Technische Universität Berlin

International Innovations to Improve the Quality and Value of Health Care: The German case

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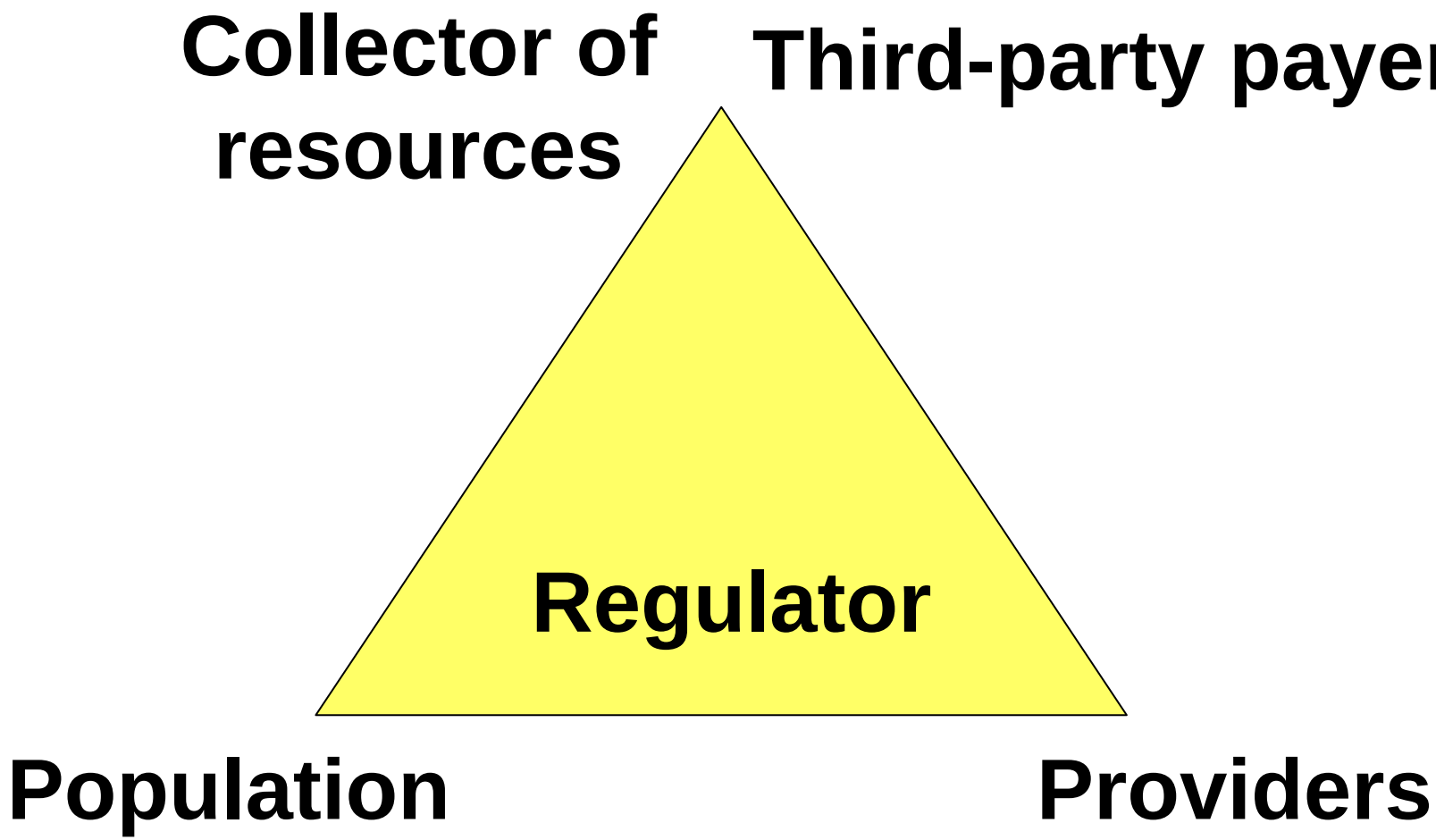
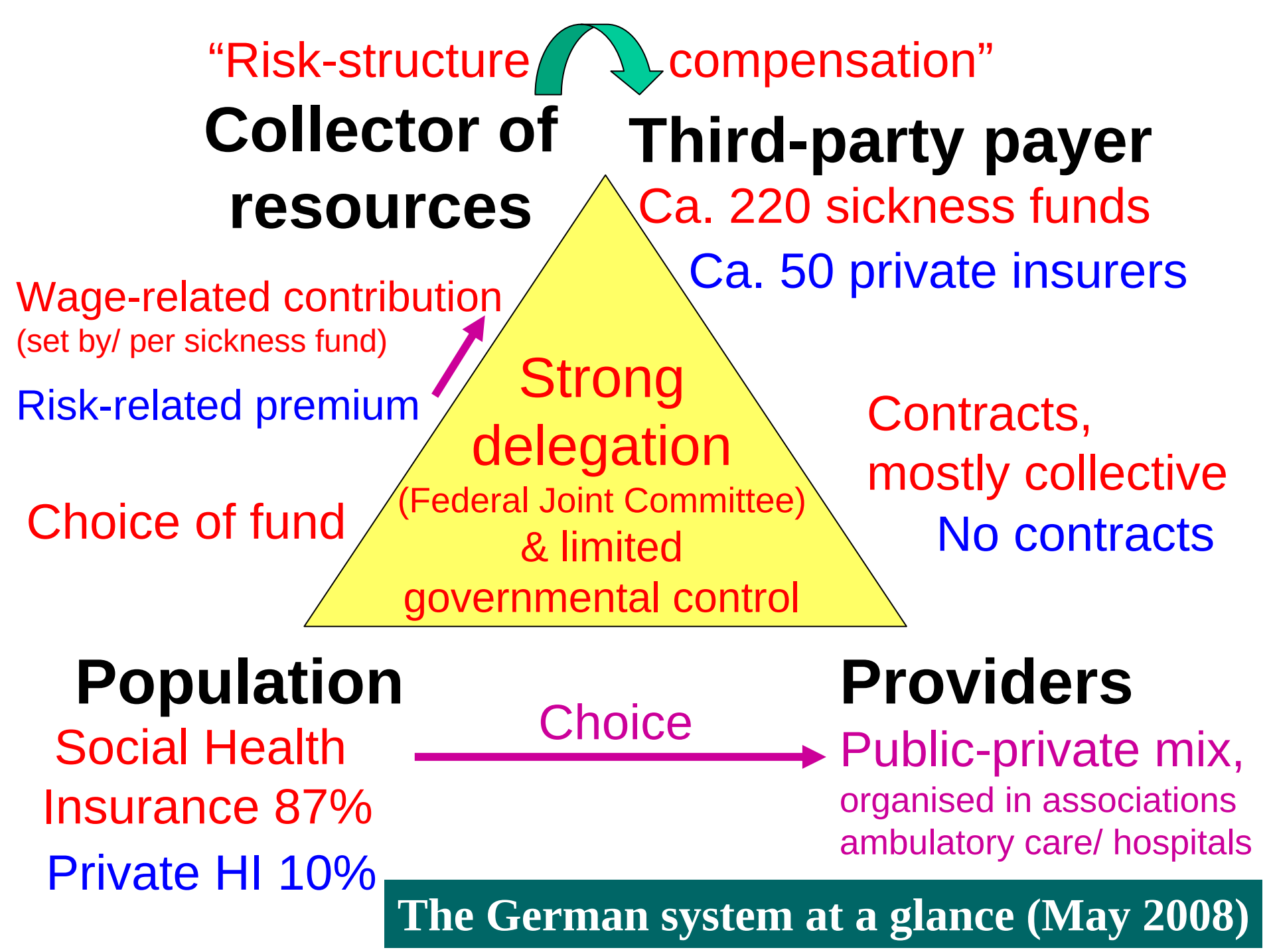
European Observatory on Health Systems and Policies



