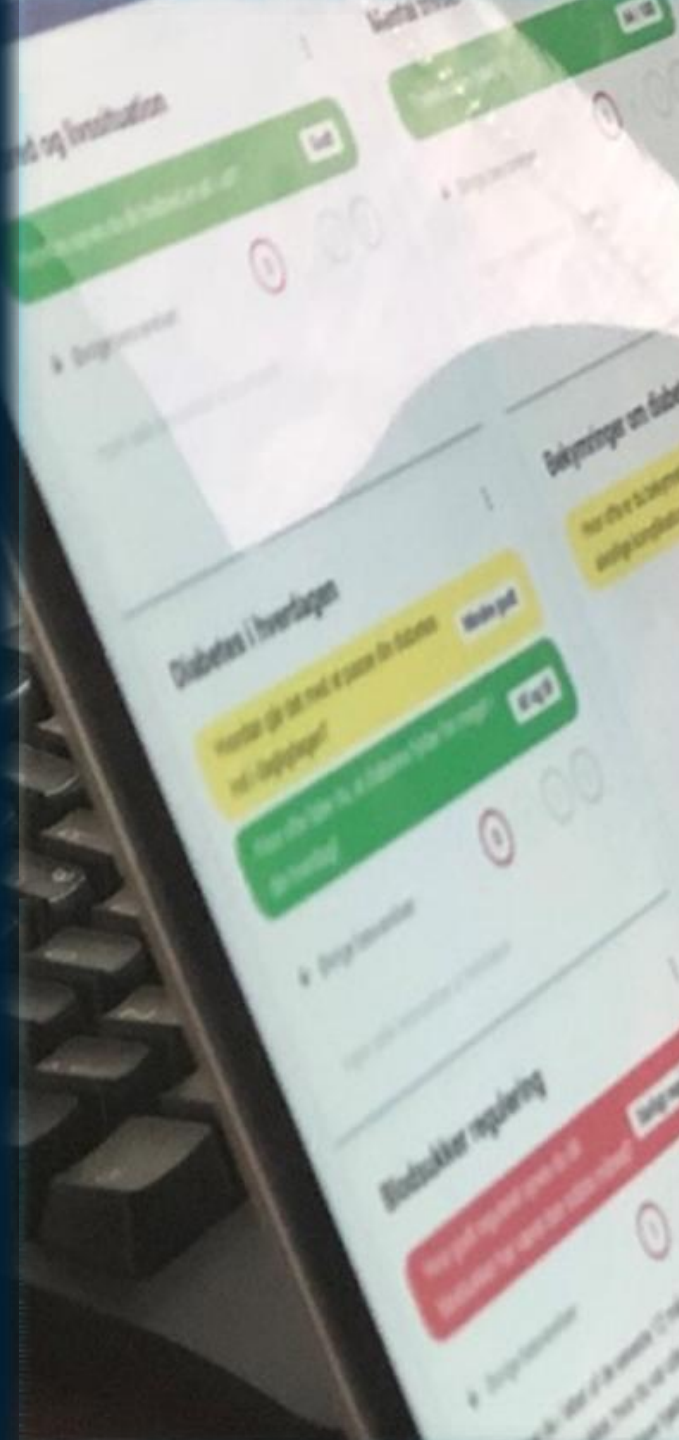
PROMS data mainly relay to technology / implementation

LITTLE KNOWN

Real-world, individual daily-life experiences

Associations PROMS + HbA1c + Time-in-Range

Who benefits most from Diabetes Technology?



