



# Hvorfor er det så vanskelig å lykkes med IKT-prosjekter i helsesektoren?

Teknologiperspektivet

# In Second Look, Few Savings From Digital Health Records

By REED ABELSON and JULIE CRESWELL

The conversion to electronic health records has failed so far to produce the hoped-for savings in health care costs and has had mixed results, at best, in improving efficiency and patient care, according to a new analysis by the influential RAND Corporation.

Optimistic predictions by RAND in 2005 helped drive explosive growth in the electronic records industry and encouraged the federal government to give billions of dollars in financial incentives to hospitals and doctors that put the systems in place.

"We've not achieved the productivity and quality benefits that are unquestionably there for the taking," said Dr. Arthur L. Kellermann, one of the authors of a reassessment by RAND that was published in this month's edition of Health Affairs, an academic journal.

RAND's 2005 report was paid for by a group of companies, including General Electric and Cerner Corporation, that have profited by developing and selling electronic records systems to hospitals and physician practices. Cerner's revenue has nearly tripled since the report was released, to a projected \$3 billion in 2013, from \$1 billion in 2005.

The report predicted that widespread use of electronic records could save the United States health care system at least \$81 billion a year, a figure RAND now says was overstated. The study was widely praised within the technology



Dr. Alvin Rajkomar tracks patient data on a Samsung Galaxy. JIM WILSON/THE NEW YORK TIMES

industry and helped persuade Congress and the Obama administration to authorize billions of dollars in federal stimulus money in 2009 to help hospitals and doctors pay for the installation of electronic records systems.

"RAND got a lot of attention and a lot of credit with the original analysis," said Dr.

## COMMENTARY

### Healthcare IT: Savior Or Sinkhole?



**Paul Cerrato**

Editor, InformationWeek Healthcare

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**Latest RAND report suggests we might be throwing taxpayer dollars away on EHRs and other healthcare IT systems.**

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Paul Cerrato | January 11, 2013 03:43 PM

The Office of the National Coordinator for Health IT (ONC) has done an outstanding job of promoting EHR technology through Meaningful Use financial incentives, and it has fostered a spirit of cooperation among IT stakeholders. But ONC sometimes sounds more like a cheerleader than an objective observer on the extent to which modern informatics can transform healthcare.

The issue's still out. A RAND Corporation report in 2005 predicted that the



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MANDAG 21. JANUAR 2013 | LØSSALG KR 30,- | ÅRGANG 22 | NR. 17

# Finansavisen



SIDE 26 OG 27  
serit  
**Sikter mot milliarder**

**Norges største IT-investorer**  
SE STOR OVERSIKT  
SIDE 22, 23 OG 24

Personlig økonomi:  
**Svinedyre iPhone-forsikringer**  
SIDE 16 OG 17



## Norsk satsning på e-journal: Har sløst bort 1 mrd.

■ Etter 13 år er Norge fortsatt ikke ferdig  
■ Estland kom i mål for 82 millioner kroner

SIDE 28 OG 29



Lindorffs råd til europeiske bedrifter:



**Veldig fornuftig å stramme inn**  
SIDE 12



**Norsk olje-politikk vil ikke bli mye endret**  
HEGNARS LEDER PÅ SIDE 2

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• Audi, Audi A3, Audi A4, Audi A5, Audi A6, Audi A7, Audi A8  
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• Volkswagen, Volkswagen Golf, Volkswagen Passat, Volkswagen Polo, Volkswagen Tiguan  
• Skoda, Skoda Octavia, Skoda Superb  
• SEAT, SEAT Ibiza, SEAT Leon, SEAT Alcazár  
• Nissan, Nissan Qashqai, Nissan X-Trail  
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## £11bn NHS IT 'failure' to be scrapped quickly

22 September 2011

After damning criticism over wasted money and failed objectives the government has confirmed it is to accelerate the end of the multi-billion pound NHS National Programme for IT, with ministers blaming predecessors from the previous Labour government.

David Cameron pledged in May that the government's Major Projects Authority would review the heavily criticised IT programme.