European Observatory on Health Systems and Policies


“Risk-structure compensation”
Collector of resources
Third-party payer
Ca. 220 sickness funds
Ca. 50 private insurers
Wage-related contribution
(set by/ per sickness fund)
Risk-related premium
Choice of fund
Strong delegation
(Federal Joint Committee)
& limited governmental control
Contracts, mostly collective
No contracts
Population
Social Health Insurance 87%
Private HI 10%
Choice
Providers
Public-private mix,
organised in associations
ambulatory care/ hospitals
The German system at a glance (May 2008)

I will focus on three particular innovative examples:

1. Quality measurement/ management in hospitals (-> 3 approaches) 2001
2. Disease Management Programs 2002
3. Evaluating cost-effectiveness ("value") of drugs 2008

   (while I will "forget" other approaches such as minimum volumes for certain procedures, hospital quality reports, mandatory quality management systems …)

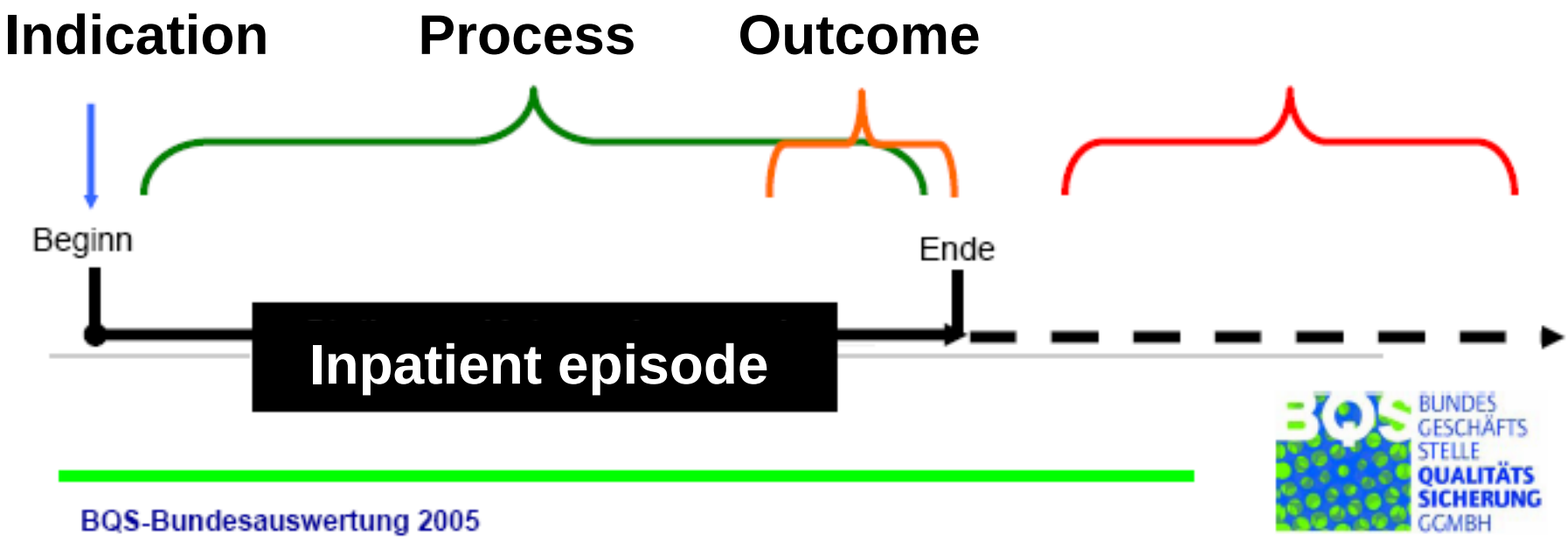
Federal Office for Quality Assurance (BQS)

since 2001 mandatory for all ca. 1,700 hospitals, 169 indicators, 2.8 million cases (17%), with feedback and “structured dialogue“

