



Wonca

WICC Open Day

“Using ICPC to measure population level morbidity and managing health services”



about.....

Preben Larsen

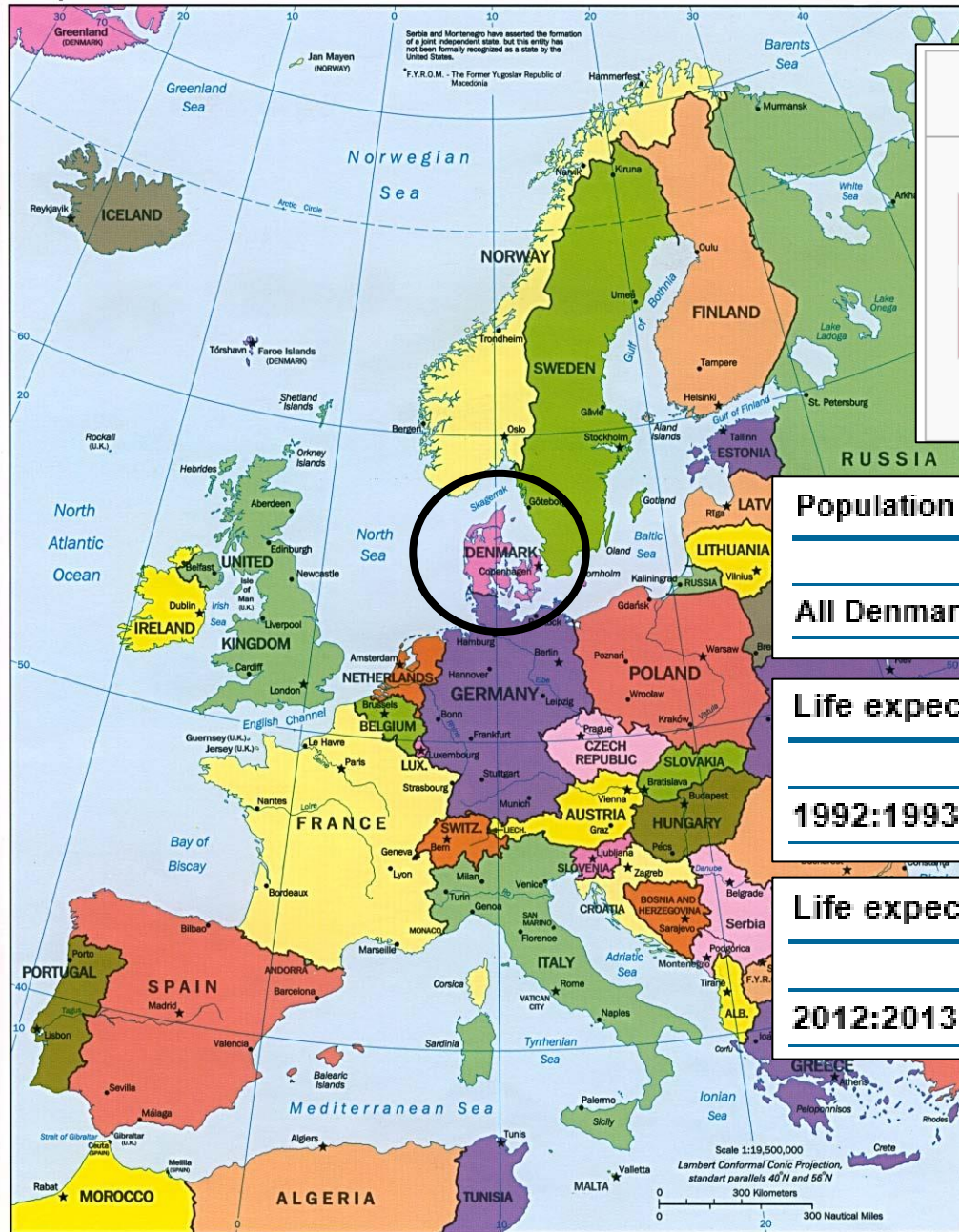
- MD 1975
- GP since 1984
- Medical professional consultant in local regions 1999 - 2009 on IT issues
- Senior Adviser (Health Classifications)
DAK-E – Danish Quality Unit of General Practice since 2010
- WICC – observer – associate member 2012



Subjects.....

- **Health care in Denmark**
- **The use of ICPC in Denmark**
- **DATA capture in Denmark**
- **Feedback reports on quality, example**
- **Benchmarks in Diabetes care**
- **Population benchmarks**
- **Data capture, effect?**

Europe



Kingdom of Denmark
Kongeriget Danmark



Flag



Coat of arms

Area: 43,094 km²

Population at the first day of the quarter by region and time

| | 2014Q3 |
|-------------|-----------|
| All Denmark | 5 639 719 |

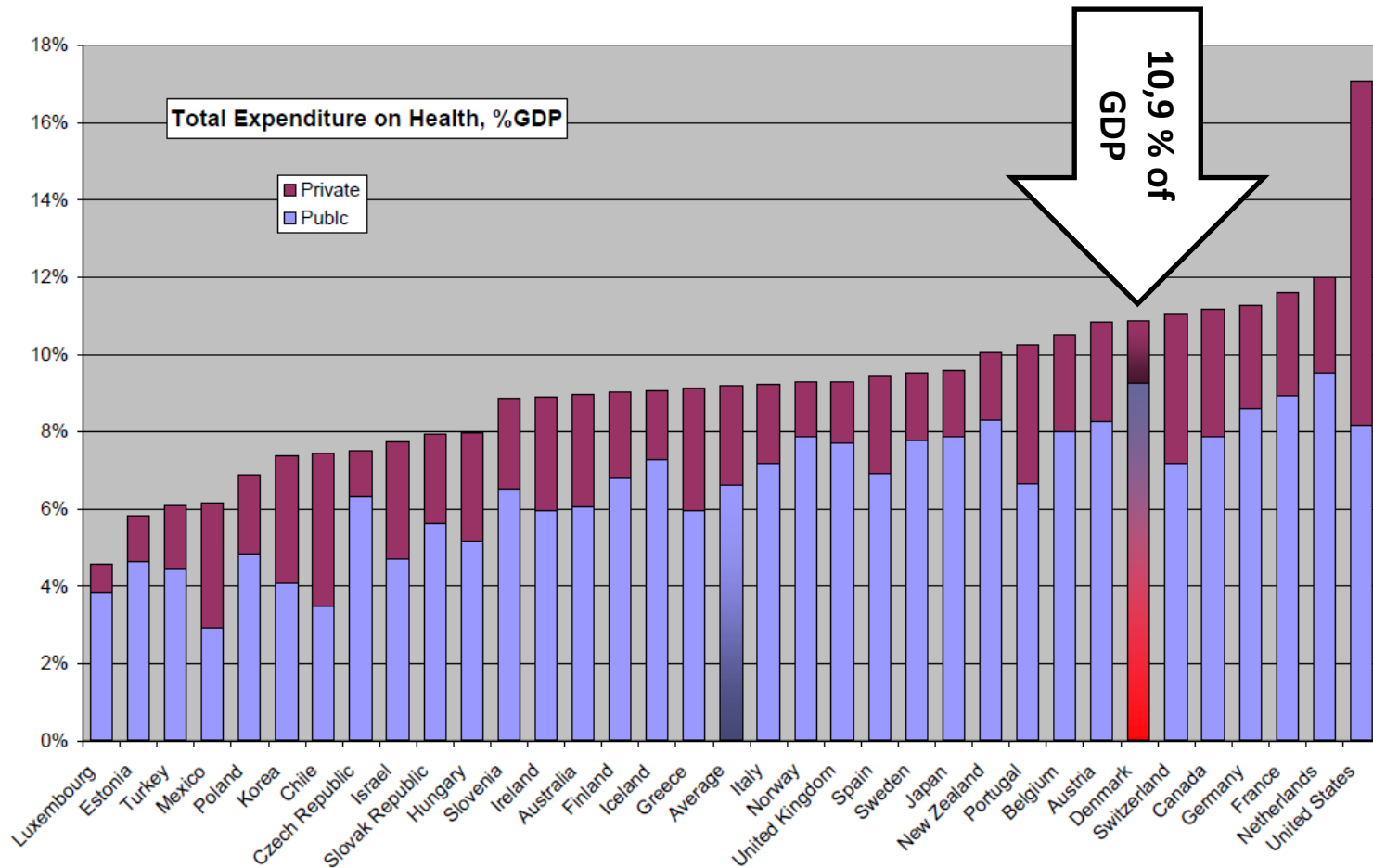
Life expectancy for new born babies by time and sex

