Seminar in cooperation with University of Tartu, University of Southern Denmark, WHO PATH CC Krakow and Estonian Health Insurance Fund

Quality of Health Care

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Registries and Improvement

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the danish clinical registers

a national quality improvement programme

Stroke: 30 days mortality (published april 2009)

30 days mortalitet	Number of cases	Crude OR (95% CI)	Adjustet OR (95% CI) *
National	varying	1.0	1.0
Region Hovedstaden	3176	1.01 (0.89; 1.16)	1.00 (0.84; 1.18)
Region Sjælland	1731	1.04 (0.88; 1.23)	1.33 (1.08; 1.64)
Region Syddanmark	2299	0.96 (0.82; 1.12)	0.83 (0.68; 1.01)
Region Midtjylland	2343	0.90 (0.77; 1.05)	0.95 (0.78; 1.15)
Region Nordjylland	1144	1.14 (0.94; 1.38)	0.99 (0.77; 1.28)

* Adjustet for age, sex, marital status, previous stroke, hypertension, diabetes, atrial fibrillatio, smoking, Scandinavian Stroke Scale, type of stroke

Traditional reporting of indicators

Example: Stroke (not published before april 2009)

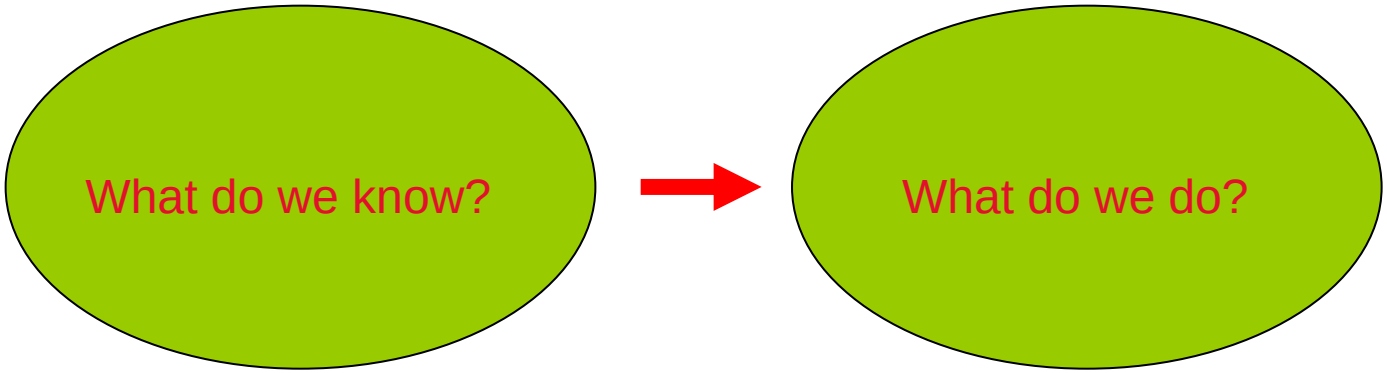
Standard 95%	Number of patient Cases (Denominator)	Number of stroke patients treated with platelet Inhibitor within 2. day of hospitalisation (Nominator)	Proportion 2008 (95% CI)	Proportion 2007 (95% CI)	Proportion 2006 (95% CI)
Capital Region of Denmark	1969	1688	86 (84; 87)	87 (85; 88)	90 (89; 91)
Region Sealand	1143	1013	89 (87; 90)	92 (90; 93)	91 (89; 92)
South Denmark Region	1470	1232	84 (82; 86)	82 (81; 84)	78 (76; 80)
Central Denmark Region	1581	1427	90 (89; 92)	86 (84; 87)	81 (79; 83)
North Denmark Region	787	690	88 (85; 90)	89 (87; 92)	89 (87; 91)
National level	6950	6050	87 (86; 88)	87 (86; 87)	85 (85; 86)

You can't fatten the pig by weighing it

The objective with quality registries is not…..

…the data collection itself – but the **use** of data

…and action taking on them!



Closing the knowing - doing gap!