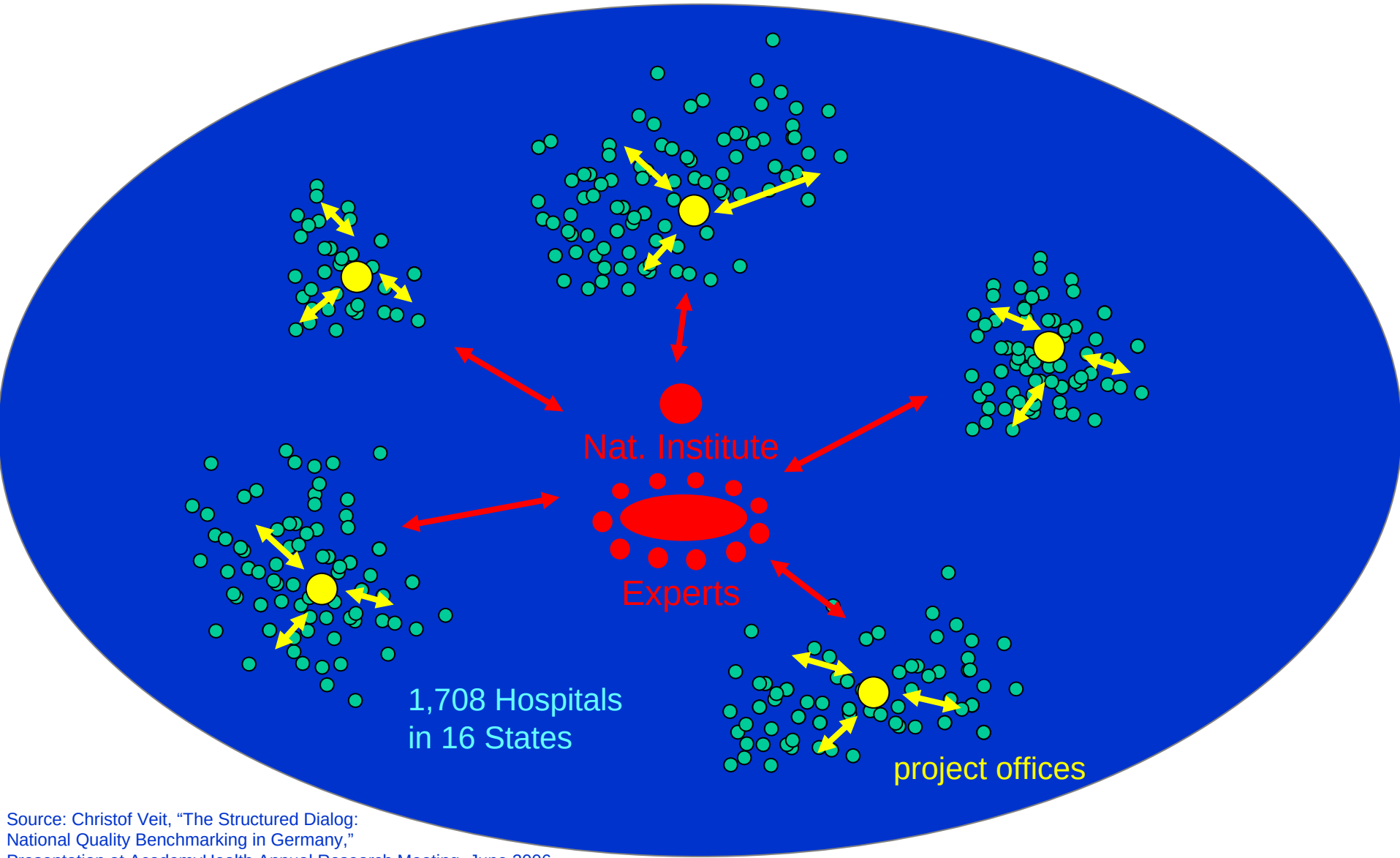
Is the appropriate thing done? 13%

Is it done correctly? 27%

With what (short-term) results? 60%



BQS - Benchmarking with all hospitals



Source: Christof Veit, “The Structured Dialog: National Quality Benchmarking in Germany,” Presentation at AcademyHealth Annual Research Meeting, June 2006.


Qualitätsindikatoren — BQS - Microsoft Internet Explorer
Datei Bearbeiten Ansicht Favoriten Extras ?
Zurück
http://www.bqs-qualitaetsindikatoren.de/
Adresse
Suche
BQS
Qualitäts-indikatoren
Erfassungsjahr 2007
Indikatoren
Erläuterungen
Kontakt
BQS-Online
BQS-Qualitätsreport
BQS-Outcome
BQS-Qualitätsindikatorendatenbank 2007
Für das Erfassungsjahr 2007 finden Sie hier umfangreiche Informationen zu den BQS-Qualitätsindikatoren.
BQS-Leistungsbereiche mit Dokumentationspflicht
Allgemein- und Gefäßchirurgie
Cholezystektomie
Karotis-Rekonstruktion
Innere Medizin / Kardiologie
Ambulant erworbene Pneumonie
Herzschrittmacher-Implantation
Herzschrittmacher-Aggregatwechsel
Herzschrittmacher-Revision-/Systemwechsel-/ Explantation
Koronarangiographie und Perkutane Koronarintervention (PCI)
Herzchirurgie
Koronarchirurgie, isoliert
Aortenklappenchirurgie, isoliert
Kombinierte Koronar- und Aortenklappenchirurgie
Transplantationsmedizin
Herztransplantation
Linkleiste
Neue Leistungsbereiche 2007
Pankreas- und Pankreas-Nierentransplantation
Lungen- und Herz-Lungentransplantation
Allgemeine Erläuterungen zur QIDB
bitte auswählen
Informationen zu Teilbereichen
Indikatoren für die öffentliche Darstellung (Qualitätsberichte der Krankenhäuser)
Übersicht: Laienverständliche Indikatoren (Qualitätsberichte der Krankenhäuser)
Historie der Qualitätsindikatoren
Internet
Start
2 Windows Expl...
SquirrelMail 1.4.1...
Qualitätsindikator...
Potsdam Karl-Mar...
Microsoft PowerP...
15:22

