Quality: a product of good hospital management as much as good treatment

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Presentation content

- About Diakonhjemmet Hospital
- What is quality?
  - What is quality in healthcare?
  - Diakonhjemmet Hospital definition of quality.
- Who has responsibility for quality in healthcare?
- Technology at Diakonhjemmet Hospital
- The role of technology in :-
  - enabling and supporting quality improvement
  - creating quality problems?
- Diakonhjemmet Hospital model of quality improvement and corporate governance
  - The basis of our quality management system
  - PDCA – Plan, Do, Check, Act
  - ICT supported PDCA
- Results and Conclusions

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Diakonhjemmet Hospital

- City centre Oslo Hospital
  - ✧ Local hospital status
  - ✧ Emergency department
- Private - charity owned – non-profit – fully publically funded
- 205 beds (2011 – 234, 2010 – 244, 2009 – 270, 2008 - 290 beds)
- 7 clinical department (orthopaedic and general surgery, rheumatology, internal medicine, psychiatric acute ward and district centre, elderly psychiatry and child psychiatry)
- 1500 employees
- 12800 inpatient and 96000 outpatient visits
- 43000 radiology and over 1 mill lab tests
- Budget: £125 mill.

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What is Quality?

- **ISO definition**
  - ✧ ISO 9000:2006 §3.1.1 – Quality: degree to which a set of inherent characteristics fulfils requirements !
  - ✧ §3.1.2 - Requirements: need or expectation that is stated, generally implied or obligatory
- **Institute of Medicine**
  - ✧ the extent to which health services provided to individuals and patient populations improve desired health outcomes. The care should be based on the strongest clinical evidence and provided in a technically and culturally competent manner with good communication and shared decision making.

    Total quality is best defined as an attitude, an orientation that permeates an entire organization, and the way in which that organization performs its internal and external business. People who work in organizations dedicated to the concept of total quality constantly strive for excellence and continuous quality improvement in all that they do

    Pelletier & Beaudin, PhD, Q Solutions: Essential Resources for the Healthcare Quality Professional, Second Edition, (Glenview, IL: National Association for Healthcare Quality, 2008); p.3.

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Diakonhjemmet definition of quality

- Quality is a product of all the services and facilities the patient receives or comes into contact with during the period of treatment from referral to discharge
  - ✧ buildings
  - ✧ personal
  - ✧ decor
  - ✧ administrative services
  - ✧ food
  - ✧ diagnosis, treatment and care
  - ✧ finances
  - ✧ personnel competence
  - ✧ etc
  - ✧ ICT / technology

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Who has responsibility for quality in healthcare?

Before
(but not long before....)
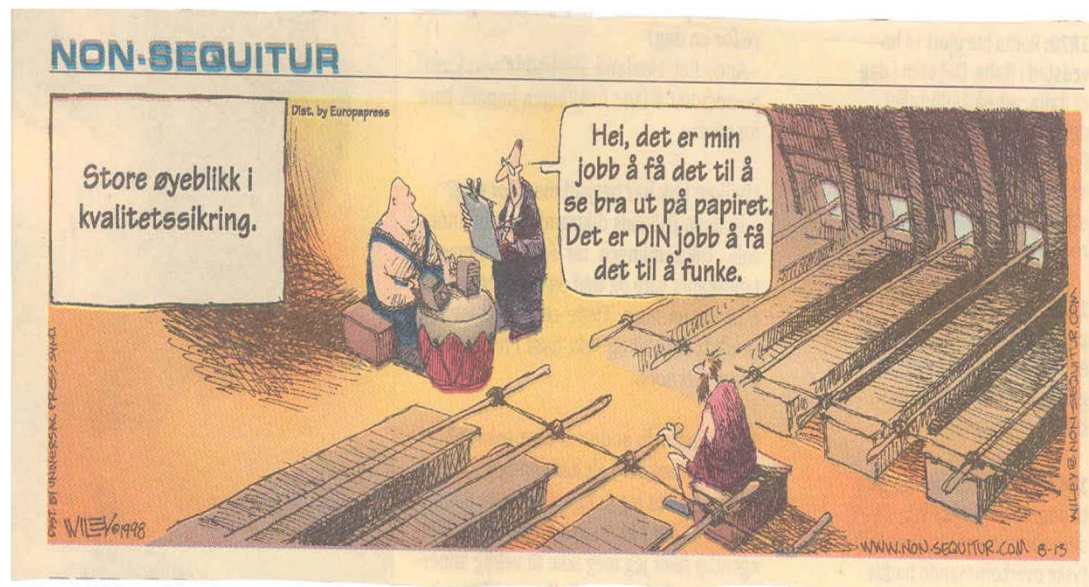
William Edwards Deming stated " Management's job is to optimize the whole system" and "Deming believed that 80–85% of quality (or lack thereof) was due to the system and not the individual", *ergo of management*

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Technology supported Quality Management and Improvement

- Due to the complexity of hospital management Diakonhjemmet has chosen a fully technology supported system of quality management and improvement

- Management support for technology and improvement

- Diakonhjemmet is fortunate to have a CEO with a keen awareness of the benefits of technology and a passion for improvement.

