

Zukunftsperspektiven der Qualitätssicherung in Deutschland

Future of Quality Improvement in Germany

Prof. Richard Grol

Fragmentation in quality assessment and improvement



(c) 2002 Sammlung Heiko Burkhardt, Dailysoft.com

Integration of initiatives and collaboration between parties needed to be more effective

Major problem Heart Surgery Academic Medical Center Nijmegen

Mortality rate in 2004 almost 7% compared to 2,7% nationally; publication in media leads to:

- Patients skipping operations (one third of beds empty)
- Internal and external investigations (eg. Authorities): very critical findings and conclusions about quality of care, collaboration and teamwork, attitude of doctors, etc
- Authorities closing heart surgery center for 6 months; Executive Board, director heart center, other leaders quit

Next:

- New Executive Board of Academic Medical Center, new director of heart center, new clinical leaders
- Complete redesign of surgery processes, improved team work and collaboration, new surgeons, etc
- New quality and safety policies for Academic Center with very rigorous clinical audits of all departments and centers
- **Mortality rates less than 1,5% in 2010**

Why this major improvement in heart surgery: hypotheses?

- **Data and feedback: sense of urgency**
- **Public reporting: patiënt choice**
- **Improved standardization of care processes**
- **Better collaboration of wards, better team work**
- **Improved professional attitude and behaviour**
- **New leadership, policies and regulations**
- **???**

Concerns of a change agent in healthcare

Despite many quality improvement initiatives:

- many patients (studies: 30-45%) do not receive recommended (evidence based/guideline based) treatment or best practices
- many tests ordered or medications prescribed are not evidence based, unnecessary and potentially harmful
- many patients in hospitals (5-10%) harmed or die because of adverse events, many (>40%) are avoidable/preventable
- large, unexplained differences in quality between providers
- improvement, even after well developed implementation programs, is usually small and slow

Adherence to stepped care guideline and prescribing anti-depressants (Franx et al 2011)

- Extensive use of antidepressants in primary care, unrelated to symptom severity; stepped care guideline recommends AD only in severe or chronically depressed patients
- ***Controlled study on the effect of QI-collaborative aimed at implementation of the stepped care guideline: % AD***

	<u>2006</u>	<u>2007</u>	<u>2008</u>
-QI-group (N=400 practic)	49%	32%	26%
-usual care (N=3958 pract)	50%	47%	53%

Future of improving quality: how to be more effective?

Invest in integrated systems for QI with:

- Relevant and reliable data, feedback and transparency
- Value for money, linking quality to costs
- Innovative ways to involve patients in improving care
- Improved (multi-disciplinary) collaboration and team work
- Standardization and control of care processes
- New type of professional attitude and behaviour
- Leadership that has quality as top-priority

Impact of monitoring and feedback on performance or use of innovation (Jantved 2006, van der Weijden 2006)

Unrealistic optimism: most clinicians overrate quality of their performance (Davis JAMA 2006), reliable data and feedback increase “sense of urgency” for improvement

Systematic reviews show that ***feedback*** to providers can contribute to better quality and safety of clinical care, **when** it comes from a **reliable source**, is **recent**, gives **advice** on how to do better and is **repeated** regularly

And when it is ***integrated within a wider system of quality improvement, for example in local peer review groups or collaboratives***

Data on safety problems in Netherlands

- a. *records 21 hospitals of 8000 at random selected patients*
 - 6% of hospital patients “**adverse event**”, 40% avoidable
 - around 1950 avoidable deaths per year in 2010

- b. *analysis of records*: 40.000 people admitted to hospital per year because of medication errors (HARM-study)

- c. *national data*: almost 7% of Dutch patients in hospital get infection; less than 5% of S.aureus identified as MRSA (this is 10-25% in Germany)

***Huge impact of such data
on sense of urgency and action!!***

“Clinical outcome measurement is good value for money”

Report Society for Cardiothoracic Surgery in UK (2011):