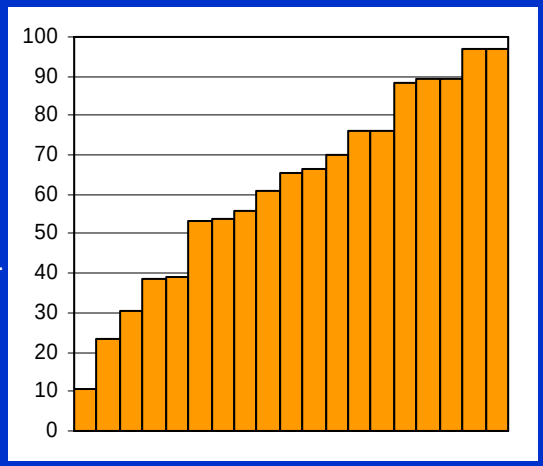
P4R

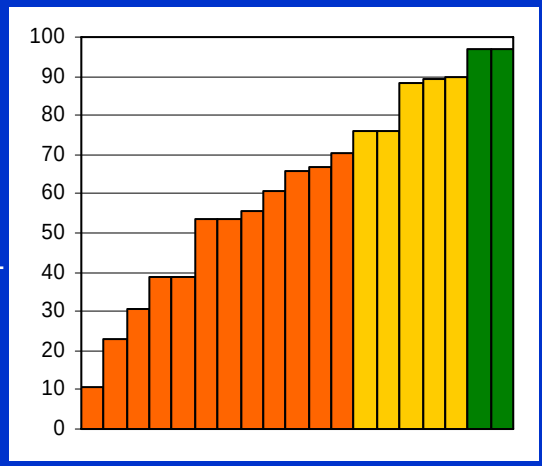
- Hospitals get € 0.58 ($ 0.9) per documented case
- If reported cases are <80% of respective reimbursed cases, payment is cut by € 150 ($ 235) per case up to 100%
- If documentation is handed in late, hospital is fined € 6,000 ($ 9,400)

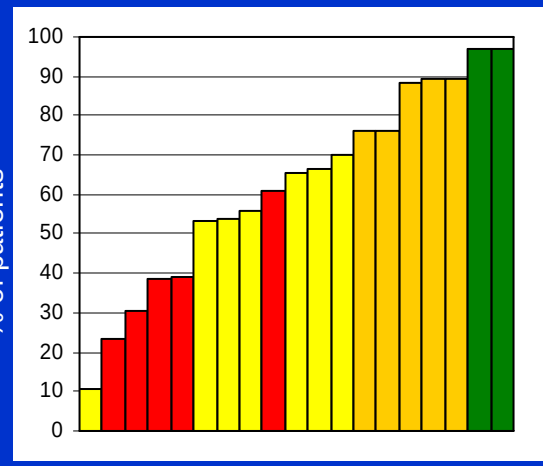
Community acquired Pneumonia
Blood gas analysis within 8 hours
Hospital results in Hamburg 2005

The only non-surgical/ non-invasive indication included

% of patients who get the necessary blood gas analysis, objective: 100%
each column represents a Hamburg hospital







Statistical Results → Structured Dialogue → Evaluation

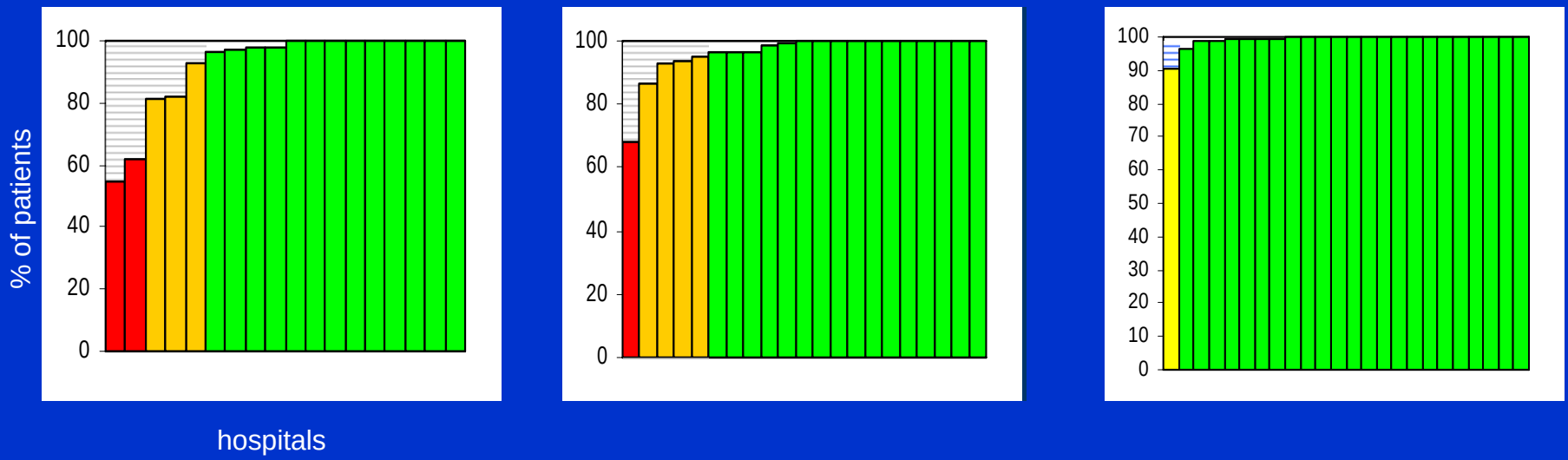
- Objective achieved
- Improvement expected, no dialogue
- Structured dialogue