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A timeline of IT implementation in our hospital

- 1989 Lab (electronic messaging in 1992)
- 1994 DIPS PAS/EPJ DOS version
- 2000 DIPS PAS/EPJWindows version
- Radiology (RIS / PACS) in 1999
- Paperless in 2006 ($1010^{06}101010$)
- GoTreatIt 2008 (Rheumatology)
- Electronic Messaging
    - Lab – 2006
    - Treatment documentation 2010
    - Messaging between the hospital and community healthcare 2011
- Administrative ICT support
    - Accounting and pay
    - Personnel management
    - Quality management
    - Building management
    - Internet and Intranet

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The basis of our quality management system

- Introduction to Plan – Do – Check – Act
- IT supported PDCA
- Lean
- Process mapping
  - ✧ Clinical pathways
  - ✧ non-clinical processes
- Combining it all
  - ✧ "The whole is greater than the sum of the parts"

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PDCA – Plan, Do, Check, Act

- William Edwards Deming
  - ✧ Loved in Japan, ignored in the US
  - ✧ Focus on systems, get it right first time, variation and waste reduction (Lean)

- In a hospital management paradigm
  - ✧ Put simply
    - *you do what you say you are going to and at least what you have to. Everything else comes second to this.*
    - *You measure it and analyse it*
    - *You try again when you don't achieve the targets and implement when you do.*

- Lean in Hospitals
  - ✧ Lean is based on Deming's ideas (PDCA and reduction in variation)
    - *Deming[1] "invented" PDCA and took it to Japan. Toyota embraced it. Womack, Jones and Roos and Licker documented what Toyota had done (The Machine that Changed the World and The Toyota Way) and called it Lean.*

1. Actually Shewart described PDCA before Deming

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Quality based management paradigm

- **PDCA**

- **Plan** – Strategy and yearly targets
- **Do** – Daily activity and projects
- **Check** – reports and analysis
- **Act** – implement the positive,
  take another round on the outstanding
  challenges
- Constant review of adverse events
  – BOTH from treatment,
  legal requirements and
  from goal achievement

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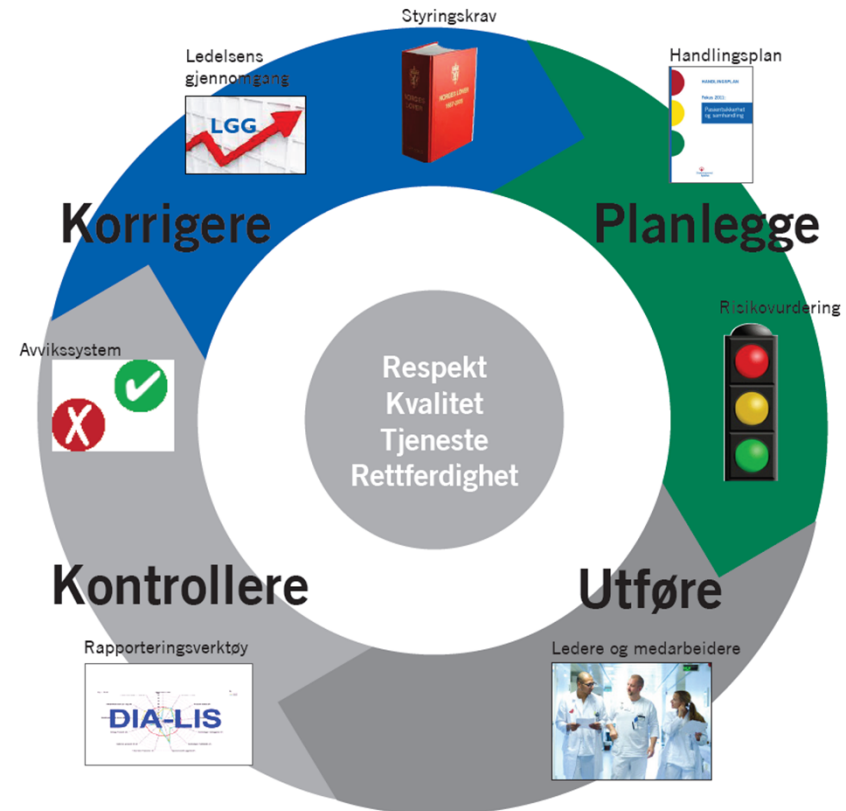
ICT supported PDCA

- Process mapping
  - ✧ Clinical pathways
  - ✧ Administrative processes
- Performance management
  - ✧ KPI
  - ✧ National and regional indicators
- Adverse event / continuous improvement
  - ✧ patient, ICT, information security, HSEQ, fire safety, MTU, etc
  - ✧ Targets and legal requirements
- Document management
  - ✧ administrative
  - ✧ patient related