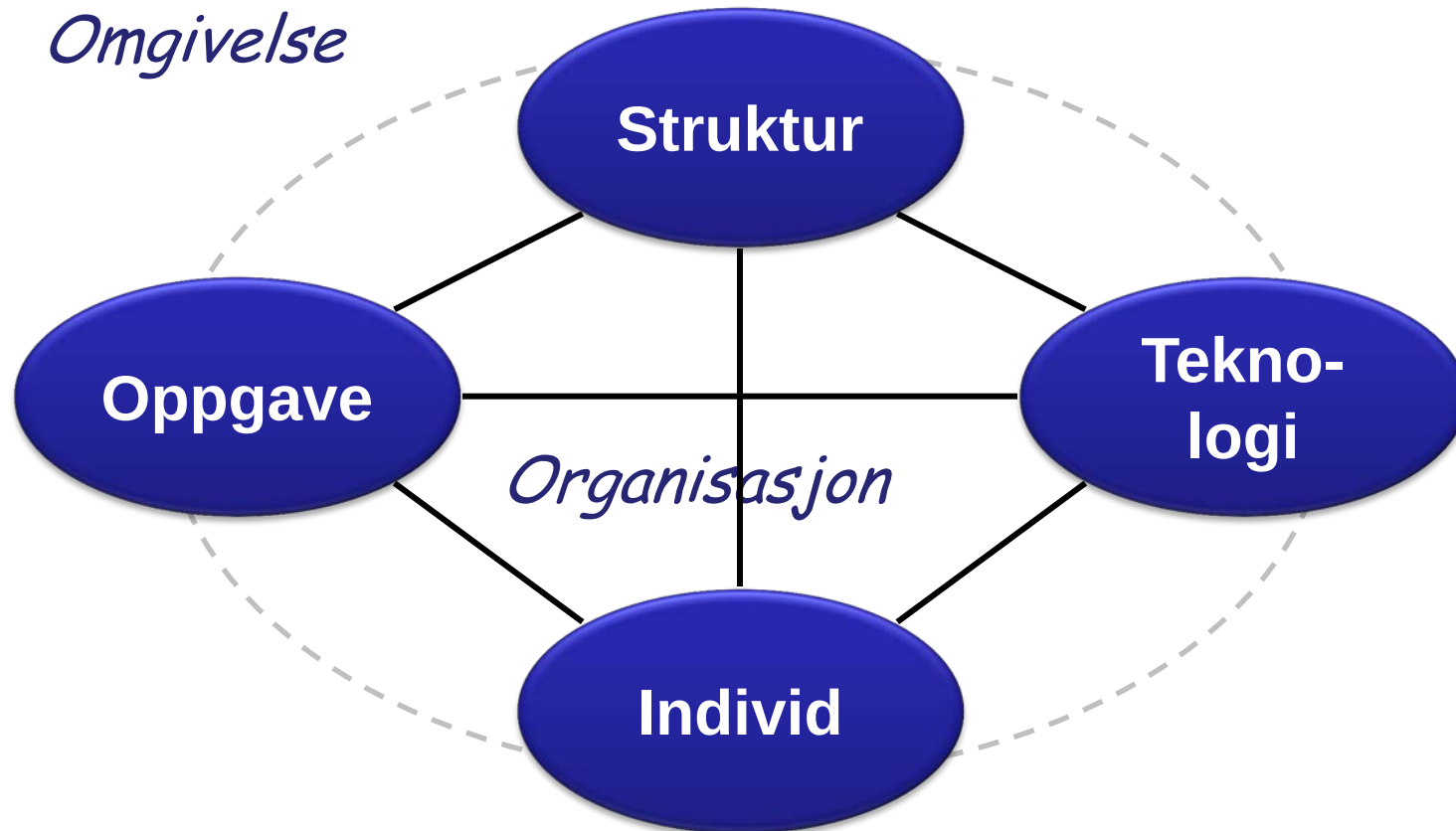


The MPA concluded that the NPfIT has not and cannot deliver its original goals, despite what were labelled "substantial achievements" from two thirds of the £6.4bn already spent.