Proper selection of topics and tecnicalities

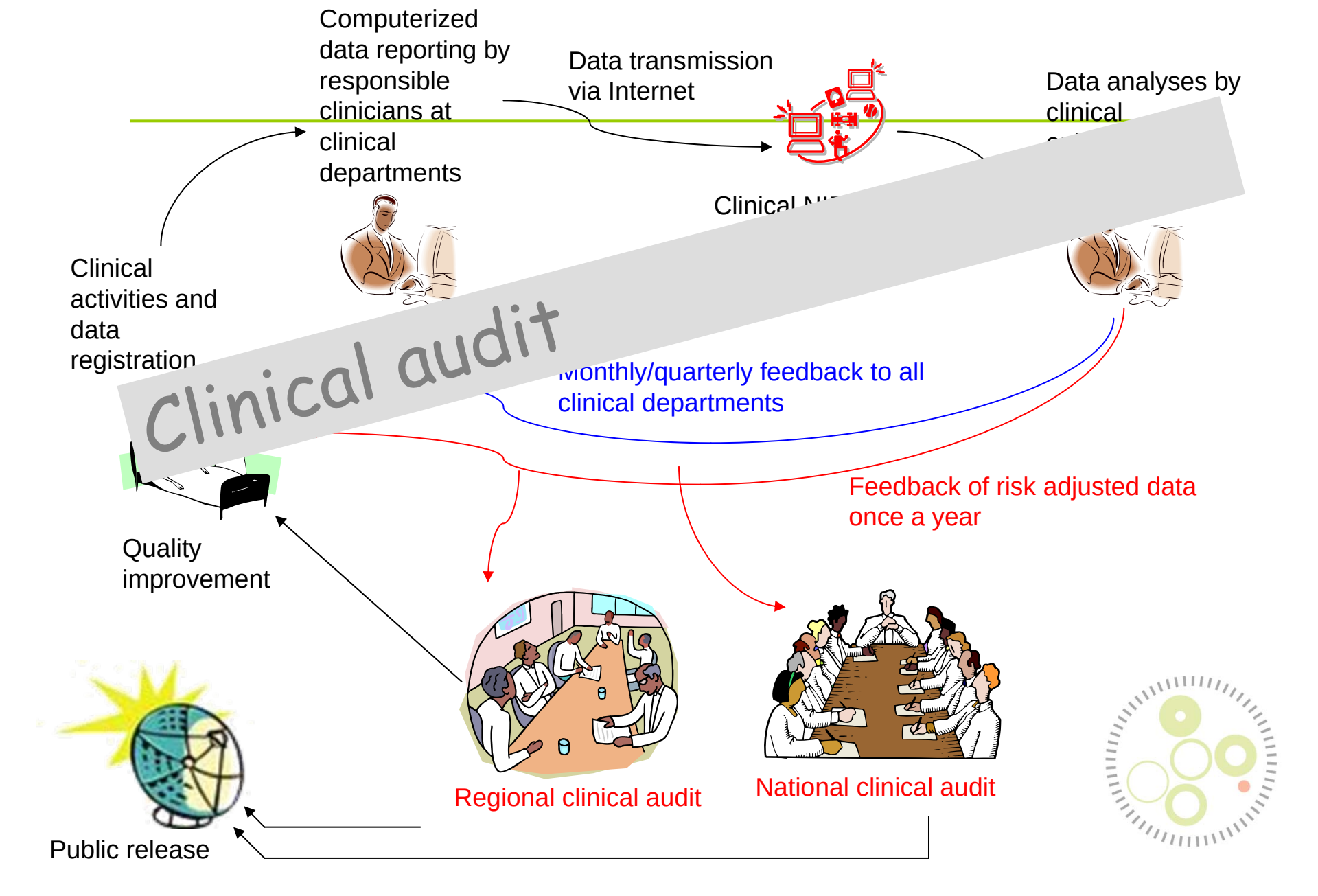
- Usability – how, by whom, for what:
- Selection of appropriate topics for registries
- Clinical ownership
- Standardisation of methods and outputs (plus structure)
- Data collection burden – smart use of available data sources
- Timing of feed-back and reporting from registries

Balanced Dimensions of Quality

- Patient-oriented (patient centeredness, equity)
- Organisational (timeliness, efficiency)
- Medical technical (effectiveness, safety)

  - *Differences in derivation,*
  - *Differences in datasources,*
  - *Differences in scientific foundations*