- *Legal requirements*
- *Roles and responsibility*
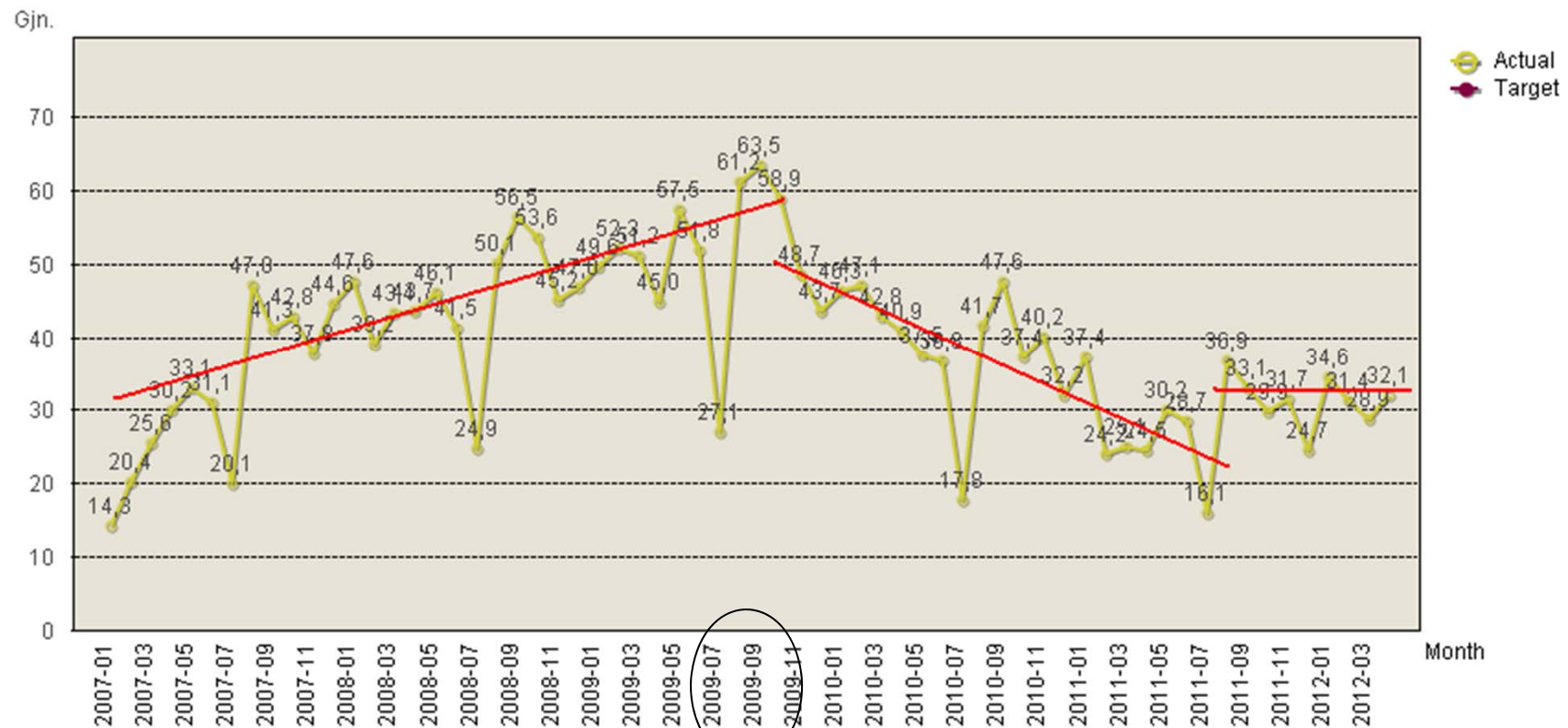- *Personnel competence*
- *Documented procedures*

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Results and conclusions

- A selection of results
- Conclusions

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Waiting time, treatment guarantee and bed blockers

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Waiting time, treatment guarantee and bed blockers
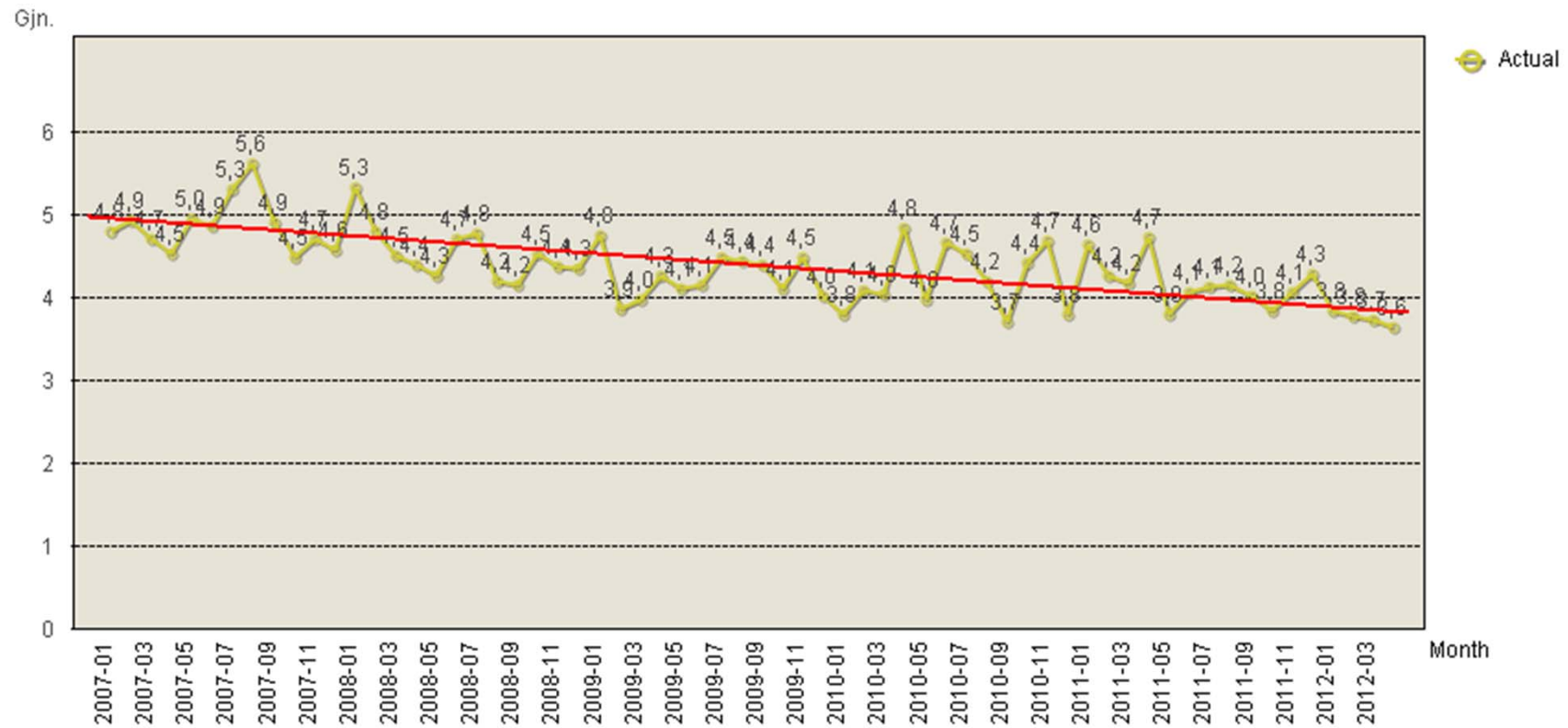