- Objective achieved
- Improvement expected
- Follow up next year
- Quality problem

Source: Christof Veit, "The Structured Dialog: National Quality Benchmarking in Germany," Presentation at AcademyHealth Annual Research Meeting, June 2006.

Hip Replacement
Antibiotic Prophylaxis

% of patients who get the necessary prophylaxis, objective: > 95%
each column represents a Hamburg hospital
Hamburg data 2003 - 2005



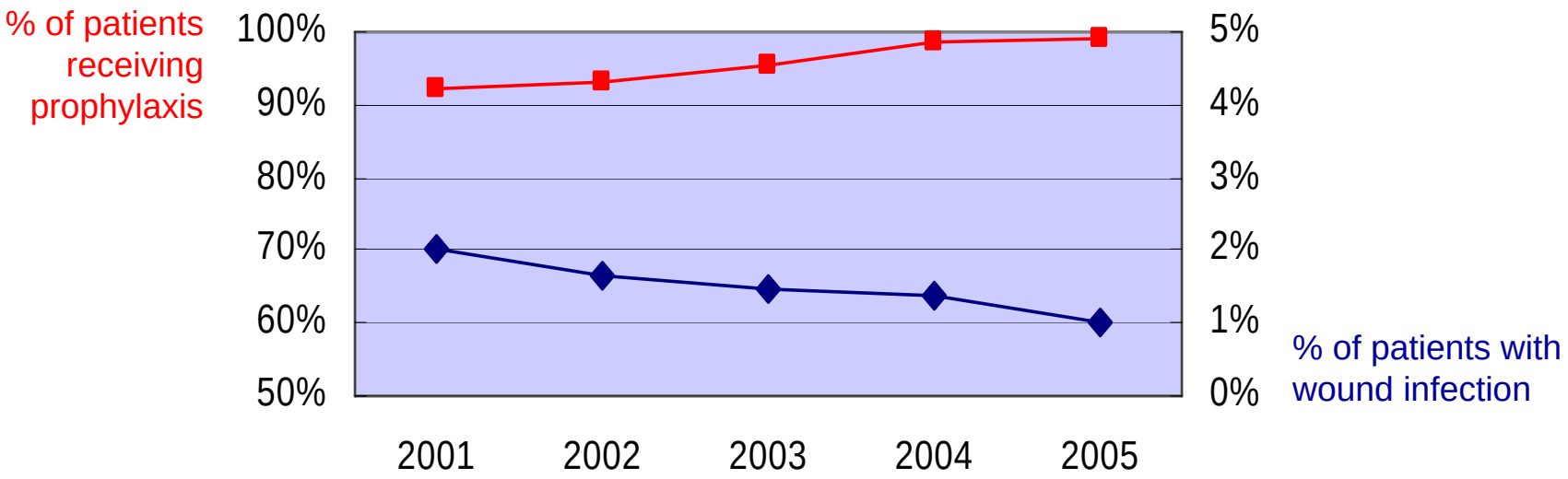
2003 → 2004 → 2005

Objective achieved
Follow up next year
Quality problem

Source: Christof Veit, "The Structured Dialog:
National Quality Benchmarking in Germany,"
Presentation at AcademyHealth Annual Research Meeting, June 2006.