- Costs of data collection for cardiac surgery in England: 1,5 milj pound per year
- Savings in bed days for CABG surgery alone: 5 milj pound
- Public reporting of mortality data at hospital and surgeon level: 50% improvement in risk adjusted mortality rates for cardiac surgery

Debates about transparency and public reports of quality indicators

Debate: some claim that it works, others that it reduces motivation and trust in professionals and leads to gaming

Many people don't trust numbers:

“Trust only statistics that you manipulated yourself” (Churchill)

My view: society has **moral right** to receive good and reliable information on quality, crucial for sustained trust of society

Shared responsibility of all parties:

- *to develop valid, reliable and acceptable indicators*
- *to find a balance between need of society for information and fair treatment of providers and professionals*

More work to do!!

Value for money: link quality data to costs

Seven hundred billion dollars. That's a ballpark estimate of how much money is wasted in the U.S. medical system every single year, according to a new Thomson Reuters report. A sum equal to roughly one-third of the nation's total health-care spending is flushed away on unnecessary treatments, redundant tests, fraud, errors, and myriad other monetary sinkholes that do nothing to improve the nation's health. Cut that figure by half, and there would be more than enough money to offer top-notch care to every one of America's 46 million uninsured.

None of the health-care reform bills on the table in Washington do anything meaningful to address that wasted \$700 billion. Nor do they call for changes in the underlying flaw that drives much of the waste—the fee-for-service system that pays doctors and hospitals for the amount of medical care delivered rather than for its quality. Under fee-for-service there is no financial incentive for doctors to eliminate waste, since they wouldn't pocket any of the resulting savings. They would just earn less.

By leaving this perverse reward system in place, Congress is virtually guaranteeing that health-care reform legislation, if passed, will do nothing to “bend the curve” of rising health-care costs, as President Barack Obama originally set out to do. Even the few cost-cutting efforts that the bills do include won't go into effect until at least 2013. As a result, U.S. health spending is on track to double over the next 10 years, to \$5.2 trillion, about 21% of the gross domestic product.

Or possibly not. Politicians may be reluctant to

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WAYS TO CUT HEALTH-CARE COSTS RIGHT NOW

By Catherine Arnst

Photograph by Taka
Illustrations by Gary Neil

**Employers and hospitals
don't have to wait for
Congress to address
inefficiencies and waste**

rein in the medical-industrial complex, but the private sector is forging ahead. Faced with health-care costs that keep rising 6% to 7% every year—even during this year of negative overall inflation—plenty of insurers, hospitals, employers, and communities are figuring out how to offer better care for less money. They are willing to take experimental leaps in an attempt to solve some of the health system's most intractable problems.

A BIG STEP FORWARD

BusinessWeek has looked at 10 such attempts to lower health-care costs and improve patient care. These innovations cannot have the same impact as a comprehensive federal bill. Nor are the gains from private efforts assured. Paul B. Ginsburg, president of the nonprofit Center for Studying Health System Change, cautions that “there are a lot of things we know can improve health, such as wellness programs. But we don't know if they can save money on a large scale.”

Still, companies and hospitals are taking the initiative, and some results are in plain view. “Three years ago, professional medical organizations were very reluctant to talk about inappropriate treatments, but I already see

that changing,” says Robert Kelley, vice-president for health-care analytics at Thomson Reuters. He points out that the American College of Cardiology recently published several standards of care for angioplasty and other common treatments, aimed at preventing unnecessary and costly interventions. Given that about one in six U.S. health-care dollars is currently spent on cardiovascular procedures, “that's a big step forward,” says Kelly. Here are some others.

USA: 700 billion dollars of unnecessary costs in health care annually: one third of health care budget

1,7 million people get infection in hospital, 100.000 die, annual costs 30 billion dollars

(Business Week 2009)

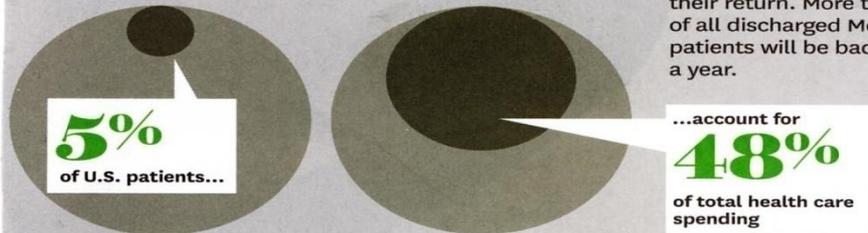
“A few people cost a lot”

4. A FEW PEOPLE COST A LOT

A relatively small number of patients—often older or chronically ill people—account for a large portion of all medical costs.