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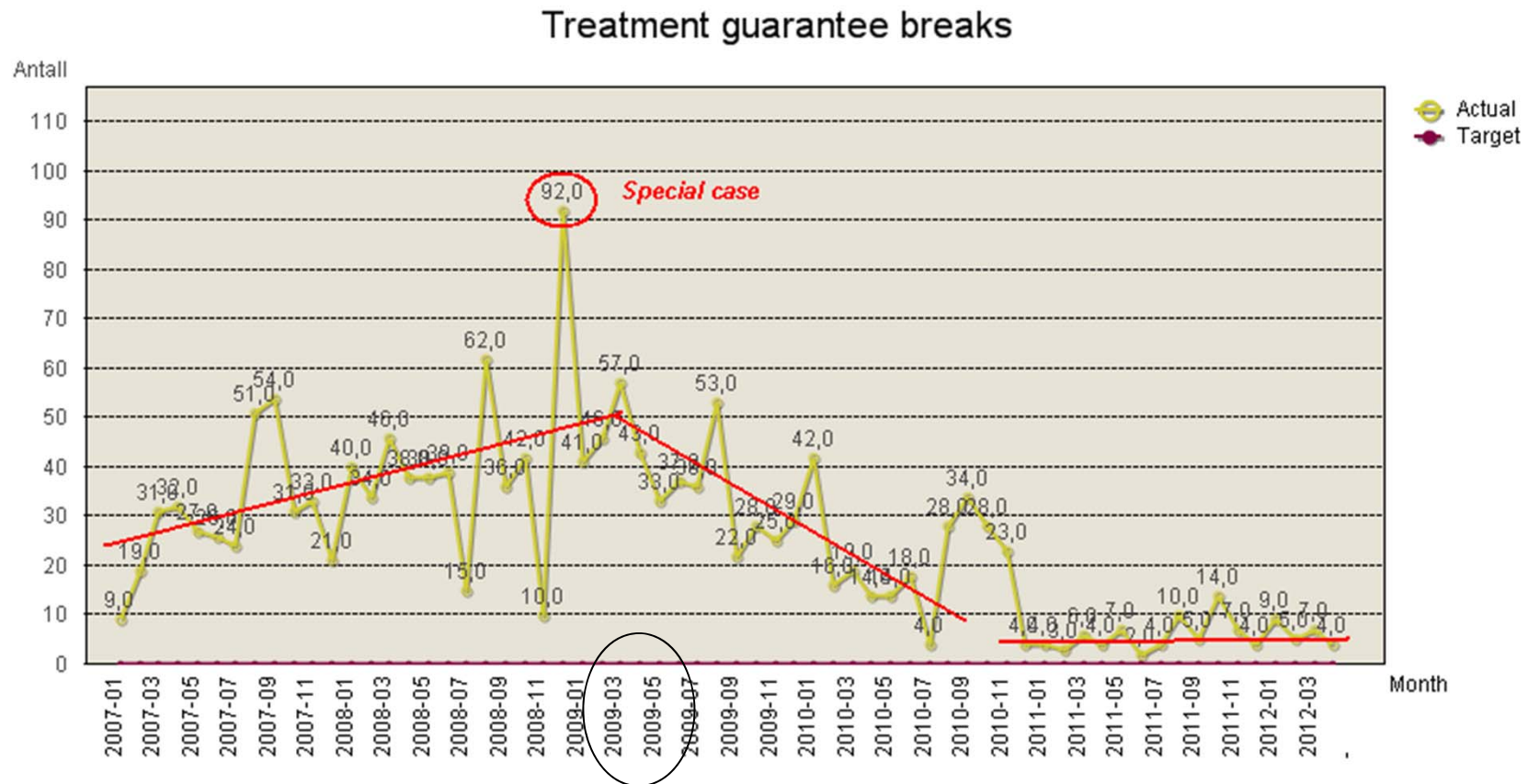
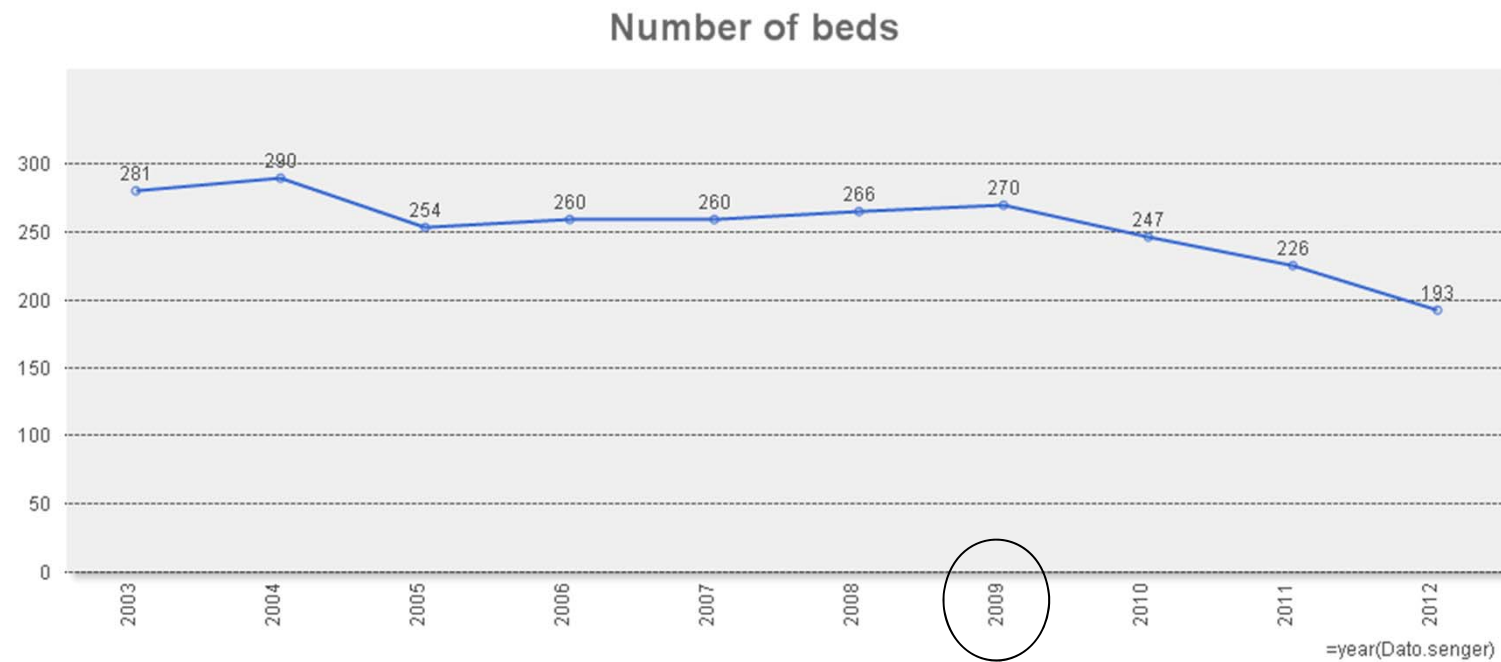# Waiting