| | Men | Women |
|-----------|------|-------|
| 1992:1993 | 72.5 | 77.8 |

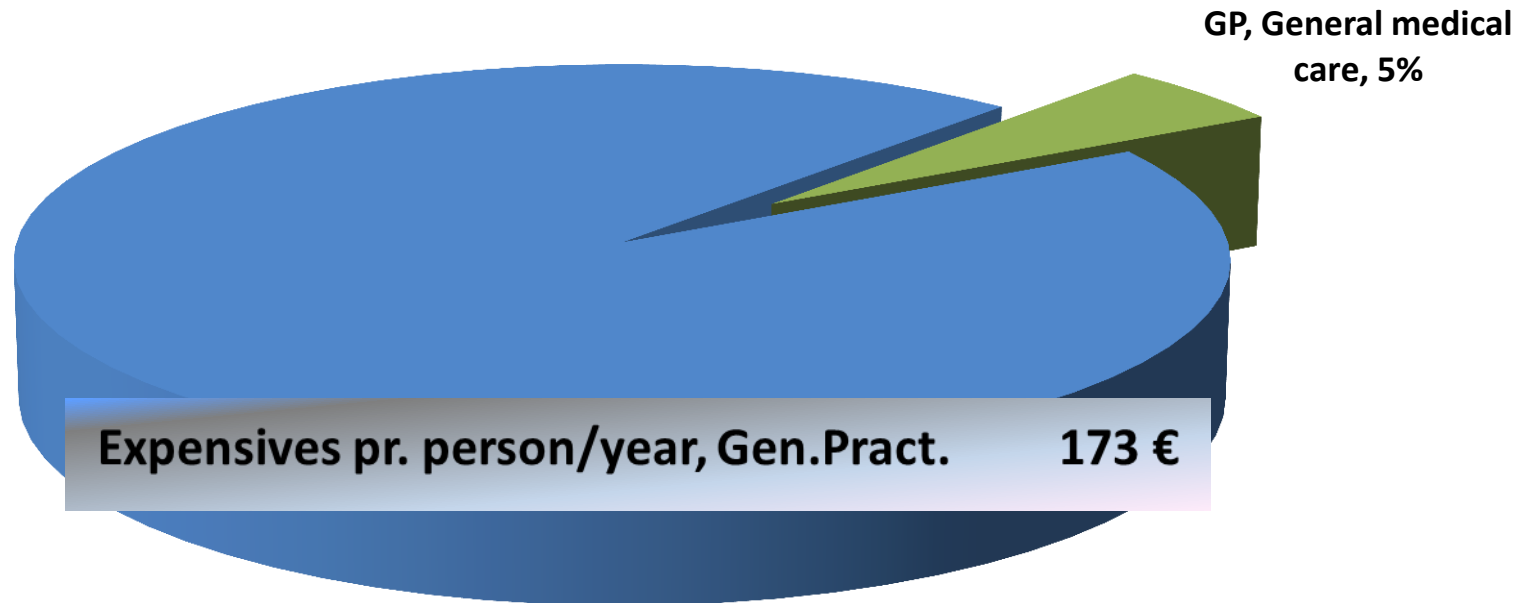
Life expectancy for new born babies by time and sex

| | Men | Women |
|-----------|------|-------|
| 2012:2013 | 78.0 | 81.9 |

Primary health care in Denmark



Primary health care in Denmark



| | |
|---|------------------------|
| Total health expensives, Denmark 2012: | 18,5 billions € |
| General Practice: | 0,97 billions € |

Primary health care in Denmark



- 5 Regions – 98 local municipalities
- Civil registration system with personal ID numbers
- 2.016 primary care clinics
- 3.590 GPs
- Listed patients (1.590/GP)
- 36 mill contacts to GP/year (*10.000 /GP pr. year*)
- Capitation + fee for service
- Tax financed



ICPC in Denmark

- **Danish College of General Practitioners (DSAM)**
 - Scientific College of General Practice
 - The college is member of WONCA
 - The college holds the Danish versions of ICPC
- **Danish Quality Unit of General Practice (DAK-E)**
 - DAK-E - Danish Quality Unit of General Practice – improve the quality work of general practice.
 - Funded by the Government
 - Development of IT programs facilitating quality work
 - **Sentinel Data Capture**
 - Feedback reports focusing on quality development in their own practice.
 - Administering collected data in **DAMD (Danish General Practice Database)**

ICPC in Denmark

- ICPC has been used in EMR in Denmark since 1993
- ICPC-2 implemented in all EMR-systems
- All GPs use EMR
- EMR-systems are certified by MedCom and the Danish Quality Unit of General Practice
- Agreement between GPs and the Public Health Care system includes mandatory use of data capture and ICPC-coding
- 98% of GPs report data
- 50% of GPs code at least 72% of all face-to-face contacts

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Why use ICPC?

- **Much information included in a diagnostic code**
- **Provides overview of individual patient**
- **Provides overview of patient population**
- **Links to medical information**
- **Facilitates decision support**
- **Facilitates communication between health care services**
- **Promotes quality improvement/research**

All EMRs offers problem sort of journal entries based on ICPC-codes

ICPC code is linked from the EMR to web-based relevant literature.

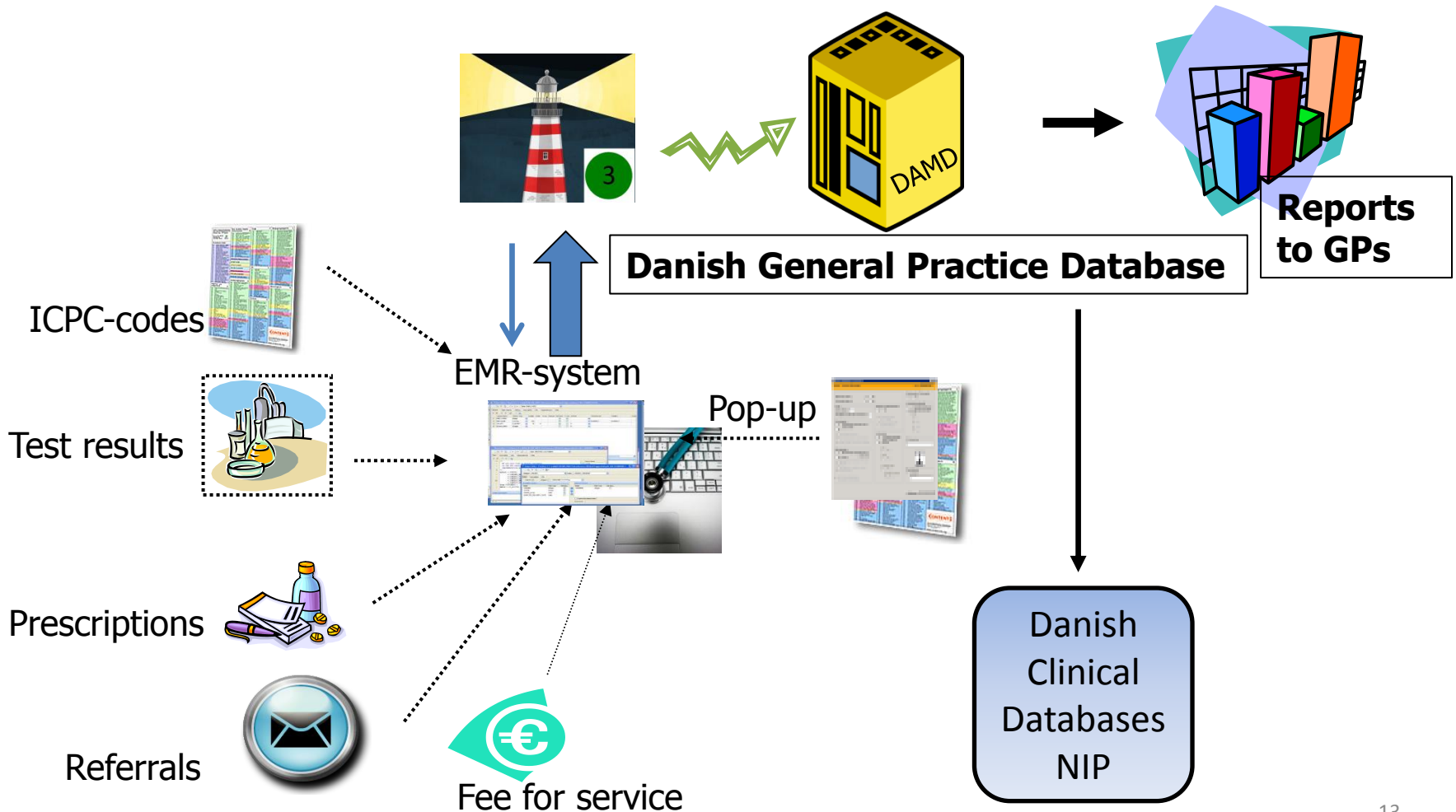
Guidelines for referrals to hospital are based on ICPC-codes mapped to ICD-codes.