These include frequent hospital readmissions and managing the consequences of obesity and uncontrolled diabetes.

One in five Medicare patients discharged from the hospital will return within a month; half won't have seen a doctor before their return. More than 50% of all discharged Medicare patients will be back within a year.



SOURCE HENRY J. KAISER FAMILY FOUNDATION

WHAT TO DO COORDINATE AND FOLLOW UP

Patients with complicated illnesses should receive care in “centers of excellence” with disease-specific expertise. They should have follow-up appointments after hospital discharge to prevent readmission. Well-coordinated care should be rewarded.

PAY FOR PERFORMANCE

The Physician Group Practice Demonstration, a Medicare pilot program, rewards groups for coordinating patient care, improving quality, and reducing costs. In the first three years, the groups increased average quality scores by this many percentage points:

10 on 10
diabetes measures

11 on 10
congestive heart
failure measures

6 on seven
coronary artery
disease measures

10 on two
cancer screening
measures

\$32.3M

SAVINGS
GENERATED BY
THE REWARD
SCHEME

SOURCE CENTERS FOR MEDICARE & MEDICAID SERVICES

5% of (chronically ill) people account for almost 50% of healthcare spending

Good coordination and follow-up can improve outcomes and reduce costs and should thus be rewarded

(Harvard Business Review 2010)

Effect (financial) incentive (P4P) on quality of care (Mannion BMJ 2008, and others)

- Many *experiments*, in USA en UK: conclusion is that performance of care providers can be influenced by financial incentives, particularly in case of large financial risk; but effects are mostly small (Lindauer New Engl J Med 2008)
- In case of no effect: financial incentive often too small; incentive to individuals more effective than to groups
- Strategic behaviour in case of large incentive : gaming, fraude, exclusion of high risk patients, etc

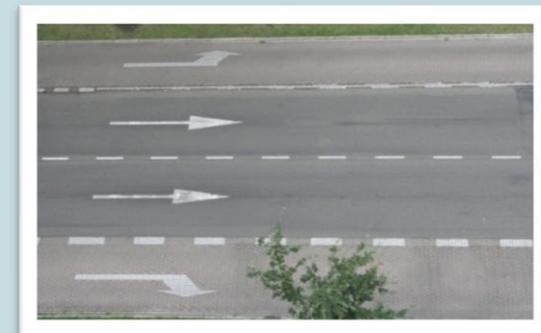
Experiment “pay-for-quality”

(Kirchner, Braspenning IQ 2009)

- Bonus up to 8% of income for score on performance indicators in primary care (70 practices Netherlands)
- Indicators developed by panels of GPs and insurers
- 10% improvement in chronic care after 1 year
- **Success factors:**
 - shared development of indicators, mutual trust
 - bonus large enough, but not too large
 - bonus for both performance and improvement
 - embedded in national QI-system for primary care

New ways of involving patients in quality improvement ...

- **Consulting**: map experiences and needs of patients to plan improvement
- **Informing**: provide comparative information and enhance choice for patients
- **Involving**: patient as partner in care team, shared decision making, involvement in policy



Why do health consumers not use public reports on quality of hospitals? (Ketelaar et al, IQ healthcare 2010)

Interviews with healthy people (45-75) about motives to use or not to use information on quality of hospitals:

- Previous experiences and opinion of family crucial
- Advice of family physician/GP very important
- When not used: not aware of information, not looking for it when healthy
- Most information difficult to understand
- Little trust in the sources of information (many [www.sites](#))

Conclusion: invest in better information and more support to guide patients through public information