Important Phases in the Danish National Indicator Project



Audit

The multidisciplinary Indicator Group conduct audit at national level and evaluates the national and regional results with attention to:

- Assessment of data basis (completeness, validity)
- Do the results meet the standards?
- Are there clinical significant variations of results over time and between regions and hospitals?
- Recommendations to the regional audit groups regarding quality improvements

Specific Experiences gained from audits

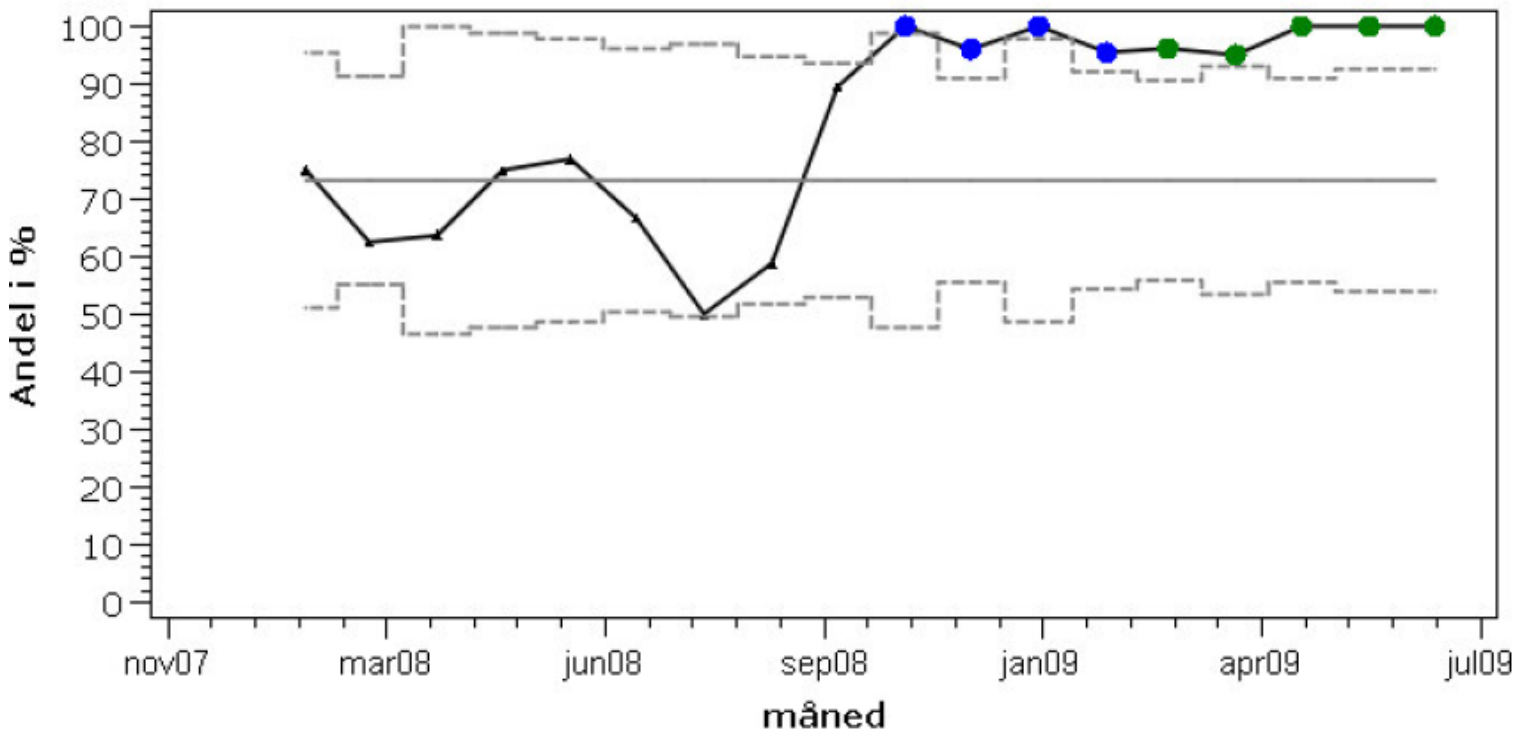
National audit

- The importance of attention to the validity of data
- Indicator algorithms: Nominator and denominator
- Recommendations shows a tendency over time towards being more firmly than friendly
- Suggestions of benchmarking with best performing hospitals