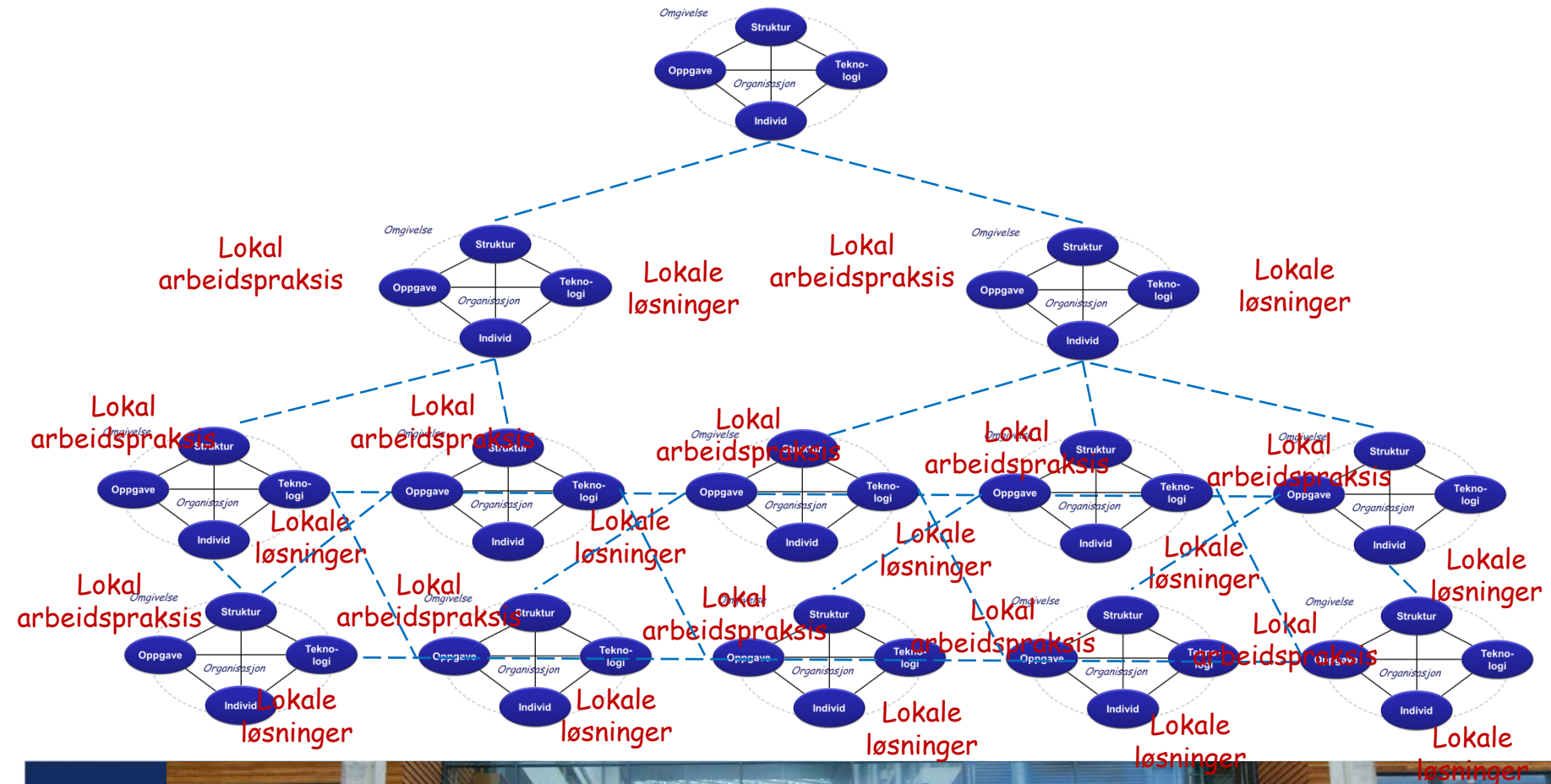
The government said it was no longer appropriate for a centralised authority to make decisions on behalf of local organisations in a modernised NHS "which puts patients and clinicians in the driving seat".

"We need to move on from a top down approach and instead provide information systems driven by local decision-making," the Department of Health said. "This is the only way to make sure we get value for money and that the modern NHS meets the needs of patients."