Integrated and coordinated care for chronic patients

Review of 22 systematic reviews on effect of integrated and coordinated care for patients with heart failure, diabetes, depression etc (Wensing et al 2010): better quality of care and patient outcomes, and lower costs

Optimal chronic care management demands:

- team work; improved multi-disciplinary collaboration,
- standardization of processes, protocols
- new professions (nurses) and new division of tasks
- quality assessment, indicators, monitoring quality
- computer support systems

Cost-containment by integrated care for chronic patients

Results of studies on integrated care for patients with diabetes and chronic lung diseases: better outcomes for patients and cheaper (Steuten et al 2006):

- 30% less admissions to hospitals
- 30-40% reduction in absence of work
- 3-9% reductions in costs of healthcare within 2 years

Health care is managing of extreme complexity

THE **CHECKLIST** MANIFESTO • HOW TO GET THINGS RIGHT



ATUL GAWANDE

BESTSELLING AUTHOR OF
BETTER AND COMPLICATIONS

“Healthcare too complex to leave to control and decisions of individual clinicians; human memory and attention needed is fallible in complex care; therefore we should use teamwork, control and checklists”

Example: average patient on IC needs 178 actions per day; errors in 1-2%

Most adverse events in surgery (>50%), mostly infections and bleedings



Sculpture: by Joep van Lieshout

Study WHO checklist in 8 hospitals in 8 countries: large reduction of mortality and complications (Haynes NEJM 2009)

WHO Surgical Safety Checklist (adapted for England and Wales)

NHS
National Patient Safety Agency
National Reporting and Learning Service

SIGN IN (To be read out loud)

Before induction of anaesthesia

Has the patient confirmed his/her identity, site, procedure and consent?
 Yes

Is the surgical site marked?
 Yes/not applicable

Is the anaesthesia machine and medication check complete?
 Yes

Does the patient have a:
Known allergy?
 No
 Yes

Difficult airway/aspiration risk?
 No
 Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
 No
 Yes, and adequate IV access/fluids planned

Name:

Signature of Registered Practitioner:

PATIENT DETAILS

Name:

ID:

Procedure:

TIME OUT (To be read out loud)

Before start of surgical intervention
for example, skin incision

Have all team members introduced themselves by name and role?
 Yes

Surgeon, Anaesthetist and Registered Practitioner verbally confirm:
 What is the patient's name?
 What procedure, site and position are planned?

Has antibiotic prophylaxis been given within the last 60 minutes?
 Yes/not applicable

Has the surgical site infection (SSI) bundle been undertaken?
 Hair removal
 Patient warming
 VTE prophylaxis
 Glycaemic control

Anticipated critical events
Surgeon:
 How much blood loss is anticipated?
 Are there any specific equipment requirements or special investigations?
 Are there any critical or unexpected steps you want the team to know about?

Anaesthetist:
 Are there any patient specific concerns?
 What is the patient's ASA grade?
 What monitoring equipment and other specific levels of support are required, for example blood?

Is essential imaging displayed?
 Yes/not applicable

Name:

Signature of Registered Practitioner:

SIGN OUT (To be read out loud)

Before any member of the team leaves the operating room

Registered Practitioner verbally confirms with the team:
 Has the name of the procedure been recorded?
 Has it been confirmed that instruments, swabs and sharps counts are complete (or not applicable)?
 Have the specimens been labelled (including patient name)?
 Have any equipment problems been identified that need to be addressed?

Surgeon, Anaesthetist and Registered Practitioner:
 What are the key concerns for recovery and management of this patient?