time, treatment guarantee and bed blockers
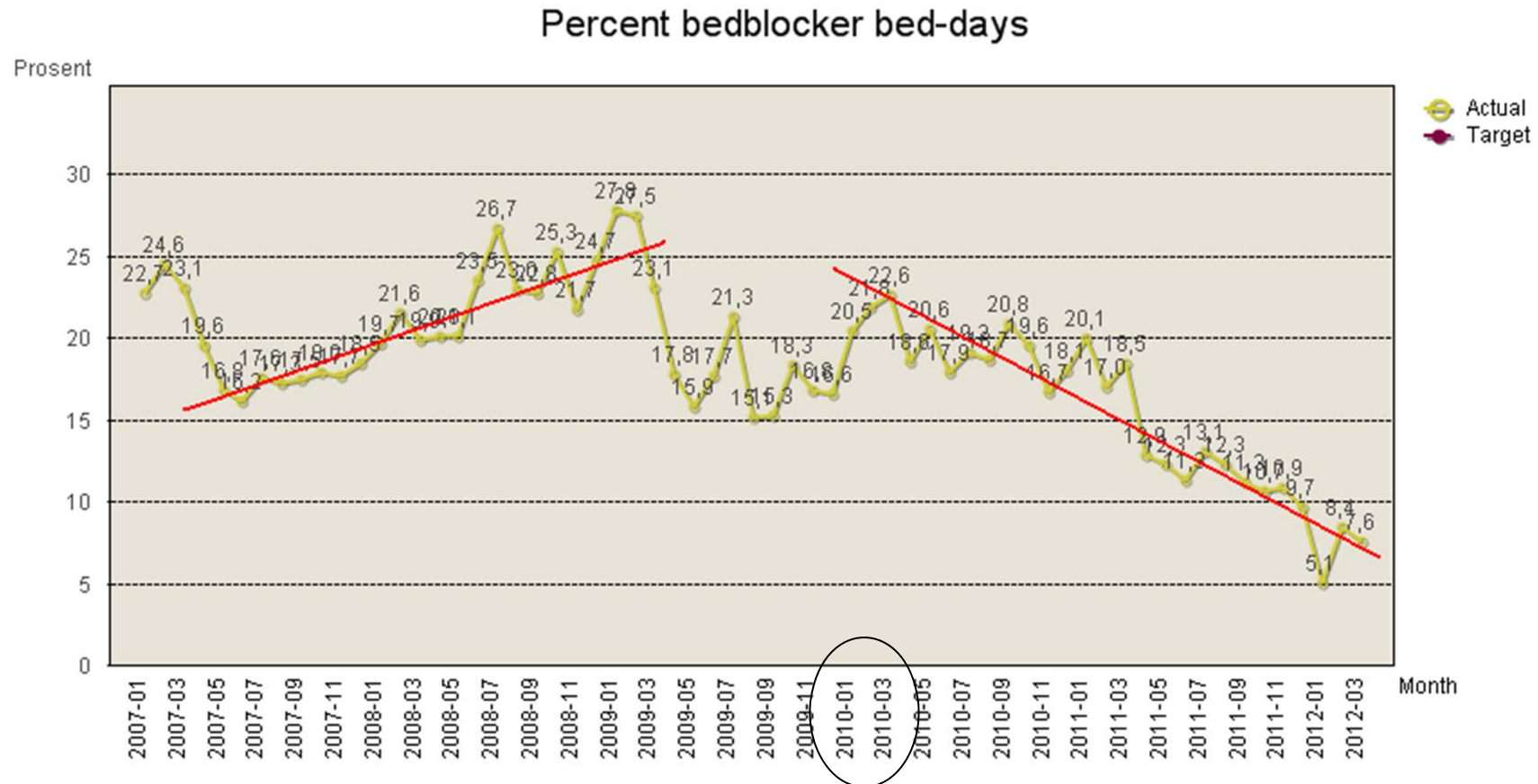
Length of stay and number of beds