And Feedback

Hip fracture monthly data

Det Nationale Indikatorprojekt - Hoftenære frakturer
All-or-None
Holstebro Ort.kir.afd., RMIDT



Løbende indikatorresultat
Indikatorresultat, gennemsnit seneste afsluttede auditperiode (aug. 2007 - aug. 2008)
Øvre CI grænse (95 %)
Nedre CI grænse (95 %)
Signifikant over gennemsnittet for sidste auditperiode (mindst 5 i træk over)
Signifikant over gennemsnittet for sidste auditperiode (resultat over øvre grænse for 95 CI)
Signifikant under gennemsnittet for sidste auditperiode (mindst 5 i træk under)
Signifikant under gennemsnittet for sidste auditperiode (resultat under nedre grænse for 95 CI)

Effectiveness of audit and feedback?

- Ivers N, Jamtvedt G, Flottorp S, Young JM, Odgaard-Jensen J, French SD et al. Audit and feedback: effects on professional practice and healthcare outcomes. Cochrane Database Syst Rev 2012; 6:CD000259

Effects of presence of quality systems in hospital

- Accreditation
- Certification
- Patient Safety systems
- .....

Lack of Effect of JCI accreditation in DK

Rate of change from 2003 to 2008 Red=significant change from 2003 to 2008	All-or-None		Proportion of recommended care provided	
	JCI-accredited county	Non-participating counties	JCI-accredited counties	Non-participating counties
Apopleksi	**0.15**	**0.27**	**0.09**	**0.25**
Schizophrenia	**0.07**	**0.14**	**0.14**	**0.16**
Ulcusblødning	**0.06**	**0.03**	**0.08**	**0.05**
Hjerteinsufficiens	**0.03**	**0.05**	**0.08**	**0.15**

Postulated relationships

- Hospital level quality management systems have a direct positive effect on department quality management systems
- Hospital level quality management systems have a direct positive effect on clinical indicators for all four conditions
- Department quality strategies have a positive effects on clinical indicators for each condition

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External

Hospital level

Pathway level

Patient level

External pressure
Perceived external pressure
External assessment

Hospital governance
Quality orientation of the management board

Hospital culture
Competing values
Social capital
Patient safety culture

Patient empowerment
Involvement in QM
Client council

Quality management system
Quality management systems index
Quality management compliance index
Clinical quality implementation index

Professional engagement

Departmental quality strategies
Specialized expertise and responsibility
Evidence-based organization of pathways
Patient safety strategies
Clinical review

Patient Empowerment
Involve in QM
Patient information

Pathway culture
Patient safety culture
Teamwork culture

Professionalism
Attitudes
Behaviour

Patient experience

Perceived patient safety

Clinical effectiveness

Acute myocardial infarction 

Stroke 

Hip fracture 

Deliveries 

Key findings of the DUQuE Project

- Effect on quality management systems/strategies on patient level outcomes:
  - Weak effects of ***distal*** quality management systems on patient level outcomes
  - Strong and systematic effect of ***proximal*** quality management strategies on clinical effectiveness
- **Effects robust** after formal bias analysis for uncontrolled confounding, selection bias, measurement error.

WHY: Policy at European level
Tallin Charter WHO-Europe 2008

We, the member states:

- **Believe** that well-functioning health systems are essential to improve health – therefore health systems need to demonstrate good performance

- **Commit ourselves** to promote transparency and be accountable for health system performance to achieve measurable results

- *Monitoring and evaluation of health system performance and balanced cooperation with stakeholders at all levels of governance are essential to promote transparency and accountability*

Governance - leadership – effectiveness ?

- Management attention *Jha A., Epstein A: Hospital governance and the quality of care Health Affairs 29(1), 182-7; 2010*
- Quality Contracts with professionals and hospital *Danish experience 2011-13*
- Pay for Performance/ value-based purchasing
- *Constant increase in litterature volume – very limited effects !*
- Making results publicly available *constant increase in litterature volume – effects variable !*

GRADE C EVIDENCE

All elements together !