Name:

Signature of Registered Practitioner:

This checklist is the minimum standard for England and Wales

19 killer items

Effects of control measures to reduce antibiotic use (Davey et al, Cochrane review 2006)

66 studies with 60 interventions to reduce antibiotic use in hospitals:

- In most studies (70-80%) a significant effect was found on AB use, infections and clinical outcomes
- **Restrictive** methods (authorisation by colleague, use of strict indications, automatic stop orders, etc) **more effective**
- ...than **educational** methods (CME, information, feedback, reminders, outreach expert visitors, etc)

Reducing central line-catheter infections at IC

(Pronovost et al NEJM 2006, Pronovost 2010)

Controlled study in Michigan hospitals at 50 IC wards:

- Nurse use checklist to prevent central line infections
- Support Executive Board

Results: 66% reduction in infections, saving 2000 lives and preventing substantial extra costs

Interpretation Pronovost: standardization and control of performance is effective, in case of support by clear policies by leaders, of improved team work and of physicians who accept control by nurses

***Crucial role of nurse in
improving quality and safety***



18 reviews (Laurant 2009): nurse same quality of care, more satisfaction

A new type of professional

Improving quality and safety in healthcare demands a new type of professional:

- Using data for critical reflection on own performance
- Transparent and accountable to others (colleagues, society)
- Accepting control by others, sharing responsibilities
- Becoming a team worker and collaborator
- Involving patients in their care
- Admitting and communicating mistakes and incidents
- Being skilled in systematically improving patient care

Long way to go for many professionals in many countries

Professional values of doctors in USA and UK (Roland et al 2011)

	<u>USA</u>	<u>UK</u>
• Doctors should participate in peer review of quality of colleagues	55%	63%
• Doctors should report incompetent colleagues	59%	63%
• Did you report incompetent peer	65%	72%
• Doctors should disclose medical errors to affected patient	63%	70%
• Doctors should undergo periodic recertification examinations	54%	24%

Include topic of quality and safety improvement in (under)graduate curriculum of clinicians

Concerned with new knowledge, skills, attitudes and routines in practice (“Improvement knowledge”); naive to expect that clinicians master these competencies without appropriate education



Training in practice and good role models in teaching practices important

“Hudson River Hero” (or “Hudson River Teamwork”)



Analysis of successful landing of plane in Hudson River and saving all passenger showed:

- ***-experienced pilot***
- ***-strict use of checklists and procedures***
- ***-optimal collaboration of crew***

Most effective measure to reduce hospital infections: hand hygiene!



**<50% adherence
to guidelines on
hand hygiene**

**(physician
performance
poor)**

Study on hand hygiene of nurses in three hospitals (Brink et al, IQ 2009)

Impact of two approaches: state of art (feedback, posters, education, alcohol rub, etc) versus extended approach (team and leadership training)

- State of art approach +23%
- State of art approach +
team and leadership training +38%

Interpretation: crucial role of **team work and leadership** development in introducing complex changes