Length of stay - internal medicine and surgical departments
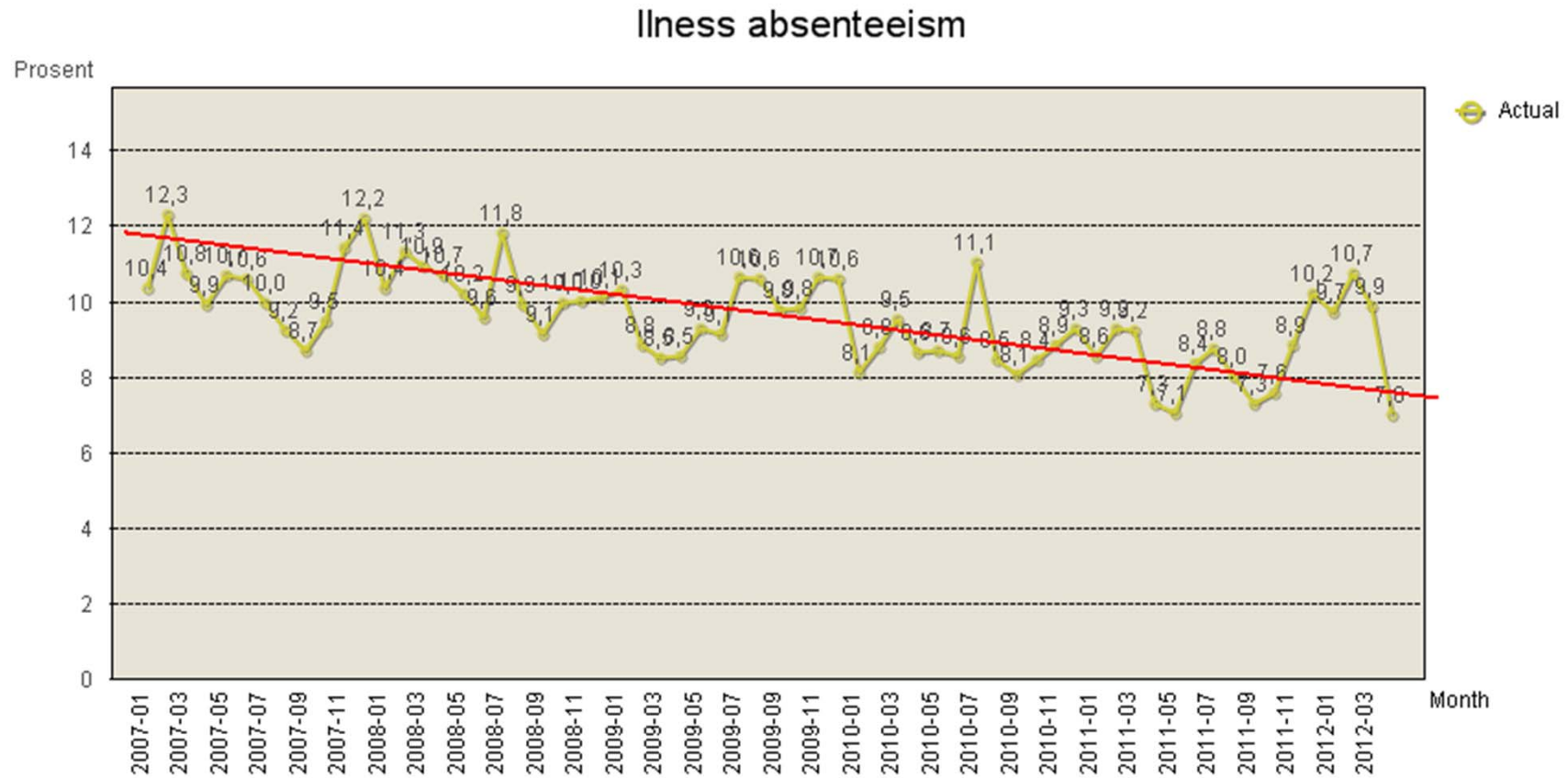
Excluding bedblocker days