AIM

We examined Diabetes-Related Person-Reported Outcomes (PROMS) and WHO-5 in Adult Persons with Diabetes -

- Before and After starting on Automated Insulin Delivery (AID) or Glucose Sensors



METHODS

Real-world, longitudinal, retrospective design

Study based on DiaProfil: PROMS and WHO-5 data

n = 104 AID users

n = 329 Sensor users

Data prior / post Diabetes Technology (own controls)

Analysis: Linear mixed-effect models with time as a fixed effect and a random intercept for each participant

RESULTS

Diabetes-specific PROMS and mental well-being PROMS / WHO-5 Pre and Post Diabetes Technology (AID and Sensors)

Outcomes	Before AID	After AID	Δ	p-value	Before sen	After sensor	Δ2	p-value
WHO-5 (NOT diabetes-specific)	61,52	63,65	2,13	0,143	65,79	66,07	0,27	0,701
Q19. Fitting diabetes into daily life	3,24	3,59	0,36	**<0,001**	3,32	3,42	0,1	**0,007**
Q20. Diabetes limits me in daily activities	2,31	2,21	−0,10	0,163	2,16	2,12	−0,03	0,324
Q25. Diabetes takes most of my time	2,89	2,67	−0,22	**0,006**	2,71	2,79	0,08	**0,03**
Q26. Worried about complications	2,74	2,67	−0,07	0,309	2,67	2,65	−0,01	0,722
Q27. Confident looking after my diabetes	4,08	4,27	0,18	**0,004**	4,01	4,08	0,07	**0,039**
Q28. Have enought diabetes knowledge	4	4,06	0,06	0,268	3,77	3,83	0,06	0,084
Q33. Adjust diabetes medication when ill	3,75	3,75	−0,00	0,997	3,77	3,88	0,12	**0,002**
Q35. How to react to high / low blodd sugars	4,54	4,63	0,09	0,13	4,47	4,48	0,02	0,612
Q37. Adjust insulin with physical activity	3,79	3,8	0,01	0,942	3,72	3,75	0,03	0,492
Q77. Perceived blodd sugar regulation	2,77	3,18	0,4	**<0,001**	2,88	2,93	0,05	0,234
Q78. Bothered by fluctuations in blood sugar	3,37	3,02	−0,35	**<0,001**	3,03	3,2	0,17	**<0,001**
Q79. Worried by low blood sugars	2,83	2,59	−0,24	**0,003**	2,62	2,54	−0,08	**0,043**
Q80. Worried by high blood sugars	3,18	2,78	−0,40	**<0,001**	2,9	2,95	0,05	0,182

RESULTS

Diabetes-specific PROMS and mental well-being PROMS / WHO-5
Pre and Post Diabetes Technology (AID and Sensors)

Outcomes	Before AID	After AID	Δ	p-value	Before sen	After sensor	Δ2	p-value
WHO-5 (NOT diabetes-specific)	61,52	63,65	2,13	0,143	65,79	66,07	0,27	0,701
Q19. Diabetes everyday life	3,24	3,59	0,36	**<0,001**	3,32	3,42	0,1	**0,007**
Q20. Diabetes limits me in daily activities	2,31	2,21	−0,10	0,163	2,16	2,12	−0,03	0,324
Q25. Diabetes takes most of my time	2,89	2,67	−0,22	**0,006**	2,71	2,79	0,08	**0,03**
Q26. Worried about complications	2,74	2,67	−0,07	0,309	2,67	2,65	−0,01	0,722
Q27. Confident looking after my diabetes	4,08	4,27	0,18	**0,004**	4,01	4,08	0,07	**0,039**
Q28. Have enought diabetes knowledge	4	4,06	0,06	0,268	3,77	3,83	0,06	0,084
Q33. Adjust diabetes medication when ill	3,75	3,75	−0,00	0,997	3,77	3,88	0,12	**0,002**
Q35. How to react to high / low blodd sugars	4,54	4,63	0,09	0,13	4,47	4,48	0,02	0,612
Q37. Adjust insulin with physical activity	3,79	3,8	0,01	0,942	3,72	3,75	0,03	0,492
Q77. Perceived blood sugar regulation	2,77	3,18	0,4	**<0,001**	2,88	2,93	0,05	0,234
Q78. Bothered by fluctuations in blood sugar	3,37	3,02	−0,35	**<0,001**	3,03	3,2	0,17	**<0,001**
Q79. Worried by low blood sugars	2,83	2,59	−0,24	**0,003**	2,62	2,54	−0,08	**0,043**
Q80. Worried by high blood sugars	3,18	2,78	−0,40	**<0,001**	2,9	2,95	0,05	0,182

RESULTS

AID and sensor users showed improvement:

- Fitting diabetes into daily life, concerns hypoglycaemia, confidence management.