Antibiotic Prophylaxis and Wound Infection in Hip-Replacement 2001 – 2005

Hamburg Hospitals - 3,500 cases per year

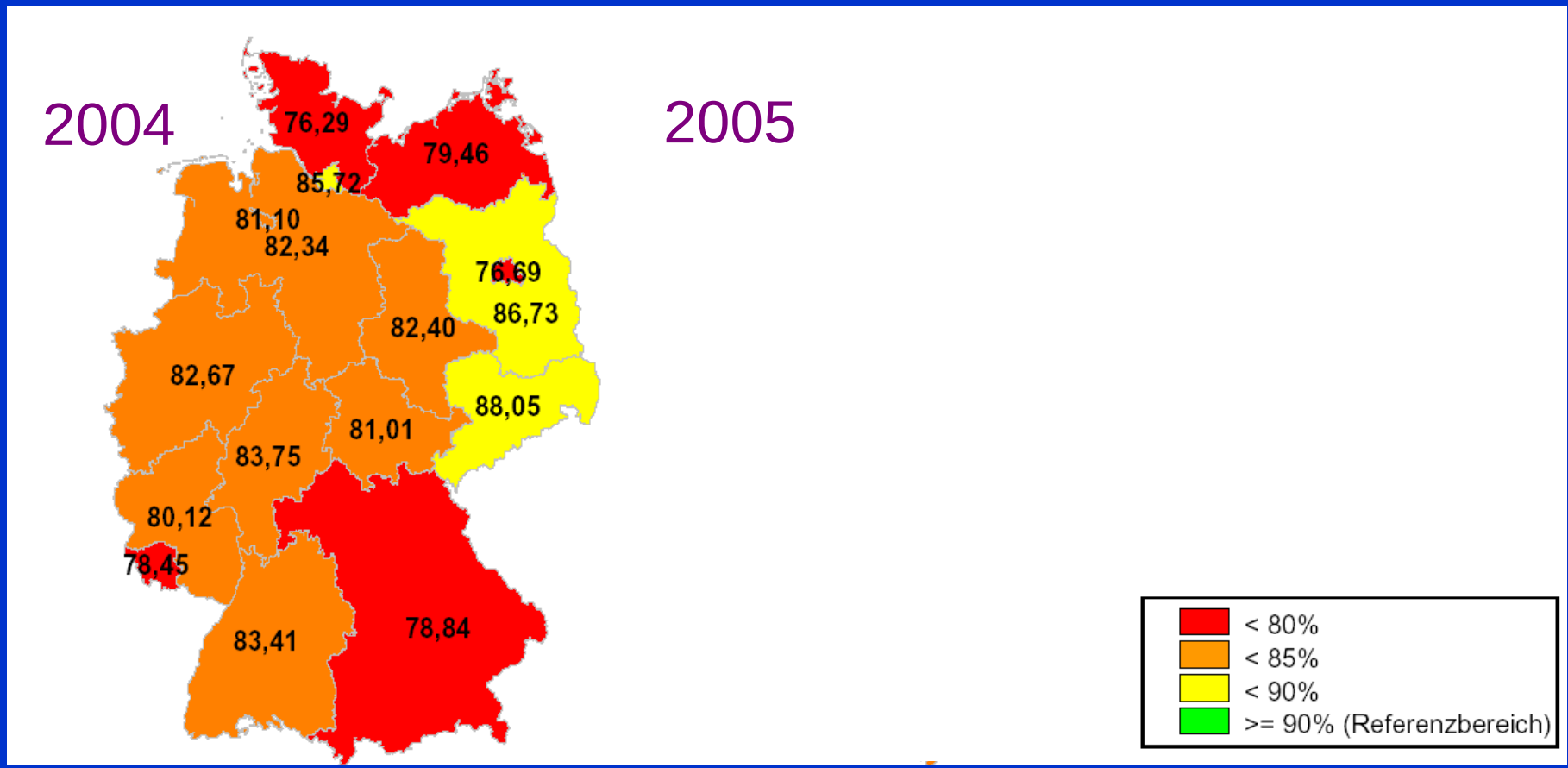


Source: Christof Veit, "The Structured Dialog: National Quality Benchmarking in Germany," Presentation at AcademyHealth Annual Research Meeting, June 2006.

Antibiotic Prophylaxis in Hysterectomies 2004–2005

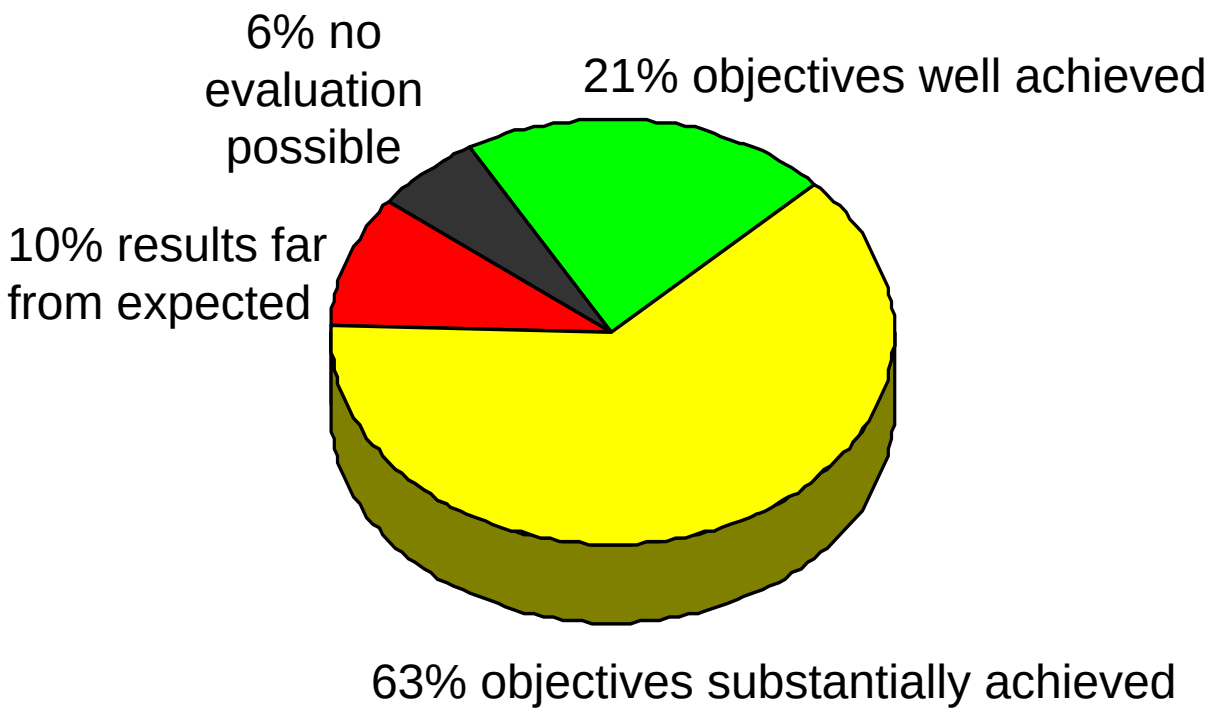
152,000 cases, 97% completeness of data, results by state

Diagrams show percentage of patients receiving prophylaxis per state. Objective: >= 90%



Source: Christof Veit, "The Structured Dialog: National Quality Benchmarking in Germany," Presentation at AcademyHealth Annual Research Meeting, June 2006.

National Results:
Achievement of Quality Objectives in 2005



Source: Christof Veit, “The Structured Dialog: National Quality Benchmarking in Germany,” Presentation at AcademyHealth Annual Research Meeting, June 2006.