Length of stay and number of beds

Number of beds

Absenteeism

Putting it all together

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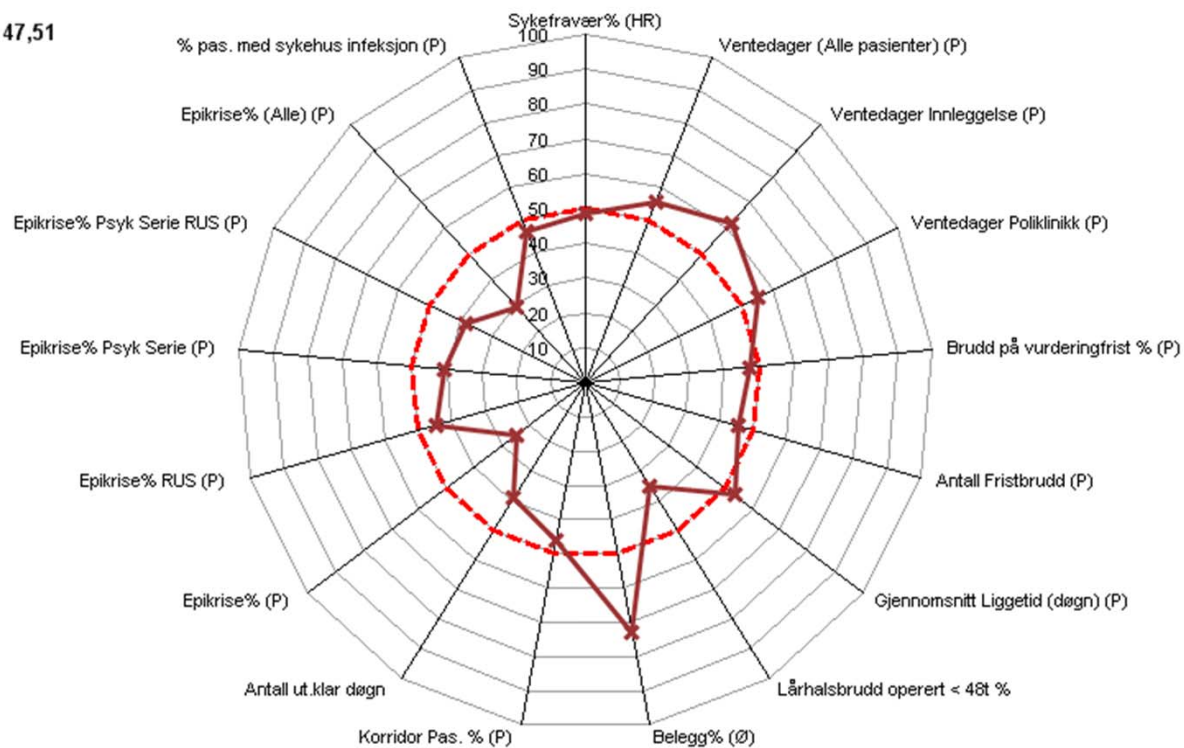
Overall management measure