AID users also showed:

- Decreased diabetes burden, less concerns fluctuations, improvement perceived glycaemic control

SENSOR users also showed:

- Confidence adjusting diabetes medication, BUT higher diabetes burden

NO SIGNIFICANT IMPACT on Mental Well-being / WHO-5

CONCLUSION

1) AID and Sensor users:

   Improved self-management skills and

   Reduced diabetes burden significantly (most for AID)

2) Non-Diabetes specific measures remained unchanged for both

3) Person / patient perceived perspectives remain undervalued in optimising diabetes technology use

Scientific Conference Proceedings (partial list)

Skovlund, SE et al. Development of a National Minimal Set of Patient-Important Outcome Domains for Value-Based Diabetes Care in Denmark. Diabetes. 2018;

Skovlund, SE et al. Outcomes of systematic user involvement and user research in a national patient-reported outcomes diabetes initiative. ADA Congress, Diabetes, June, 2019.

Skovlund, SE et al. Psychometric Development of a Multidimensional PRO Questionnaire and Clinical Dialogue Platform for Routine Diabetes Care. ADA Congress, 1267-P, Diabetes. June, 2019;

Skovlund, SE et al. A Clinical Mixed-Methods Study of the Perceived Benefits of Using the Danish Diabetes PROM and Dialogue Support Tool in Routine Diabetes Care. ADA Congress, June, Diabetes, 2020.

Skovlund, SE et al. Design of a Protocol and Psychometric Evaluation protocol Questionnaires for a National PRO Diabetes Multi-sector Pilot Study in Denmark (M-PRODIA). ADA Congress, June, Diabetes, 2020.

Skovlund, SE et al. Psychological impact and care needs among people with diabetes and caregivers in Denmark – Results of a national diabetes survey. EASD Congress, October 2020.

Skovlund, SE et al. The development and evaluation of a new clinical PRO diabetes platform for value based diabetes care – Interrim results from a multi-center pilot study. Global ICHOM Congress, 16-18 Nov 2020.

Skovlund SE et al. Design of a Protocol and Psychometric Evaluation Questionnaires for a National Danish PRO Diabetes Multi-sector Pilot Study (M-PRODIA). ADA 2021

Skovlund SE et al. A Clinical Mixed-Methods Study Of The Perceived Benefits Of Using The Danish Diabetes Patient-Reported Outcome Measure And Dialogue Support Tool In Routine Outpatient Diabetes Care. ADA 2021

Skovlund SE et al. One in Three People with Diabetes Do Not Receive Support Needed to Deal with Emotional Aspects of Living with Diabetes. Press release ADA 2021

Ejskjaer, N et al. Interim real-world 10-site data from the National Danish PRO Diabetes Multi-Sector Study (M-PRODIA) engaging 460 PWD and 30 HCP shows high acceptability and benefits. ADA 2022

Publications (partial list)

Feasibility and Acceptability of a Digital Patient-Reported Outcome Tool in Routine Outpatient Diabetes Care: Mixed Methods Formative Pilot Study.
Skovlund SE, Troelsen LH, Noergaard LM, Pietraszek A, Jakobsen PE, Ejskjaer N.
JMIR Form Res. 2021 Nov 3;5(11):e28329. doi:

The participatory development of a national core set of person-centred, measurable outcome constructs for use in routine diabetes care across healthcare sectors.
Skovlund SE, Troelsen LH, Klim L, Jakobsen PE, Ejskjaer N.
Res Involv Engagem. 2021 Sep 10;7(1):62..