Tabelle A:
Vom Gemeinsamen Bundesausschuss als uneingeschränkt zur Veröffentlichung geeignet bewertete BQS-Qualitätsindikatoren

Leistungsbereich	LfdNr	Bezeichnung des Qualitätsindikators	Bezeichnung der Qualitätskennzahl	Kennzahl ID
Cholezystektomie	2	Präoperative Diagnostik bei extrahepatischer Cholestase	Präoperative Diagnostik bei extrahepatischer Cholestase	2006/12n1-CHOL/44783
	3	Erhebung eines histologischen Befundes	Erhebung eines histologischen Befundes	2006/12n1-CHOL/44800
	7	Reinterventionsrate	Reinterventionsrate	2006/12n1-CHOL/44927
Geburtshilfe	3	E-E-Zeit bei Notfallkaiserschnitt	E-E-Zeit bei Notfallkaiserschnitt	2006/16n1-GEBH/68383
	4	Anwesenheit eines Pädiaters bei Frühgeborenen	Anwesenheit eines Pädiaters bei Frühgeborenen	2006/16n1-GEBH/737
	10	Antenatale Kortikosteroidtherapie	Antenatale Kortikosteroidtherapie: bei Geburten mit einem Schwangerschaftsalter von 24+0 bis unter 34+0 Wochen unter Ausschluss von Totgeburten und mit einem präpartalen stationären Aufenthalt von mindestens zwei Kalendertagen	2006/16n1-GEBH/49523
Gynäkologische Operationen	7	Antibiotikaprophylaxe bei Hysterektomie	Antibiotikaprophylaxe bei Hysterektomie	2006/15n1-GYN-OP/47637
	9	Thromboseprophylaxe bei Hysterektomie	Thromboseprophylaxe bei Hysterektomie	2006/15n1-GYN-OP/50554
Herzschrittmacher-Implantation	1	Leitlinienkonforme Indikationsstellung bei bradykarden Herzrhythmusstörungen	Leitlinienkonforme Indikationsstellung bei bradykarden Herzrhythmusstörungen	2006/09n1-HSM-IMPL/9962
	3	Leitlinienkonforme Systemwahl bei bradykarden Herzrhythmusstörungen	Leitlinienkonforme Systemwahl bei bradykarden Herzrhythmusstörungen	2006/09n1-HSM-IMPL/75973
	5	Leitlinienkonforme Indikationsstellung und leitlinienkonforme Systemwahl bei bradykarden Herzrhythmusstörungen	Leitlinienkonforme Indikationsstellung und leitlinienkonforme Systemwahl bei bradykarden Herzrhythmusstörungen	2006/09n1-HS 76124
	8	Perioperative Komplikationen	Perioperative Komplikationen: chirurgische Komplikationen	2006/09n1-HS
			Perioperative Komplikationen: Sondendislokation im Vorhof	2006/09n1-HS
			Perioperative Komplikationen: Sondendislokation im Ventrikel	2006/09n1-HS
Hüft-Endoprothesen-Erstimplantation	7	Endoprothesenluxation	Endoprothesenluxation	2006/17n2-HI
	8	Postoperative Wundinfektion	Postoperative Wundinfektion	2006/17n2-HI
	11	Reinterventionen wegen Komplikation	Reinterventionen wegen Komplikation	2006/17n2-HI
Karotis-Rekonstruktion	1	Indikation bei asymptomatischer Karotisstenose	Indikation bei asymptomatischer Karotisstenose	2006/10n2-KA
	2	Indikation bei symptomatischer Karotisstenose	Indikation bei symptomatischer Karotisstenose	2006/10n2-KA
	7	Perioperative Schlaganfälle oder Tod risikoadjustiert nach logistischem Karotis-Score I	Perioperative Schlaganfälle oder Tod risikoadjustiert nach logistischem Karotis-Score I: Risikoadjustierte Rate nach logistischem Karotis-Score I	2006/10n2-KA