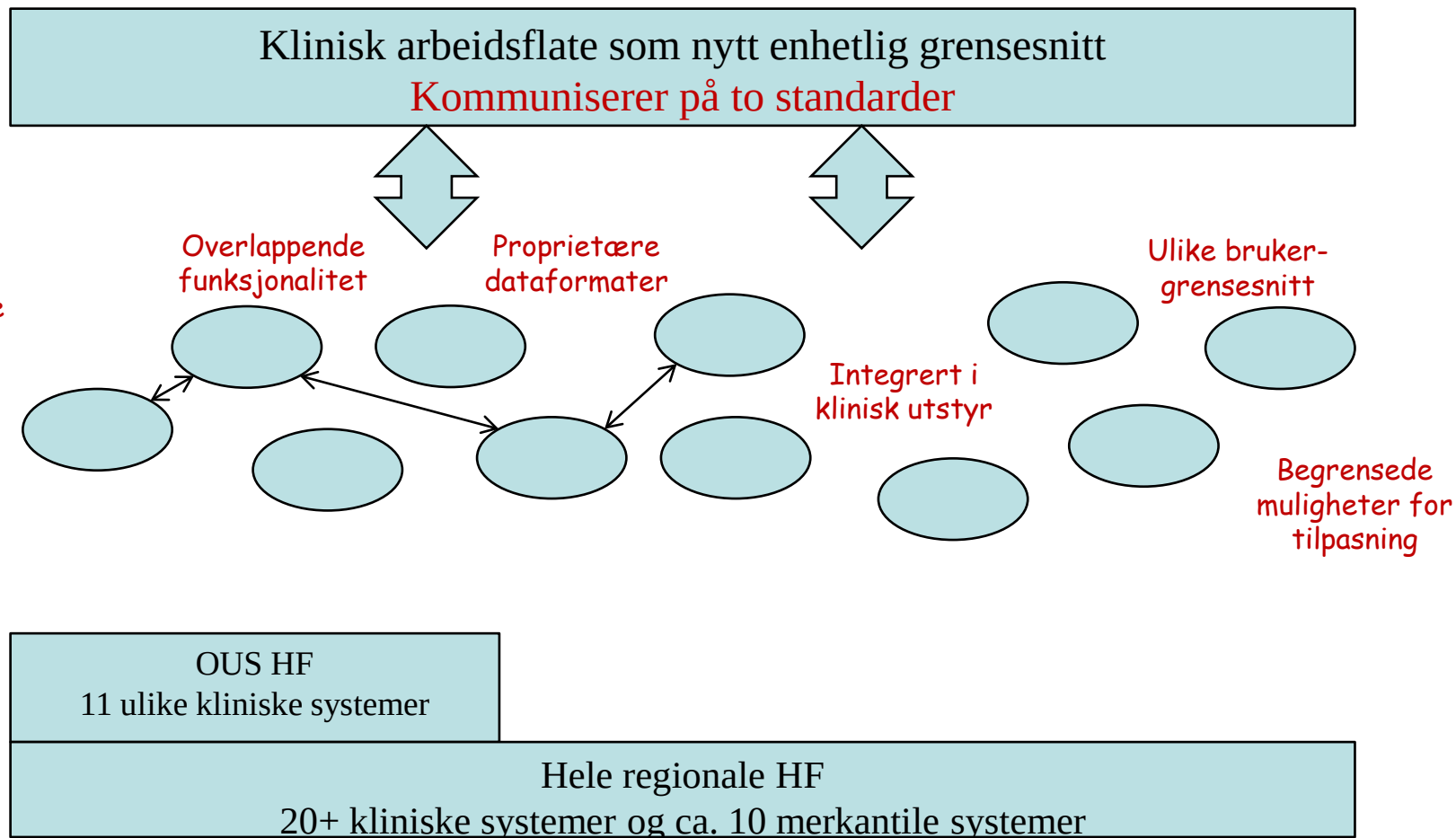
# Leavitt's Diamant: Organisatorisk og teknologisk kompleksitet



# Organisatorisk og teknologisk kompleksitet i HFene



# Organisatorisk og teknologisk kompleksitet: Klinisk arbeidsflate



# Utfordringer med informasjonskvalitet

Irishland  
Husk  
Varicella virus

VAC. Vaccinated in infancy. Fair forested scar.

P.H. Onset 5 days ago. Ached all over. No backache. No headache. Vomited Eruption two days ago.

P.E. V.D. N. obese. Few papules but on face are mostly vesicles. Some papules are umbilicated. On body eruption is not all out. Some macules as well as vesicles. On hand are beginning vesicles a typical circular formation as per drawing.

A Typical condition

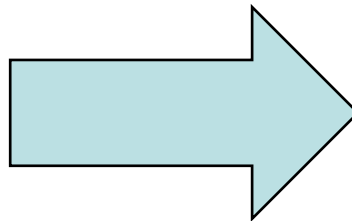
2-25-02 Beginning pustular stage.

2-26-02 At height on face, nearly as on hands.

2-27-02 Drying on face.

2-28-02 Dry on face except near ears. Less trouble on hands & less pain at that account. All the lesions are very large.