ICPC coding / DATA capture

Technique for data capture

- A software installation (Sentinel Data Capture) on every working station automatically collects patient data from the GP's EMRs, independent of the EMR-system.
- Data are transferred in a structured form to the Danish General Practice Database (DAMD).
- Quality reports are generated from structured data
- Reports are used by GPs for quality improvement specific on the individual patient and on the patient population in the clinic.

ICPC coding / DATA capture



DATA capture/Quality reports

The screenshot shows the DAK-E website interface. At the top left is the DAK-E logo with the text "De praktiserende lægers og regionernes fælles enhed for kvalitetsudvikling". A search bar is located at the top right. Below the header is a navigation menu with items: "Almen praksis", "Speciallæger", "Andre", "Regioner", "Kommuner", "DAMD/Forskning", "Systemhuse", and "Om DAK-E". The main content area features a large banner image of a lighthouse with the text "TIL VERDENS BEDSTE HÅNDVÆRKERE". Below the banner are three columns: "Nyheder fra DAK-E" with news items from March and February 2014; "Kalender" with dates for October and November 2014; and "Nye projekter" listing "DAK-E-internet for ambassadører og systemhuse: Datafangst og funktionalitet". On the right side, there are sections for "Dine Kvalitetsdata" (with a login link), "Support" (with IT support phone number 6550 4550 and opening hours), and "E-mail: support@tak.dk". At the bottom right, there are logos for "ICPC-2 KODEVÆRKTØJ" and "ICPC-2 E-LÆRINGSPROGRAM". A large blue watermark "www.dak-e.dk" is overlaid diagonally across the page.

- FEEDBACK QUALITY REPORTS
- INDIVIDUALLY FOR EACH GENERAL PRACTICE
- ACCUMULATED DATA IN THE DAMD DATABASE
- GP ACCESSES REPORTS VIA A PROFESSIONAL DIGITAL SIGNATURE
- REPORTS FOR REGIONAL AND LOCAL HEALTH AUTHORITIES



Ydemr: 023299
Kodeprocent: 74 %

Identification of GP
Code frequency

Kvalitets rapporter

For Sentinel læger

Vejledninger

Chronic diseases:

- Diabetes sygdomme
- Heartfailure
- Minor psychiatric diseases
- CVD
- COPD

Reports on chronic diseases.
Based on supplementary project
reported data (POP-UP)
- mandatory

Andre rapporter

Other reports i.e:

- Anticonceptive
- Use of antipsychotic medication
- Benzodiazepines and car driving
- Childhood vaccination plan
- Age distribution for each ICPC code
- Risk of CVD / Diabetes
- Elderly fragile patients
- Heavy users of Medicine
- Absent children from child study
- Absent from smear examination

Other reports, based on
medication, lab findings etc.

Reports of Practice 'operation,

- Distribution of contacts ICPC chapters
- Code Percentage per. employee
- Patients with multiple contacts

Reports on practice
management



Ydemr: 023299
Kodeprocent: 74 %

Dansk Almenmedicinsk KvalitetsEnhed

www.dak-e.dk



Kvalitets rapporter

For Sentinel læger

Vejledninger

Reports only for the Sentinel Physicians - physicians who have sent data over the past 6 months and encodes more than 70% of their contacts.

... data de seneste 6 måneder, og som koder over 70 % af deres kontakter. (Jeres praksis har kodet 74 % af kontakterne.)
Hvis I oplever, at nogle rapporter er grå og dermed inaktive, er det fordi, ovenstående kriterier ikke er opfyldt, og derfor kan vi ikke generere valide rapporter.

Risk Report

Multiple symptoms and functional disorders
Risk of Osteoporosis
Patients at risk for influenza vaccination in 2014

Rapporter indtæller ICPC organkapitler



- A - Alment/uspecificeret
- A - Patiens with cancer
- K - Cardiac/vascular system
- K78 Atrial fibrillation/AT therapy
- K86-K87 Hypertension
- L - Muscle / skeletal system
- L88 Rheumatoid arthritis
- L95 Osteoporosis
- L - Muskel/skeletsystem
- L88 Reumatoid artrit
- L95 Osteoporose
- T - Endokrint/Metabolisk/Ernæringsmæssigt
- T - Endocrine / Metabolic / Nutritionally
- T82 Obesity
- T85-T86 Metabolic Disease
- U - Urinary
- U70-U71 Urinary tract infections
- Y - Male genitalia
- y85 Prostatahypertrofi





Quality re

Benchmark 1

Benchmark 2

Number /percentage of patients in practice with T90

Date of report

omb patienter med diabetes

is sammenligning side 1

Praksis sammenligning side 2

EGNE pt. med diabetes, hos Læge Preben Larsen, Ydernr:023299

Hvordan ser du data

Fra data til kvalitet

Udskriv denne side

129 patienter ud af 1666 patienter (7.7 %)

Udtræk udført: torsdag 28. august 2014 kl 23:17

| Navn | Cpr | Alder | Debutår | Røg | BMI | LDL | LDL rkm | lipid-sænk ¹ | Blodtryk | BT-beh | ACE/ACII ¹ | U-Alb | HbA1c | HbA1c rkm | Kompli. | Beh. | AL | AK | FM | Seneste årskontrol | |
|------------------------|-----|-------|---------|-----|-----|-----|---------|-------------------------|----------|--------|-----------------------|-------|-------|-----------|---------|------|----|----|----|--------------------|------|
| Lin | | | | | | | | | 142 | | | | | | | | | | | 11 | 2014 |
| Car | | | | | | | | | 14 | | | | | | | | | | | 20 | 2012 |
| Poulsen | | | | | | | | | 12 | | | | | | | | | | | 28 | 2013 |
| Safire Ozker | | | | | | | | | 12 | | | | | | | | | | | 02 | 2013 |
| Birthe V. Jensen | | 82 | 2001 | | | | | | 14 | | | | | | | | | | | 13 | 2014 |
| Carsten F. Christensen | | 67 | 2004 | | | | | | 15 | | | | | | | | | | | 03 | 2012 |

Name

Pt.id

Age

Onset

Status smoking

BodyMassIndex

Latest LDL-level

Recom. LDL -duration, comorb

Prescript. statins

Latest BP, K=clinic, H=Home

Numb. Medication BP

ACE/All prescribed?

U-albumine/se-creatinin

Latest level glyated hemaglobin

Rec. glyated hemaglobin

one or more complications

Oral medication?, insulin?

Responsible GP, nurse

Month of birth

Latest yearly status exam.

Link national guidelines

Link e-learning programme

¹ Har fået en recept inden for de sidste 2 år.