Context: leadership and policies



A new type of leaders

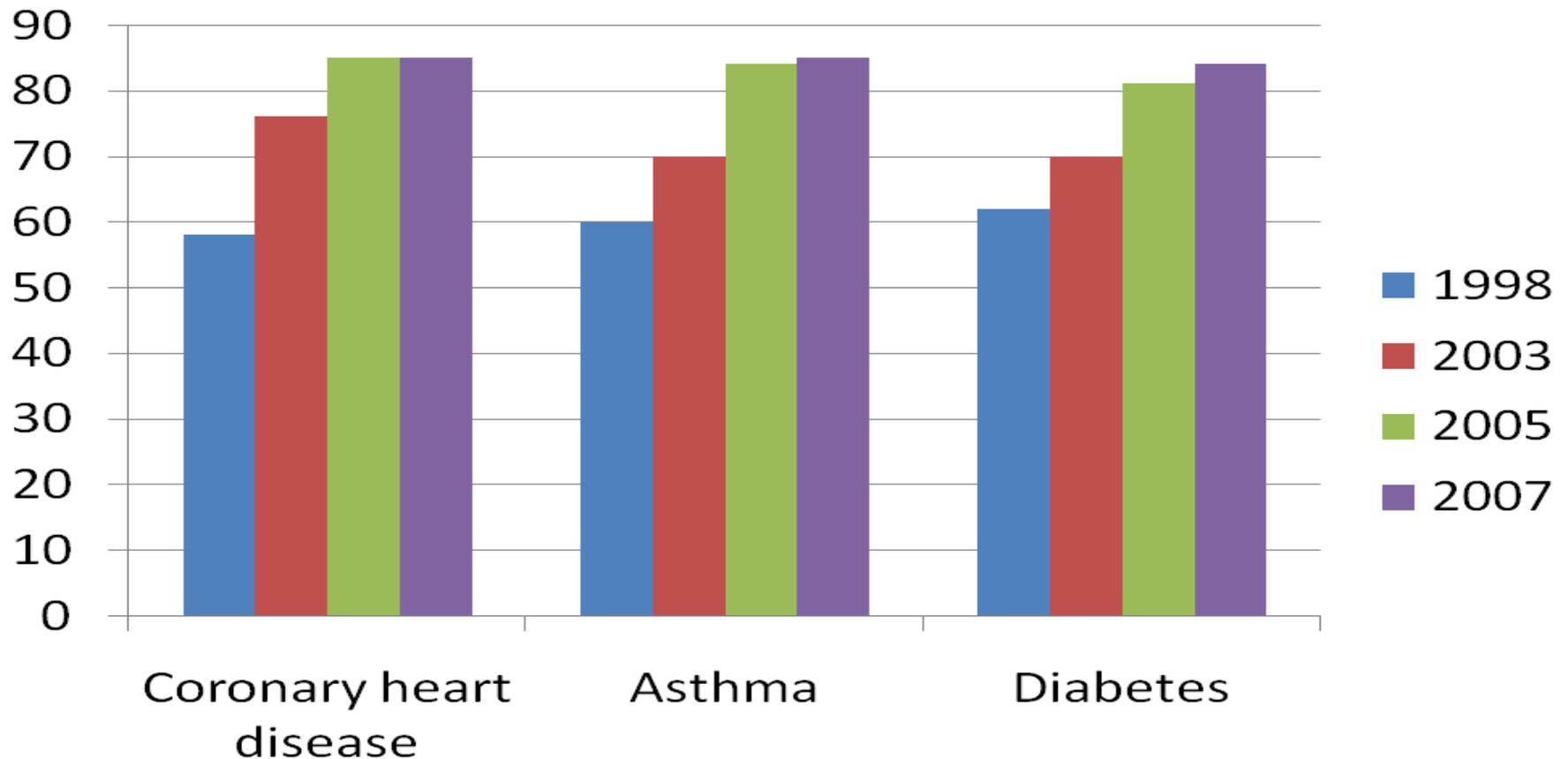
- Leaders who facilitate monitoring of quality of care, transparency, team work, professional development, use of checklists and protocols, patient centeredness, etc
- **“Boards on Board”**: leaders make quality and safety to top priority, are a role model, are competent in field of quality improvement, introduce long-term policies and methods, etc
- **Thesis Duckers**: when Executive Board stimulates quality improvement and medical specialist perceive an active role by Board, specialists are more actively involved in quality improvement activities

National policies: Quality and Outcomes Framework in UK

- New contract for GPs (April 2004): about 25-30% of income related to quality indicators (for clinical performance, patient experiences, practice management)
- Evaluations of impact showed very high indicator scores and most practices meeting quality criteria; substantial increase in income for practices (23%)
- **Unclear what caused effect:**
 - financial incentive,***
 - the indicators and standards set, or***
 - total of quality policies in last 20 years?***

Mean quality scores for 42 family practices in UK in 1998, 2003, 2005 and 2007 (Campbell et al, New Engl J Med 2009)

Gradually building a context and culture for change?



Invest in and develop.... (you need them all)

Integrated systems for QI at different levels that mix:

- Monitoring data, feedback and public transparency
- Addressing value for money, linking quality to costs
- New ways to involve patients in improving care
- Improved (multi-disciplinary) collaboration and team work
- Standardization and control of care processes
- New type of professional attitude and behaviour
- Leadership that has quality as top-priority

Good luck with making the impossible possible: improving patient care



Professional reflection..

Multi-Source Feedback System for physicians:

-feedback peers, staff, patients and self-evaluation

-data discussed with experienced colleague-mentor

-goals and plan for improvements

-after one year: repeating process, evaluation of change