3-7-02 Face dry. Eruption is now drying on hands.



Electronic Patient Record - Netscape

0101 Enrico Coco [Save] [X]

Birthplace: Sanluri [CA] Sex: M

Residence: Quartu S.E. [CA] Date of Birth: 22 Jun 1951

History: Rest angina. Exercise-electrocardiogram workload of 125 Watts x 2' (peak rate pressure dipyridamole-echocardiography test: negative.

Therapy: The patient was medically treated with blockers and became asymptomatic.

Exam Plan:

Echo Rest Produced [Edit] Apical 4-chambers v Report: [Demo version - only has carotid report]

Echo Stress Produced [Edit] Apical 4-chambers Report: [Demo version - only has carotid report]

Echo Recovery Produced [Edit] Apical 4-cham Report: [Demo version - only has carotid report]

Coronography Complete [Edit] Report: Single-vessel disease. Stenosis (30%) of anterior descending artery which underwent transient occlusion during catheterization, reversed with intracoronary nitrates. [Ats] [Bridge] [Bypass]

Served from dir: file:///E:/sascha/InfoDOM/htmlSource/

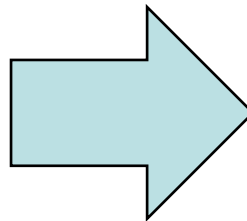


# Betydningen av Kognitiv ergonomi



Addressograph

|                                           | 7-3 | 3-11 | 11-7 |
|-------------------------------------------|-----|------|------|
| <b>ED/MA</b>                              |     |      |      |
| NOT PRESENT                               |     |      |      |
| PRESENT *N                                |     |      |      |
| <b>CAVUS</b>                              |     |      |      |
| ALL PRESENT & ADEQUATE                    |     |      |      |
| OTHER *N                                  |     |      |      |
| <b>NO TENDERNESS</b>                      |     |      |      |
| TENDERNESS *N                             |     |      |      |
| <b>SOFT</b>                               |     |      |      |
| NON-TENDER                                |     |      |      |
| <b>FLAT</b>                               |     |      |      |
| BOWEL SOUNDS PRESENT                      |     |      |      |
| OTHER *N                                  |     |      |      |
| <b>SITE - INDICATE</b>                    |     |      |      |
| INTACT                                    |     |      |      |
| FLAT                                      |     |      |      |
| <b>NORMAL SKIN COLOR/TEMP</b>             |     |      |      |
| INCISION CARE                             |     |      |      |
| OTHER *N                                  |     |      |      |
| <b>SITE - INDICATE</b>                    |     |      |      |
| DRY                                       |     |      |      |
| <b>INTACT</b>                             |     |      |      |
| ODORLESS                                  |     |      |      |
| <b>CHANGE - INDICATE TIME</b>             |     |      |      |
| OTHER *N                                  |     |      |      |
| <b>CHEST TUBE INTACT</b>                  |     |      |      |
| GRAVITY                                   |     |      |      |
| <b>SUCTION PRESSURE MM H<sub>2</sub>O</b> |     |      |      |
| NASOGASTRIC TUBE INTACT                   |     |      |      |
| GRAVITY                                   |     |      |      |
| <b>SUCTION - INTERMITTENT/CONTANT</b>     |     |      |      |
| OTHER *N                                  |     |      |      |



**QPID EMR** MRN: (Go) Schedule S

Search:

| HEM  | 02/02/2008 09:35 | BLOOD              | PT     | 19.5 | sec     | 10.3-13.2 |
|------|------------------|--------------------|--------|------|---------|-----------|
| HEM  | 02/02/2008 09:35 | BLOOD              | APTT   | 32.0 | sec     | 22.1-34.0 |
| HEM  | 02/02/2008 09:35 | BLOOD              | PT-INR | 1.9  | ...     | ...       |
| HEM  | 02/06/2008 05:58 | BLOOD              | WBC    | 30.0 | th/cmm  | 4.5-11.0  |
| HEM  | 02/06/2008 05:04 | BLOOD              | PLT    | 60   | th/cumm | 150-400   |
| LMED | 11/30/2007       | METHADONE          | ...    |      |         |           |
| ALRG | 2009-02-24       | Allergy List       | ...    |      |         |           |
| OPN  | 2008-01-24       | OP NOTE            | ...    |      |         |           |
| NTE  | 2007-12-08       | Transplant Surgery | ...    |      |         |           |
| NTE  | 2007-11-26       | Inpatient Pain     | ...    |      |         |           |
| NTE  | 2007-11-07       | Liver Consult note | ...    |      |         |           |
| NTE  | 2007-10-18       | Tx ID Consult Note | ...    |      |         |           |
| NTE  | 2004-05-08       | Patient Note       | ...    |      |         |           |