HbA1c opgives

En blå prik

bemærkning

Kør mus

[DSAM's vejledning](#)

[E-learning](#)



Diabetes - Quality reports

Measurement of indicators > 95% of diabetes population

| | |
|--|--|
| Glycemic control | The proportion of patients who at least once a year have their HbA1c measured. |
| Hypertension | The proportion of diabetic patients who at least once a year have their blood pressure measured. |
| Albuminuria | The percentage of diabetic patients that have been examined for albuminuria according to current guidelines at least every 2 years, |
| Complication Screening: Eye Examination | The percentage of diabetic patients who have had an eye examination in accordance with current guidelines, at least every 2 year. |
| Complication Screening: Foot Exam | The percentage of diabetic patients who have had foot examination in accordance with current guidelines, at least every 2 year |

Patient: Grethe Emilie Petersen Cpr-nr.: 2112430426

Diabetes (Årskontrol)

Kontakt
Diabetes debutår: 2010
Antal diabetes kontroller aftalt i kommende år: 2

Ansvarlige (initialer)
Klinikpersonale:
Ansvarlige læge:

Følges patient i praksis?
 Nej, patienten følges ikke i almen praksis

Årskontrol
 Årskontrol udføres ikke nu

Ryggestatus
 Dagligt Lejlighedsvis Ophørt Aldrig
Er der talt om rygning? Ja Nej
Sidste registrering: 03-06-2014

Årsvistilsamtale
 Ja Nej
Kost Ja Nej Motion Ja Nej
Henvist til kommunalt tilbud? Ja Nej

Individuelle behandlingsmål
 Ja Nej [Behandlingsrekommendationer](#)
Aftalt behandlingsmål omkring:
 BT HbA1c Lipider Vægt

Recept på lipidstoffer
 Ja Nej
Hvem har fravalgt behandlingen? Glemt Lægen Patienten

Barriere
Største barriere for at nå ambitiøse behandlingsmål:
Vælg primær årsag:

Metaboliske kræveringsproblemer
 Ja Nej
 Svær insulin resistens (>100 IE dagligt)
 Alvorlig hypoglykæmi
Antal indenfor seneste 12 mdr.:

Øjenundersøgelse
 Ja Nej / Ved ikke
 Ingen diabetiske forandringer eller simplex retinopati
 Maculaødem eller proliferativ retinopati
 Ukendt forandring

Popup Irrelevant
 Ja, hvorfor?

Diabetes kontrol:
12 mdr.'s kontrol eller kontrol, ÅRSUNDERSØGELSE
Der er kontrolleret parametre i henhold til guiden
Målsætninger drøftet vedr.
Kost, evt. diætetvejledning,
Motion, evt. diætetvejledning,
Ryggestatus: x
Antal kontroller årligt indl. Årskontrol: 4
Ydelse: for patient i forløbsydelse: 0107
Kraftaft: 3 mdr.
Albuminuri, er i ALT beh. Ingen cardelle gener, m...

Diabetes kontrol:
12 mdr.'s kontrol eller kontrol, ÅRSUNDERSØGELSE
Der er kontrolleret parametre i henhold til guiden
Målsætninger drøftet vedr.
Kost, evt. diætetvejledning,
Motion, evt. diætetvejledning,
Ryggestatus: x
Antal kontroller årligt indl. Årskontrol: 4
Ydelse: for patient i forløbsydelse: 0107
Kraftaft: 3 mdr.
Albuminuri, er i ALT beh. Ingen cardelle gener, m...

Tjek alt (?) udfyldt

Overbliksguide Rediger kontakt

Dato: 02-06-2014 Titel: Årskontrol
Type: K-kons./Besag Ekstern:
Behandler: Preben Larsen

Diagnoser: <Enter> »Ret hokus/mærker.
 T90 Diabetes type 2

Tahoma 8

DIABETES KONTROL:
12 mdr.'s kontrol eller kontrol, ÅRSUNDERSØGELSE
Der er kontrolleret parametre i henhold til guiden
Målsætninger drøftet vedr.
Kost, evt. diætetvejledning,
Motion, evt. diætetvejledning,
Ryggestatus: x
Antal kontroller årligt indl. Årskontrol: 4
Ydelse: for patient i forløbsydelse: 0107
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Preben Larsen (PL)



Sentinel Datafangst

Egne patienter med diabetes

Amb patienter med diabetes

Praksis sammenligning side 1

Praksis sammenligning side 2

Egne pt. med diabetes, hos Læge Preben Larsen, Ydernr:023299

Hvordan ser du data

Fra data til kvalitet

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129 patienter ud af 1666 patienter (7.7 %) Udtræk udført: søndag 31. august 2014 kl 01:56

| Navn | Cpr | Alder | Debutår | Røg | BMI | LDL | LDL rkm | lipid-sænk* | Blodtryk | BT-beh | ACE/ACII' | U-Alb | HbA1c | HbA1c rkm | Kompli. | Beh. | AL | AK | FM | Seneste årskontrol |
|---------------------------------------|-----|-------|---------|-----|-----|------|---------|-------------|----------|--------|-----------|-------|-------|-----------|---------|------|-----|-----|----|--------------------|
| Laila R. Elmegaard | | 67 | 2010 | A | 23 | 1.7↓ | 2.5 | ● | 141/82 K | 2 | ● | 3 | 63 | 47 | | p | pl | tth | 7 | 11-06-2014 |
| Carsten Jørgensen | | 65 | 2007 | A | 29 | 1.9↑ | 2.5 | ● | 148/64 | 3 | ● | 20 | 28 | 53 | | | pl | | 2 | 20-04-2012 |
| Poul Forsberg | | 58 | 2000 | O | 26 | 1.4↓ | 1.8 | ● | 128/94 | 2 | ● | 13 | 104 | 58 | ● | p,i | pl | | 11 | 28-09-2013 |
| Benna E. Antvorskov | | 69 | 2012 | D | 33 | 3.6↓ | 2.5 | ● | 135/60 K | 1 | ● | 20 | 44 | 47 | | | pl | tth | 1 | 14-10-2013 |
| Anni Stenholm | | 64 | 2006 | A | 29 | 2.0 | 2.5 | ● | 138/76 K | 0 | ● | 7 | 47 | 53 | | p | pl | tth | 8 | 14-03-2013 |
| Jane Hjarso | | 66 | 2007 | O | | 1.2↓ | 2.5 | ● | 126/71 K | 1 | ● | | 42 | 58 | | p | pl | | 3 | 18-07-2013 |
| Anders S. Mejdal | | 70 | 2014 | O | 28 | 2.0↓ | 2.5 | ● | 112/61 K | 0 | ● | 8 | 47 | 47 | | p | pl | tth | 5 | 10-06-2014 |
| Flemming B. Mortensen | | 77 | 1992 | A | 32 | 1.7↑ | 2.5 | ● | 140/59 K | 1 | ● | 24 | 47 | 58 | | i | pl | tth | 2 | 13-02-2013 |
| Villy Købling-Larsen | | 84 | 2001 | O | 27 | 1.5↓ | 2.5 | ● | 130/70 K | 3 | ● | 6 | 54 | 58 | | p | pl | | 7 | 01-05-2012 |
| Solveig Larsen | | 85 | 2000 | D | | 2.1↓ | 1.8 | ● | 142/79 K | 3 | ● | 1422 | 56 | 58 | ● | p | pl | tth | 8 | 02-06-2014* |
| Solveig L. Jørgensen | | 62 | 2006 | O | 17 | 1.1↓ | 1.8 | ● | 100/79 K | 1 | ● | 156 | 43 | 58 | ● | | pl | tth | 11 | 18-03-2014* |
| Annie Ottesen | | 75 | 2010 | A | | 2.0 | 1.8 | ● | 140/70 K | 3 | ● | 32 | 47 | 58 | | p | pl | | 7 | 20-11-2013* |
| Anny Nielsen | | 72 | 2009 | A | 20 | 1.4↓ | 2.5 | ● | 130/75 K | 0 | | | 56 | 53 | | p | pl | tth | 7 | 27-08-2014 |
| Ole F. Raith | | 80 | 2001 | O | 27 | 2.9↑ | 2.5 | | 116/59 K | 2 | ● | <2 | 53 | 58 | | p | pl | | 5 | 05-05-2014 |
| Lissie Andersen | | 62 | 2011 | A | 32 | 3.7↓ | 2.5 | | 132/79 K | 0 | | 8 | 46 | 47 | | | pl | tth | 10 | 16-06-2014 |
| Jesper R. Katholm | | 39 | | A | 34 | 0.9↓ | 2.5 | ● | 124/76 K | 2 | ● | <2 | 34 | 47 | | | tth | | 6 | |
| Jonna D. Larsen | | 67 | 2008 | A | 30 | 2.8↓ | 2.5 | ● | 144/72 K | 0 | ● | <2 | 50 | 53 | | p | pl | tth | 8 | 28-04-2014 |
| Irene Jakobsen | | 74 | 2002 | O | 29 | 2.0↑ | 1.8 | ● | 135/67 K | 2 | ● | 38 | 51 | 58 | ● | p | tth | | 1 | 14-02-2013 |
| Arne N. Olsen | | 73 | 2000 | A | | 1.4↓ | 1.8 | ● | 124/62 | 1 | ● | 7 | 51 | 58 | ● | p | pl | | 11 | 25-06-2009 |
| Bent Hansen | | 70 | 2008 | O | 41 | 2.3↓ | 2.5 | | 116/85 K | 3 | ● | 9 | 86 | 53 | | p | pl | | 4 | 29-10-2013 |
| Poul N. Kristensen | | 78 | 2000 | O | 27 | 1.9↑ | 1.8 | ● | 130/73 K | 1 | | 21 | 56 | 58 | ● | p | pl | tth | 9 | 14-08-2014* |
| Bjarne H. Andersen | | 60 | 1992 | D | 28 | 1.5↓ | 2.5 | | 99/58 | 3 | ● | <2 | 33 | 58 | | p | pl | tth | 12 | 09-12-2013 |
| Anny Vera Larsen | | 74 | 1998 | A | | 2.2↓ | 1.8 | ● | 135/81 K | 1 | ● | 66 | 52 | 58 | | p | pl | tth | 2 | 05-11-2013* |
| Mogens Christensen | | 67 | 2003 | A | 28 | 2.5↓ | 1.8 | ● | 145/80 | 1 | ● | 7 | 43 | 58 | ● | | ok | | 8 | 03-04-2013 |
| Bjorn E. Haastrom | | 72 | 2002 | O | 35 | 2.2↓ | 1.8 | ● | 124/62 K | 2 | ● | <2 | 51 | 58 | ● | p | pl | tth | 11 | 02-12-2013 |