Perceived Benefits, Barriers, and Facilitators of a Digital Patient-Reported Outcome Tool for Routine Diabetes Care: Protocol for a National, Multicenter, Mixed Methods Implementation Study.
Skovlund SE, Nielsen JBS, Falk-Møller N, Berthelsen DB, Glümer C, Pedersen LH, Kjær P, Nørgaard LM, Troelsen LH, Pietraszek A, Hessler D, Jensen S, Ejskjær N.
JMIR Res Protoc. 2021 Sep 3;10(9):e28391.

Learning Variations in Action Plan Quality Among Adults With Type 2 Diabetes in Primary Care.
Kjær PH, Fisher L, Potter MB, Sandra M Da Silva J, Ejskjaer N, Skovlund S, Hessler D.
J Am Board Fam Med. 2021 May-Jun;34(3):608-617.

Skovlund, SE et al. Can the Routine Use of Patient Reported Outcome Measures Improve the Delivery of Person-centred Diabetes Care? *Current Diabetes Reports, 2019.*

Skovlund, SE et al. Store perspektiver i værdibaseret diabetesbehandling, Tidsskrift for Dansk Sundhedsvæsen.

Skovlund, SE et al. The participatory design of a core diabetes outcome domain set for use in Value Based Diabetes Care. *Health Affairs, In submission*

Skovlund, SE et al. A feasibility-acceptability clinical mixed-method pilot study of use of an IT PRO diabetes tool (DiaProfil) for the use of the national PRO diabetes questionnaire in routine outpatient diabetes care. *JMIR, Prep for submission*

Skovlund, SE et al. Results from a multi-center RE-AIM real-world study of multi-stakeholder perceptions of benefits and barriers related to use of a digital diabetes PRO intervention for routine value-based diabetes care. *Diabetic Medicine. Prep for Submission*

Skovlund, SE et al. Psychometric and clinimetric evaluation of the Danish PRO diabetes tool for use in care for adults with type 1 and 2 diabetes. Prep for submission. (w/University of California, Irvine, US)

Skovlund, SE et al. Development and initial evaluation of a national diabetes PROM and value-based diabetes care dialogue tool. **PhD Thesis**, Clinical Institute, Aalborg University Hospital and Aalborg University. Defended 2021

User involvement and Research Based Development, Implementation and Use



ValueBased HealthCare | Center Europe

ValueBased HealthCare | Prize 2026

THE DECISION INSTITUTE

VBHC PRIZE 2026

ValueBased HealthCare | Prize 2026

ValueBased HealthCare | Center Europe

THE DECISION GROUP

Winner of the Collaboration Award 2026

This Certificate is proudly presented to

Steno Diabetes Center, Aalborg University Hospital: Reducing Health Care Costs in Diabetes by Detecting and Solving Psycho-Social Needs

On behalf of the initiator of the VBHC Prize Prof. Michael Porter, PhD and the international jury:

the International jury:

Dr. César Velasco Muñoz I AstraZeneca

Prof. Jens Deerberg-Wittram | Technical University Berlin

Prof. Leonard H. Friedman I George Washington University

Prof. Alice Andrews I Value Institute for Health and Care

Prof. Federico Lega I University of Milan

Prof. dr. Fred van Eenennaam I Non-voting Chairman VBHC Prize

Massive Needs

Real-Time Integrated
Person Outcome Data (Clinical and PROMS)
for best healthcare delivery

- Focus on Value Creation for Persons,
Patients and Healthcare Professionals





Niels Ejskjaer

MAIL n.ejskjaer@rn.dk

TEXT +45 2556 9910

AALBORG UNIVERSITY HOSPITAL

STENO DIABETES CENTER NORTH DENMARK

Sundhedsvæsenets Kvalitetsinstitut