Personalizing Health for people

@clausfn
@datafgood
@pchallenge
@opentelehealth
| Sign | Morgen | Middag | Eftermiddag | Aften | Sengetid | Total | Hba1c i% | Højde (cm) | Vægt (kg) | BT i mmHg | SMBG (uge) | Korrektion | Ændringer i behandling | Alv. Hypo | Infiltarer (mave, baller, lår) | TLF opkald |
|------|--------|--------|-------------|-------|----------|-------|---------|-----------|-----------|----------|-------------|------------|--------------|----------------|-----------|---------------------------------|----------|
| Før  | basal  | 4      | 1           |       |          |       |         | 6.8       | 1252      | 102       | 1           | 32          | 6.6          | 2.6           | 48        | 40                 | 0.5      |
| Efter| basal  | 2-3+12 |            | 2      | 1        |       |         |           |           |           |             |             |              |              |           | 0                   |         |
| Før  | basal  | 5      | 1           |       |          |       |         | 7.5       | 1398      | 8         | 8           | 2.4         | 6.9          | 2.6           | 40        | 23                 | 1        |
| Efter| basal  | 3      | 1           |       |          |       |         | 9.8       | 231       | 0.5       | 4.2         | 0           | 0            | 0             | 0         | 0.5                |         |

Forkortelser: R=Rapid, I=Insulatard, M=Mixtard, Le=Lovemir, La=Lantus, A=Astrapid, NM=Novomix, SMBG=blodsukkermåling, pr. uge
Alv. Hypo: antal hypogykämier tilfælde med bevidstfald eller kramper - husk at udfylde dato og tidspunkt på ba i journalen
Indl. Keto: indbegyndelse med ketoacidose, hvor pH er < 7,30 eller bicarbonat under 15 - husk at udfylde bagsiden med dato og bicarbonat

Cæliaki: Myxödem
Andet:
ONE-SIZE FITS ALL
STORE
SALE
Quantified Self & Wearable's
I have a blood pressure of 124 / 81. My heart rate is 51 bpm.
Real men ... that don’t use mhealth solutions!
Patient engagement is key!

DO YOU EVER THINK, PERHAPS, THERE'S MORE TO LIFE THAN EATING?

YOU MEAN, LIKE, SLEEPING?
The next killer thing?
The market potential

Motivated healthy

25M
People in the U.S. with Obstructive Sleep Apnea

1B
Smokers worldwide

1.5B
Adults overweight worldwide

6M
Pregnant women per year in the U.S.

600M
People globally suffer from hypertension

5.3M
Children, aged 3-17, diagnosed with ADHD in the U.S.

Information seekers

Chronically monitored

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Note: Bubble size is illustrative and not to scale. The conditions included in this figure as examples represent only a subset of the overall size of the Information Seeker segment.

References:
Battleground

Source: IBM Institute for Business Value.

Figure 6: Consumer electronics companies and medical device makers have their respective strengths and weaknesses – but who will win?
If the TV-market was they like healthcare, the living room would have a lot of devices!
Interoperability is hard to sell
Continua Framework (ITU-T)
User with diabetes

Assisted Living/Home Care

Hospital: virtual ambulatory
2,9 mmol/L 10 mar. 2015 09:59

i dag 12,22

6,9 mmol/L 10 mar. 2015 12:22

i dag 14,29

1,7 mmol/L 10 mar. 2015 14:27
Average BG: 7.7 ± 4.2 mmol/L Tests: 364

Blood Glucose
Target Range 3.9–8.9 mmol/L

Carbohydrates

Insulin
Diabetes

- Praktisk til ...
- Blodsukkermåler
- Kabler og programmer
- Kontrolvæske
- Batterier
- Teststrimler
- Fingerprikkere
- Lancetter
- Kanylebøtter
- Spritservietter
- Penkanyler
- Insulinsprøjter
- Insulinpenne
- Bøger for diabetikere
- Insuflon
- Insulin køletaske
- Tilbehør til Insulinpumpe