* Har fået en recept inden for de sidste 2 år.

HbA1c opgives i den nye angivelse mmol/mol. Klik [her](#) for at ændre til den gamle måleenhed.

En blå prik • bag datoen ved seneste årskontrol betyder, at der via pop-uppen er sat en personlig bemærkning vedr. patienten i forbindelse med årskontrollen.
Kør musen hen over den blå prik for at se teksten.

[DSAM's vejledning](#)[E-learning](#)

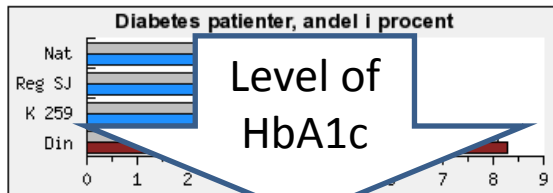
Download csv fil

Behandlingsrekommendation

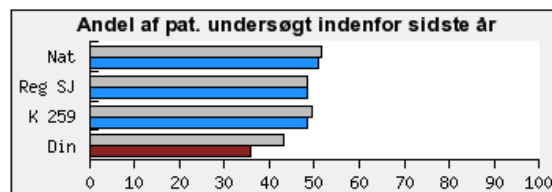
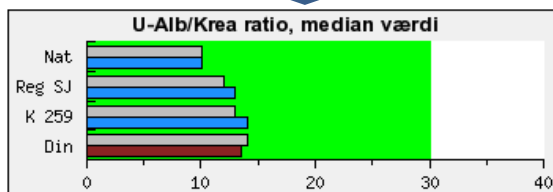
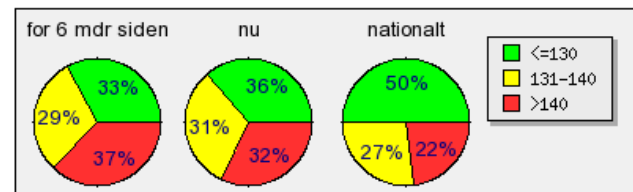
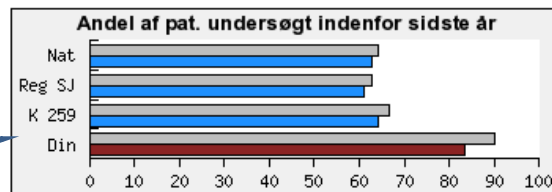
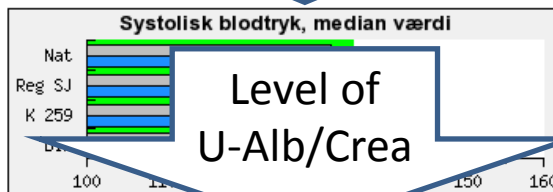
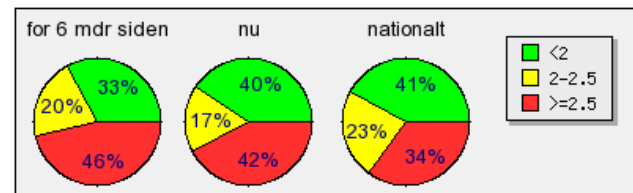
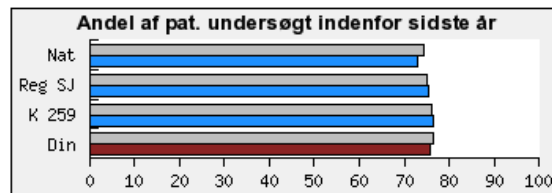
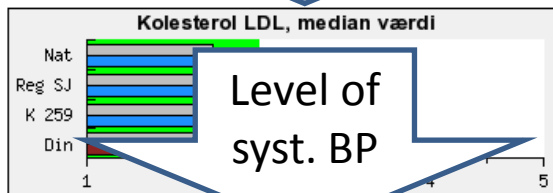
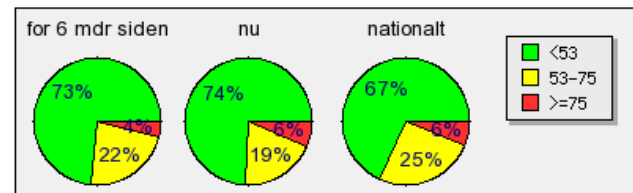
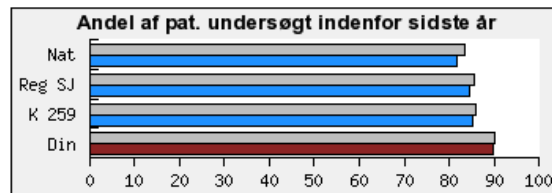
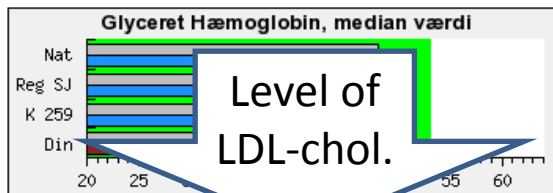
% of pat. With DM

Din Diabetes sammenligning med de andre praksiser
De grå søjler viser værdierne for 6 måneder siden.

% of pat. exam. last 12 months



Reg SJ = Region Sjælland
K 259 = Køge Kommune
skyldes det at der skal være mindst 4 sentinel praksis i kommunen



Bemærk! Medtager kun U-Albumin/Creatinin ratio målt efter den nye analysekode: NPU19661. De grå søjler viser værdierne for 6 måneder siden.