CODES \*N - REFERTO NURSING NOTES

|                                        |                                     |                                 |                             |
|----------------------------------------|-------------------------------------|---------------------------------|-----------------------------|
| <b>RESPIRATORY RHYTHM</b>              | <b>LUNG SOUNDS</b>                  | <b>HEART SOUNDS</b>             | <b>EDEMA</b>                |
| BECE - BILATERAL EQUAL CHEST EXPANSION | FSR - FINE SCATTERED RALES          | RUB - FRICTION RUB              | BAE - BILATERAL ANKLE EDEMA |
| TCP - TACHYPNEA                        | BBR - BRASLAR RALES                 | M - MURMUR                      | P - Pitting                 |
| CS - CHEST STONES                      | CR - COARSE RHONCHI                 | MUF - MUFFLED                   | SCALE - 1+ 2+ 3+ 4+         |
| KM - KUBISMAL                          | W - WAHEEZE                         | DIST - DISTANT                  | GENERALIZED - GENERALIZED   |
| NL - NORMAL                            | T - THROUGHOUT 1/2, 1/2, 2/2 WAY UP | S3, S4 - 3RD & 4TH HEART SOUNDS | BODY EDEMA                  |

# Fravær av kompetanse om teknologi og endringsprosesser - på alle nivåer!



Politisk nivå: Storting og Regjering

Embetsverk: Departement og direktorater

Styrene i regionale og lokale HF

Ledelse i regionale og lokale HF

Nøkkelkompetanse i regionale og lokale HF

# Prinsipper for reduksjon av organisatorisk og teknologisk kompleksitet

## ✚ Samle enheter med:

- ☐ Lik funksjonalitet (tilby samme tjenester → like behov)
- ☐ Høy informasjonsutveksling (stort behov for tilgang til samme informasjon)
- ☐ Høy avhengighet (integrasjon, mange overleveringer)

## ✚ Skille enheter med :

- ☐ Lav funksjonslikhet (ulike behov)
- ☐ Lav informasjonsutveksling
- ☐ Lite avhengigheter

## ✚ Standardisere

- ☐ Arbeidspraksis (prosesser, rutiner) for enheter med like prosesser
- ☐ Klinisk utstyr og løsninger for like oppgaver
- ☐ Systemportefølje, redusere til et minimumsantall av varianter
- ☐ Grensnitt for datautveksling samt formater for datautveksling

# Utvikle løsninger som

## ✚ Gir optimal nytte på lokalt nivå, i lokale arbeidsprosesser

- ☐ Brukervennlige og nyttige løsninger
- ☐ Integrert i arbeidsoppgaven

## ✚ Understøtter effektiv integrasjon

- ☐ «Sømløs» integrasjon mellom enheter (prosessflyt)
- ☐ Transparent tilgang til data på tvers av enheter (og systemer)
- ☐ Omfordeling og reorganisering av arbeidsoppgaver (tid og sted)

## ✚ Utnytte teknologiens muligheter der det er hensiktsmessig

- ☐ Lar pasienten eie egne data og gi tilgang ved behov (med regler for overstyring)
- ☐ Lar pasienten ha ansvar for kvalitet på egne data (men ikke uten hjelp og støtte)
- ☐ Lar pasienten være ansvarlig for egen behandling (egnet for en del langvarige diagnoser)
- ☐ Gir pasienten kvalitetsdata og reell valgfrihet



# Bruke teknologi til å utvikle og forbedre

## Measurement

- Big data, nano data, generated data
- Business intelligence and analytics

Kvalitetsdata

## IT-based experimentation

- Test of designs/solutions
- Measurement and evaluation

Pilotering og utprøving av nye løsninger og metoder

## Sharing

- Sharing of data and insights - microinnovations
- Knowledge dissemination and problem solving

Kunnskapsdeling, erfaringsutveksling, samhandling

## Replication

- Replicate and scale up innovations and business processes

Effektiv spredning av «beste praksis»

Brynjolfsson, MIT