Sortering: Mest viste
Antal produkter pr. side: 43

Accu-Chek Mobile blodsukkerapparat: 795,00
2in1 SMART blodsukkermåler: 199,00
Bayer Contour XT blodsukkerapparat: 75,00

Accu-Chek Aviva blodsukkerapparat: 99,50
Accu-Chek Aviva Nano: 152,00
Freestyle Freedom Lite: 125,00

Illes udvalget
ælg en eller flere...
Innovating health & care systems

No thanks! We do not have time
THE TOYOTA WAY

CONTINUOUS IMPROVEMENT | RESPECT FOR PEOPLE

FROM ONE MAN’S EXACTING STANDARDS COME THE EVER-PRESENT THREADS THAT DRIVE A WORLDWIDE LEADER IN BUSINESS INNOVATION.
Heart attack patient claims Shrewsbury hospital food was ‘overcooked’ and ‘inedible’

A man recovering from a heart attack claims he was served meals he “wouldn’t give to a pig” during his stay at the Royal Shrewsbury Hospital – and has taken pictures of the food to prove it.
The next supermodel

Why the world should look at the Nordic countries

A 14-PAGE SPECIAL REPORT
2007

46 (7,5 mmol/L)

C₅₅H₁₀₄O₆
2017

32 (5,5 mmol/L)
Key Points

- The market potential is huge for mHealth and needed to sustain our societal model
- Tech’s Big Boys Line Up for Battle – and digital health tech is the Battleground! When will they get it?
- Non conducive re-imbursement system and fragmented markets is a barrier for scaling up
- Who cares about Quantified Self? – We need Patient engagement
- Interoperability - not sexy but needed to large scale
- Give the user back full control and ownership of their health data
- Take a look to Scandinavia for the next supermodel of personal connected Health adoption
SMART APPLIANCES

ANOTHER BEER, PLEASE, HAL...

I'M SORRY, DAVE. I CAN'T DO THAT. THE BATHROOM SCALE AND THE HALL MIRROR ARE REPORTING DISTURBING FLAB ANOMALIES
Thank you for your attention

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Health Care in Denmark
The Danish Health Care System

Basic Features

- Universal Coverage
- Free & Equal Access
- Financed by general taxes
- A high degree of decentralization
Organization of the Health Care System

**National Level**
- Ministry of Health

**Regional Level**
- 5 Regions

**Local Level**
- 98 Municipalities
Where to go to if you get ill?

- Patient
- General Practitioner
- Specialist
- Private Hospitals
- Hospitals
- Emergency ward
- Dentist
Hospital Investments – A new hospital structure (and 16 new hospital projects)

- A total investment of **5,5 billion Euros**
  - The Government: 3,3 billion Euros
  - The Regions finances the rest

- New structure for **emergency departments** (From 40 → 20)

- Approx. 20 percent reserved for investments in **ICT and medico-technical devices**

- Demands for efficiency gains of 4-8 percent on **future activity**
How are we doing so far? - Outpatient treatment and beds

Actual developments (2009-2014) and expectations (2009-2020)
Unique patients vs. bed days (2009 = index)

**Diabetes, type II**

**COPD**

**Cardiovascular**

**Cancer**
Reshaping the healthcare landscape

- From castles to light houses
mHealth – Denmark as a frontrunner

Source: Currie & Seddon, 2014
Telemedicine - home measurements for patients with COPD

- Two years and 1200 patients
- TeleKit including a tablet with mobile internet, scale, blood cuff and pulse oximeter
- Weekly measurements – shared data base

The Benefits:

- 7 out of 10: Increase in level of comfort, safety and understanding of own disease
- Impairments are discovered earlier, and hence emergency hospitalizations is reduced (GOLD3).
- 9 out of 10 thought it was easy to use the Telekit
- National implementation: the goal is to offer telemedicine to all relevant COPD patients by 2019 (QALY and cost savings)