English demo www.dak-e.dk

English versions

- [Diabetes Mellitus](#)
- [Absented children from health examination](#)
- [Atrial fibrillation](#)
- [Benzodiazepines and car driving](#)
- [Children's vaccination](#)
- [Hypertension](#)
- [Risk patients for H1N1 vaccination](#)

www.dak-e.dk

HPV vaccination årgang 1993-1997

DAK-E De praktiserende lægers og regionernes fælles enhed for kvalitetsudvikling
Dansk Almenmedicinsk KvalitetsEnhed

Google™ Tilpasset søgning

Almen praksis Speciallæger Andre Regioner Kommuner DAMD/Forskning Systemhuse Om DAK-E

Nyhedsbreve fra DAK-E Support til Sentinel Driftsstatus Praksisoplysninger

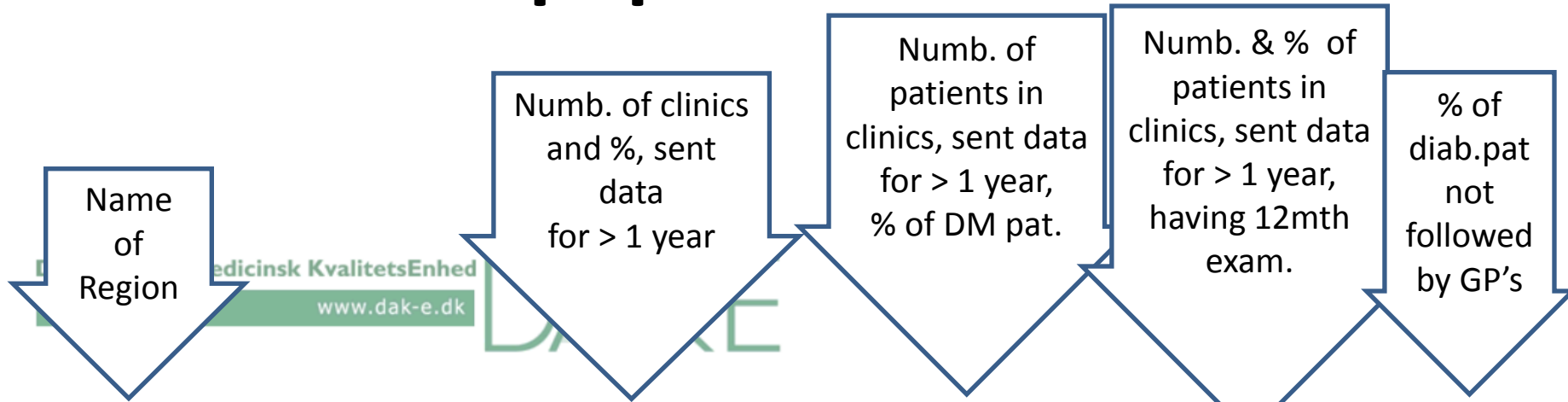


Subjects.....

- Health care in Denmark
- The use of ICPC in Denmark
- DATA capture in Denmark
- Feedback reports on quality, example
- Benchmarks in Diabetes care
- **Population benchmarks**
- **Data capture, effect?**



Diabetes – population benchmarks



| | Antal ydernr ¹ | Antal ydernr tilmeldt diabetes popup pr. 1. Okt 2014 | Antal ydernr tilmeldt diabetes popup ² | Antal pt. tilknyttet ³ | Antal pt. med diabetes | Antal pt. med popup triggeret | Antal pt. med popup udfyldt | Følges ikke i praksis |
|---------------------|---------------------------|--|---|-----------------------------------|------------------------|-------------------------------|-----------------------------|-----------------------|
| ▶Region Hovedstaden | 719 | 615 (86%) | 560 (78%) | 1.459.211 | 53.356 (4%) | 36.355 | 31.803 (87%) | 10% |
| ▶Region Midtjylland | 399 | 379 (95%) | 356 (89%) | 1.161.033 | 48.359 (4%) | 34.535 | 30.685 (89%) | 8% |
| ▶Region Nordjylland | 182 | 160 (88%) | 153 (84%) | 500.119 | 22.599 (5%) | 14.903 | 11.648 (78%) | 6% |
| ▶Region Sjælland | 274 | 247 (90%) | 226 (82%) | 707.595 | 32.862 (5%) | 22.518 | 19.313 (86%) | 7% |
| ▶Region Syddanmark | 383 | 343 (90%) | 320 (84%) | 1.059.503 | 46.724 (4%) | 31.965 | 26.562 (83%) | 9% |

¹ ifølge nyeste opgørelse fra medcom.

² Ydernumre som har været tilmeldt diabetes popup i over et år.

³ Patienter tilknyttet ydernumre defineret ved 2).

Siden er opdateret: 3/9-2014



Population benchmarks

| Name region | Numb. citizens | Patients with COPD/DM/CVD status for smoking | | | | | | Patients with Diabetes | | | | | | | | Pat. with Hypert. | | Patients with COPD | | | | |
|------------------------------------|----------------|--|-----------|--------|-------|---------|--------|------------------------|----------|-----------|---------|-----------|------------|-------------|----------|-------------------|---------------|---------------------|-----------|------------|----------|-----------|
| | | Numb | %-regist. | daily | Occ. | Stopped | Never | % reg. BMI | Avr. BMI | %BMI > 30 | Avr. BP | % reg. BP | Avr. HbA1c | % reg HbA1c | Avr. LDL | % reg LDL | Avr. syst. BP | % reg. BP last year | Avr. FEV1 | % reg FEV1 | Avr. MRC | % reg MRC |
| Region Hovedstaden | 1.751.615 | 100146 (5,7 %) | 51.9 % | 22.7 % | 2.0 % | 37.5 % | 37.7 % | 40.7 % | 30.2 | 43.6 % | 133.5 | 67.5 % | 51.4 | 83.7 % | 2.3 | 80.6 % | 137.6 | 62.2 % | 64.2 % | 39.1 % | 2.2 | 25.8 % |
| Region Midtjylland | 1.276.002 | 90318 (7,1 %) | 51.2 % | 22.0 % | 1.7 % | 38.3 % | 38.0 % | 42.4 % | 30.6 | 46.5 % | 133.2 | 75.8 % | 51.5 | 92.0 % | 2.3 | 87.5 % | 137.4 | 70.5 % | 63.8 % | 41.7 % | 2.3 | 27.1 % |
| Region Nordjylland | 579.783 | 43011 (7,4 %) | 48.2 % | 23.3 % | 1.7 % | 40.3 % | 34.7 % | 45.7 % | 30.8 | 48.2 % | 132.7 | 77.9 % | 52.1 | 91.5 % | 2.1 | 86.7 % | 136.3 | 77.8 % | 62.5 % | 44.3 % | 2.3 | 23.3 % |
| Region Sjælland | 816.007 | 60932 (7,5 %) | 51.8 % | 24.3 % | 1.8 % | 38.0 % | 36.0 % | 41.9 % | 30.9 | 48.9 % | 133.8 | 73.4 % | 51.8 | 92.7 % | 2.2 | 89.2 % | 137.9 | 66.1 % | 63.3 % | 39.2 % | 2.2 | 23.8 % |
| Region Syddanmark | 1.200.465 | 90271 (7,5 %) | 44.4 % | 23.1 % | 1.6 % | 37.5 % | 37.8 % | 42.1 % | 30.8 | 48.2 % | 133.7 | 73.7 % | 51.7 | 90.5 % | 2.3 | 87.7 % | 137.2 | 69.4 % | 64.0 % | 39.9 % | 2.2 | 20.9 % |

Sorterings rækkefølgen kan ændres ved at klikke på kolonneoverskrifterne.
HbA1c opgives i den nye angivelse mmol/mol. [Download HbA1c omregningstabel](#)



... and managing health services

Hindawi Publishing Corporation
International Journal of Family Medicine
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doi:10.1155/2012/208123

Research Article

The Danish Model for Improvement of Diabetes Care in General Practice: Impact of Automated Collection and Feedback of Patient Data

TABLE 1: Number and proportion of patients with no medication despite clinical condition indicating need for treatment now and one year ago among the included type 2 diabetes patients (7988 with recorded HbA1c, 7123 with recorded cholesterol levels, and 5805 with recorded blood pressure).

| | Oct. 2009, N (%) | Oct. 2010 | |
|--|------------------|-----------|---|
| Diabetes control (HbA1c > 7% and no medical treatment) | 235 (2.94) | 127 (1 | Absolute risk reduction (95% CI) 1.35% (0.89, 1.81) 4.73% (3.56, 5.90) 4.51% (3.42, 5.61) |
| Cholesterol (>4.5 mmol/L and no medical treatment) | 1226 (17.21) | 889 (12 | |
| Blood pressure (systolic > 130 and no medical treatment) | 722 (12.44) | 460 (7 | |
| | | | |



... and managing health services

IS THERE A MEASURABLE EFFECT OF DATA CAPTURE

Analysis of variation in HbA1c and
development in health care costs and
hospitalizations for diabetes patients from
2008 to 2012