Running average target achievement
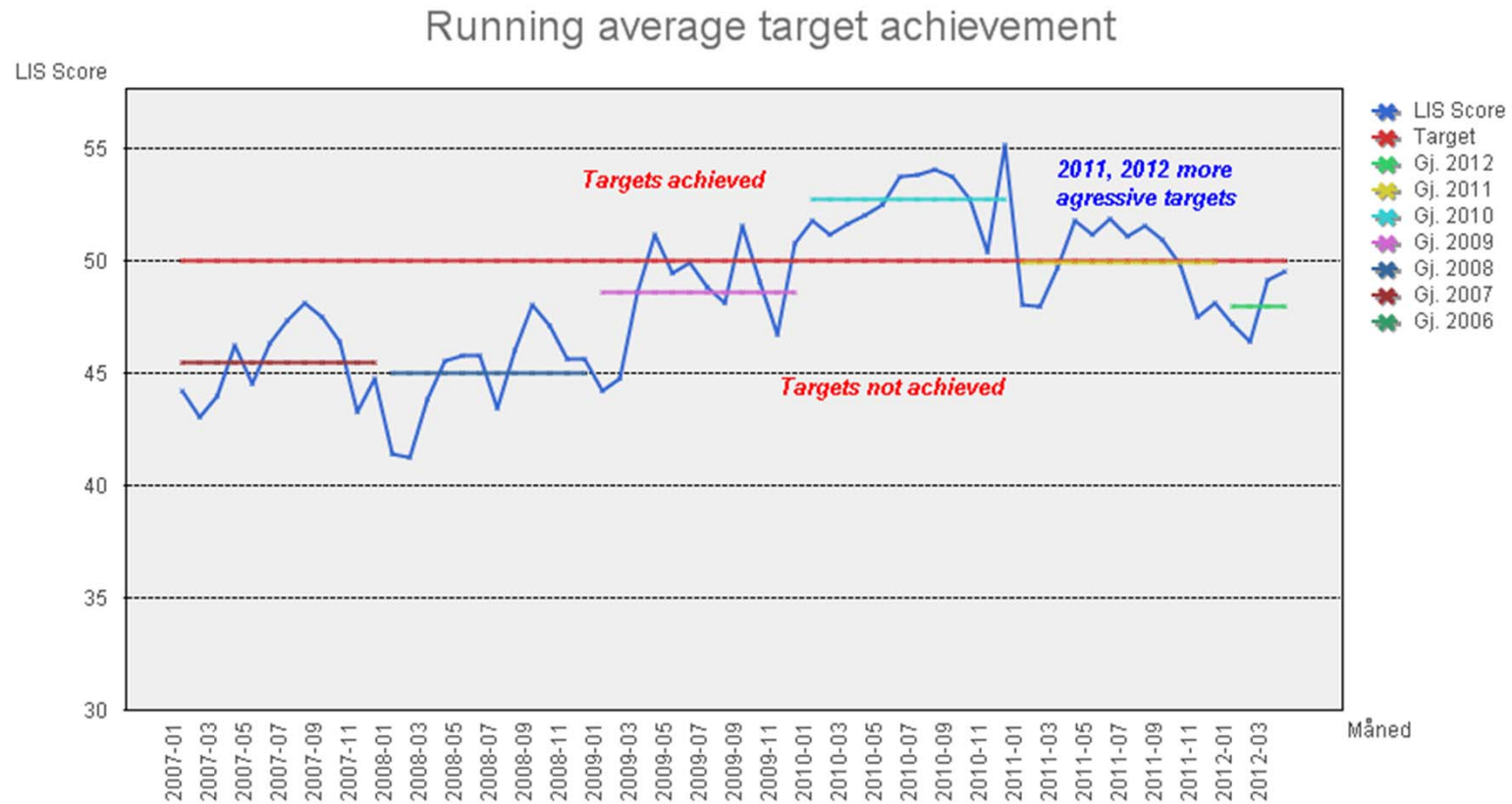
Finances

- The hospital makes a profit that is reinvested in new infrastructure, new technology, research and its employees
    - ✧ four new wards
    - ✧ new library, auditorium and learning centre
    - ✧ new accident and emergency

    - ✧ Highest number of research points of all non-university hospitals

    - ✧ Relatively modern technology park

    - ✧ High expenditure on further education

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Patient satisfaction

Sykehus	Pleie-personalet	Informasjon	Legene	Pårørende	Organ-isering	Standard	Utskrivning	Sam-handling	Pasient-sikkerhet	Ventetid elektive pasienter	Totalt
Østfold	59	49	56	50	49	56	46	51	49	51	56
Ahus	61	56	59	60	61	17	46	52	58	53	59
Hamar	40	51	44	46	45	45	44	46	17	36	41
Gjøvik	29	21	22	30	39	28	36	9	29	5	17
Kongsvinger	29	33	28	14	26	34	11	10	9	16	23
Lillehammer	35	21	13	31	29	33	25	33	20	11	26
Tynset	6	5	8	9	4	6	4	16	27	28	5
Elverum	43	45	53	41	56	30	60	22	47	29	40
Aker	51	47	51	48	47	41	43	61	60	35	57
OUS	38	31	35	40	57	40	55	59	31	46	51
Drammen	44	40	45	56	57	54	57	25	45	49	52
Ringerike	24	19	22	18	36	8	42	21	48	13	25
Kongsberg	7	7	5	8	9	24	6	37	5	9	6
Bærum	52	53	46	53	53	44	24	41	41	42	46
Sunnaas	15	34	31	11	10	37	30	17	11	13	16
Rjukan	13	25	20	25	23	9	23	4	20	10	12
Notodden	21	10	16	12	17	10	17	1	10	19	10
Skien/Porsg	41	60	49	34	49	28	53	57	45	29	44
Kragerø	46	61	60	47	60	16	61	43	52	2	45
Vestfold	22	34	41	38	41	19	46	30	38	24	33
Kr'sand	34	18	38	33	37	31	12	27	41	26	31
Arendal	14	12	5	16	21	21	36	11	24	33	20
Flekkefjord	9	9	5	7	13	5	7	5	15	41	9
Diakonhjem	**10**	**8**	**17**	**5**	**17**	**14**	**9**	**23**	**30**	**8**	**7**
Lovisenberg	16	27	10	27	12	22	7	45	7	31	18
MHansen	7	11	10	20	5	13	33	52	6	44	21
Feiring	2	1	2	1	2	1	5	6	3	15	1
Glittre	1	2	1	18	1	4	1	2	2	61	2
RevmaL	5	6	4	6	6	2	2	18	1	31	4
Betanien	4	25	24	4	20	11	13	42	13	57	24
Stavanger	47	43	48	55	51	42	50	48	51	60	59
Stord	33	57	57	24	34	48	41	28	34	1	29

Thank you / Takk

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