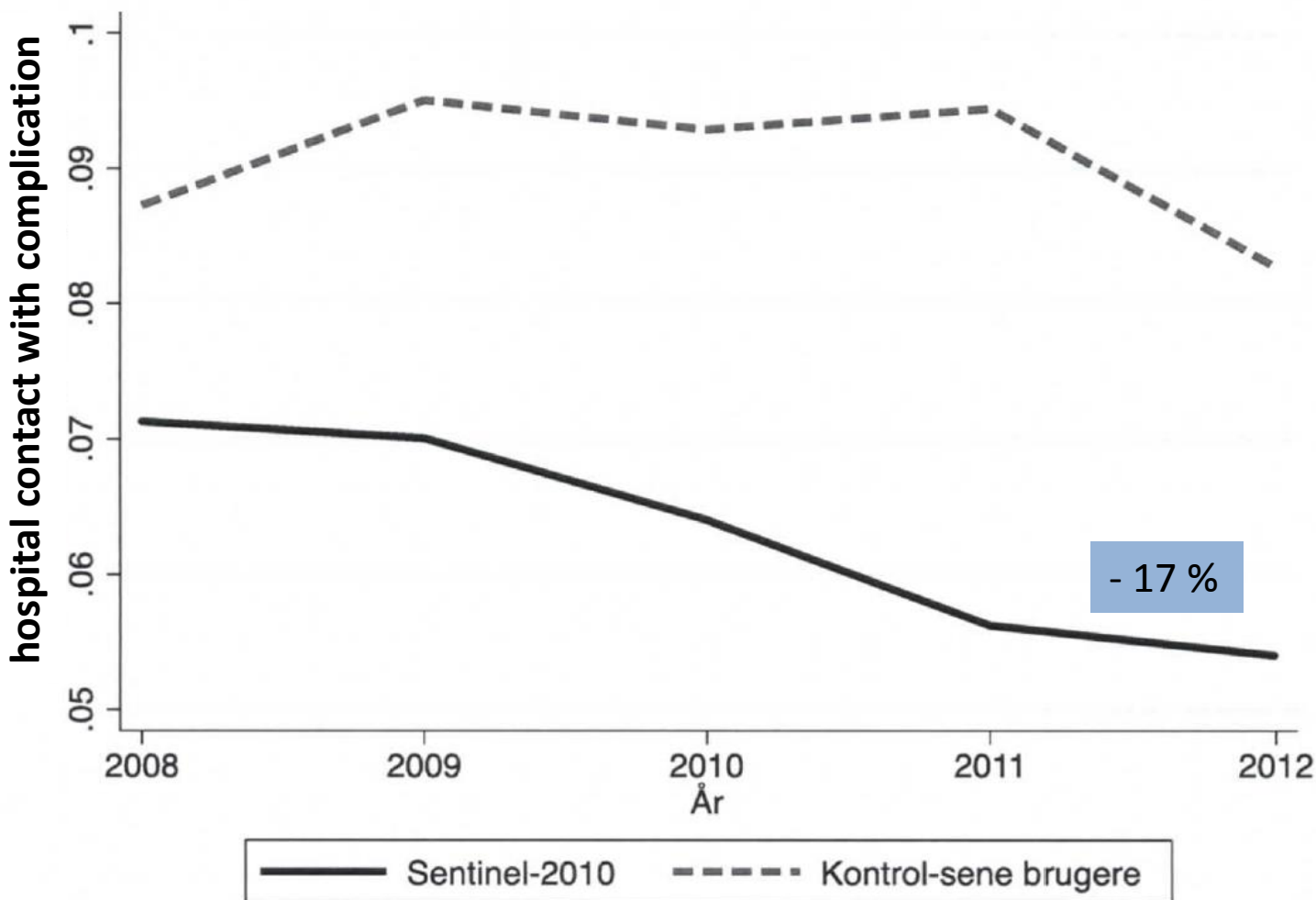


DRAFT VERSION

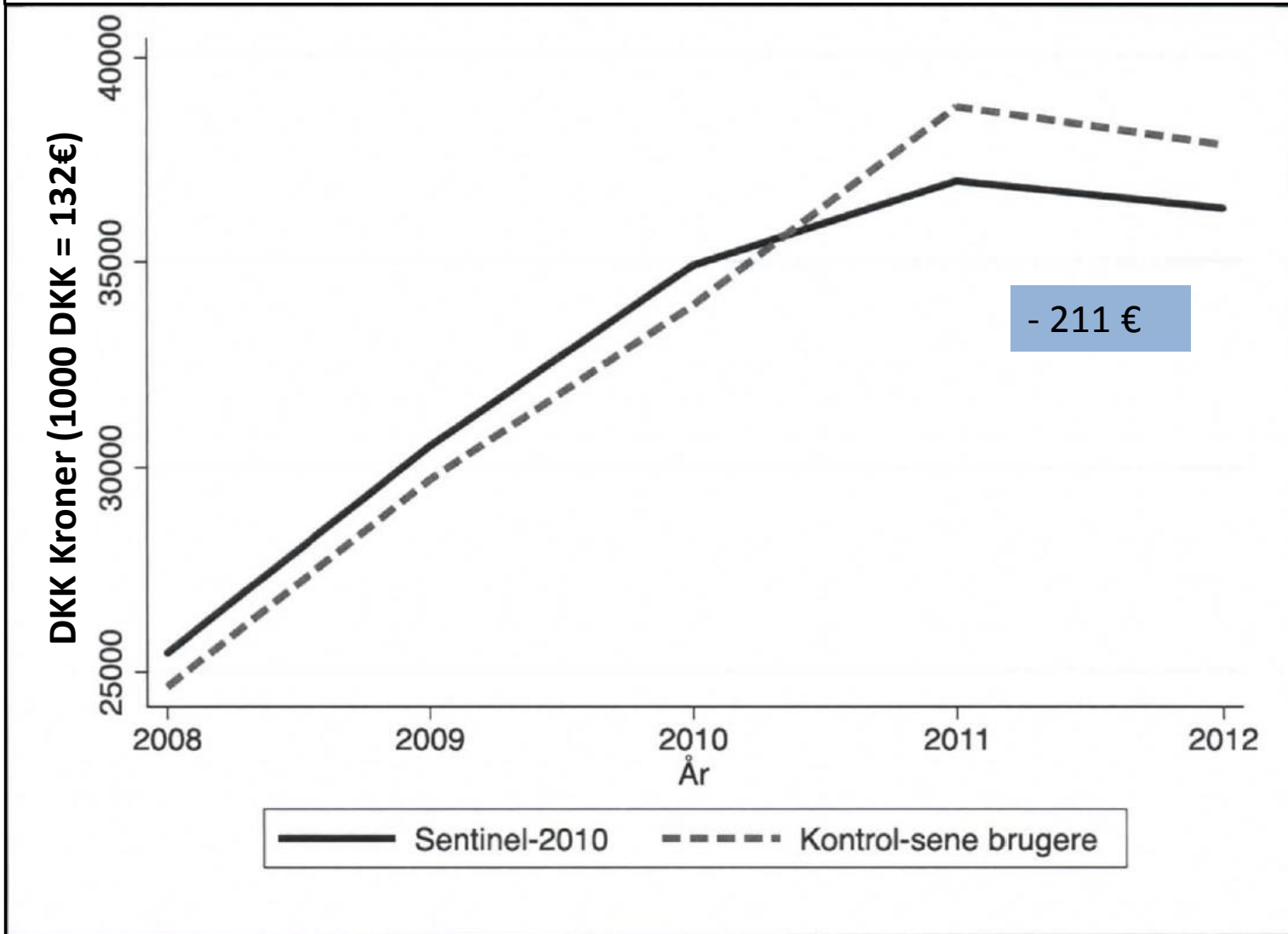




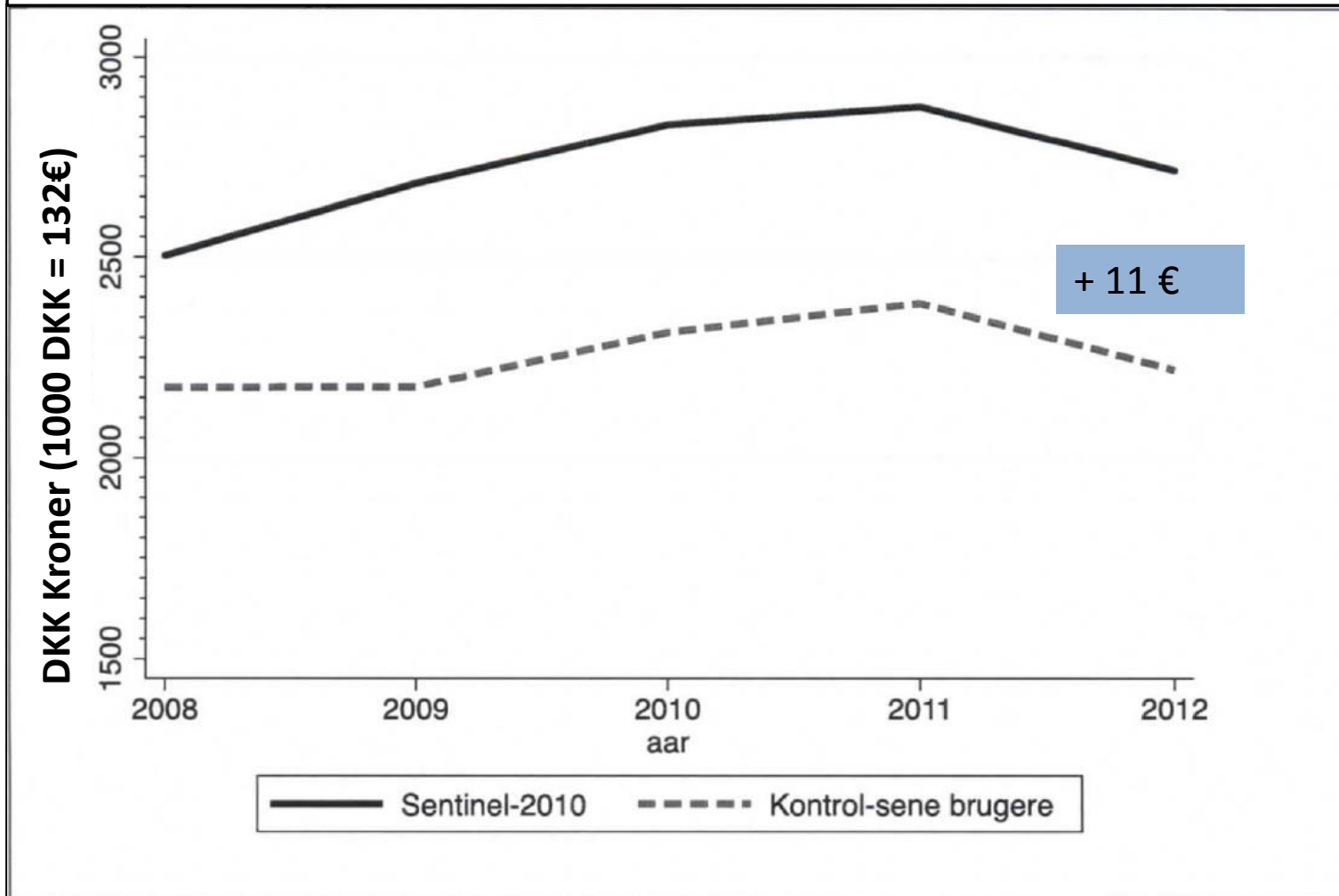
Proportion of diabetic patients with at least 1 hospitalization for complications of diabetes in the period 2008-2012 demonstrated for sentinel physicians and control group



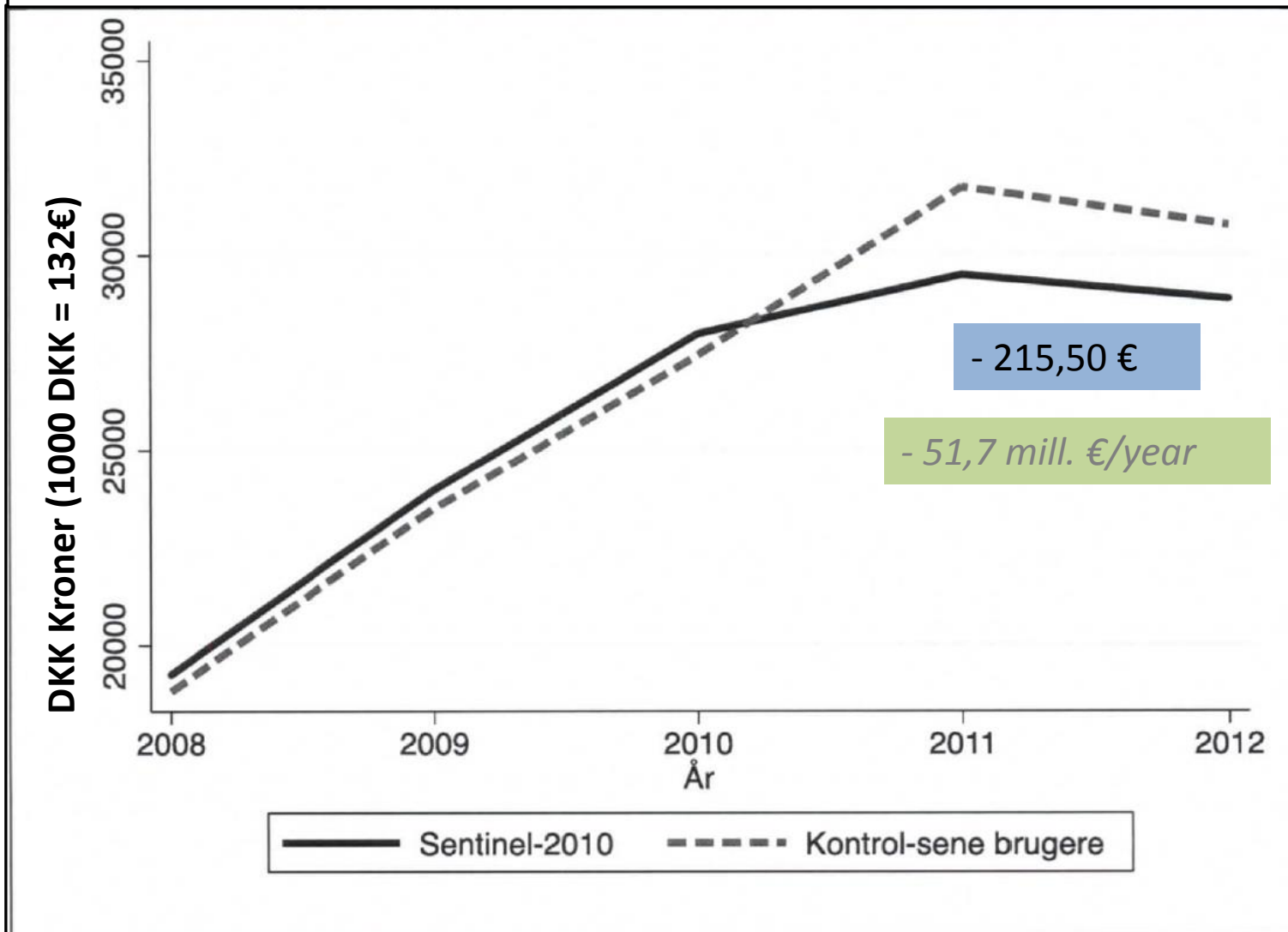
Average annual total costs per diabetic patient for sentinel physicians and control group (2008-2012)



Average annual costs in general practice per diabetic patient for sentinel physicians and the control group (2008-2012)



Average annual costs in the hospital sector per diabetic patient for patients assigned to sentinel physicians and the control group of physicians (2008-2012)





Conclusion?

- The risk of hospital contacts for complications of diabetes is reduced more for patients assigned to sentinel physicians than the control group of physicians.
- Diabetes Patient's annual cost in general practice increases more for sentinel physicians than for the control group of physicians - especially in the short term
- The total hospital costs for diabetes patients decreases more for sentinel physicians than for diabetic patients in the control group of physicians
- The total health care costs increase less in diabetic patients of sentinel physicians than for diabetic patients in the control group of physicians.



Thank you for your attention!