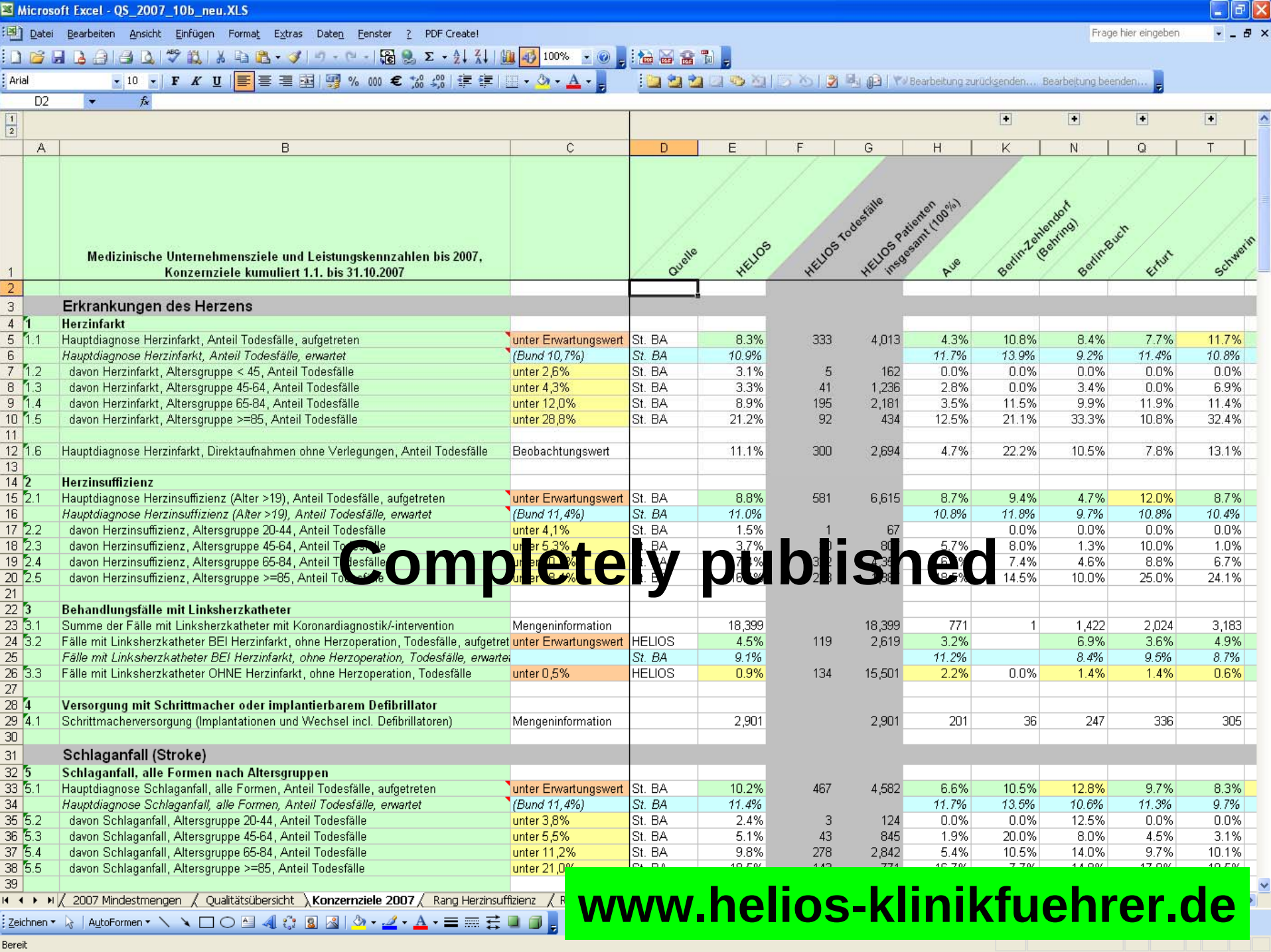
Next phase: public reporting of 27 indicators mandatory from 2008

(as part of the mandatory hospital quality reports)

Leistungsbereich	LfdNr	Bezeichnung des Qualitätsindikators	Bezeichnung der Qualitätskennzahl	Kennzahl ID
Knie-Totalendoprothesen-Erstimplantation	7	Postoperative Wundinfektion	Postoperative Wundinfektion	2006/17n5-KNIE-TEP/47390
	10	Reinterventionen wegen Komplikation	Reinterventionen wegen Komplikation	2006/17n5-KNIE-TEP/45059
Koronarangiographie und Perkutane Koronarintervention (PCI)	1	Indikation zur Koronarangiographie Ischämiezeichen	Indikation zur Koronarangiographie Ischämiezeichen	2006/21n3-KORO-PCI/43757
	3	Indikation zur PCI	Indikation zur PCI	2006/21n3-KORO-PCI/69889
	4	Erreichen des wesentlichen Interventionsziels bei PCI	Erreichen des wesentlichen Interventionsziels bei PCI: Alle PCI mit Indikation akutes Koronarsyndrom mit ST-Hebung bis 24 h	2006/21n3-KORO-PCI/69891
Koronarchirurgie, isoliert	5	Letalität	Letalität: Risikoadjustierte In-Hospital-Letalität nach logistischem KCH-SCORE	2006/HCH-KCH/66781
Mammachirurgie	2	Postoperatives Präparatröntgen	Postoperatives Präparatröntgen	2006/18n1-MAMMA/46200
	3	Hormonrezeptoranalyse	Hormonrezeptoranalyse	2006/18n1-MAMMA/46201
	5	Angabe Sicherheitsabstand	Angabe Sicherheitsabstand: bei Mastektomie	2006/18n1-MAMMA/68100
			Angabe Sicherheitsabstand: bei brusterhaltender Therapie	2006/18n1-MAMMA/68098

An in-hospital approach: the HELIOS chain

- A standardized administrative data set is extracted from all hospital information systems weekly (containing coded diagnoses and procedures etc.) and automatically transferred to the company headquarter
- >700 medical outcome, volume and other indicators/ hospital
- 33 outcome indicators are defined as company goals:
  covering 30 important diseases and procedures
  (30% of all inpatient cases)
- Results are distributed monthly to physicians (chairman) and CEOs (everybody can see everybody‘s results)
- Intra-chain competion alone already leads to improvement
- Living process: New indicators may be developed by specialty groups or centrally



Comparison to US - methodology

- HELIOS indicators have been developed independently
- However international development necessarily shows parallels (medicine and goals are the same)
- AHRQ indicators **are less numerous and less differentiated**
- As far as there are AHRQ indicators (inpatient quality indicators - IQI, patient safety indicators - PSI), -> mostly to the same diseases as HELIOS indicators

Comparison to US - results

Indicator	% change in in-hospital mortality	
	US Medicare 1998-2003 (5 yrs.)	Germany HELIOS 2003-2006 (3 yrs.)
Pneumonia	-15.2%	-26.2%
Myocardial infarction	-18.4%	-18.1%
Stroke	-12.8%	-24.5%
Cong. heart failure	-30.1%	-24.2%
Aortic aneurysm	-7.0%	-13.3%

Source: Thomas Mansky, Neue Methoden der Qualitätsmessung und des Qualitätsmanagements, in: Report Versorgungsforschung Band 1 – Monitoring der gesundheitlichen Versorgung in Deutschland. Köln, 2008, p. 149-170; the US data are based on Medicare Payment Advisory Commission (MEDPAC), Healthcare spending and the Medicare program. A data book, Washington DC 2005

Switzerland

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

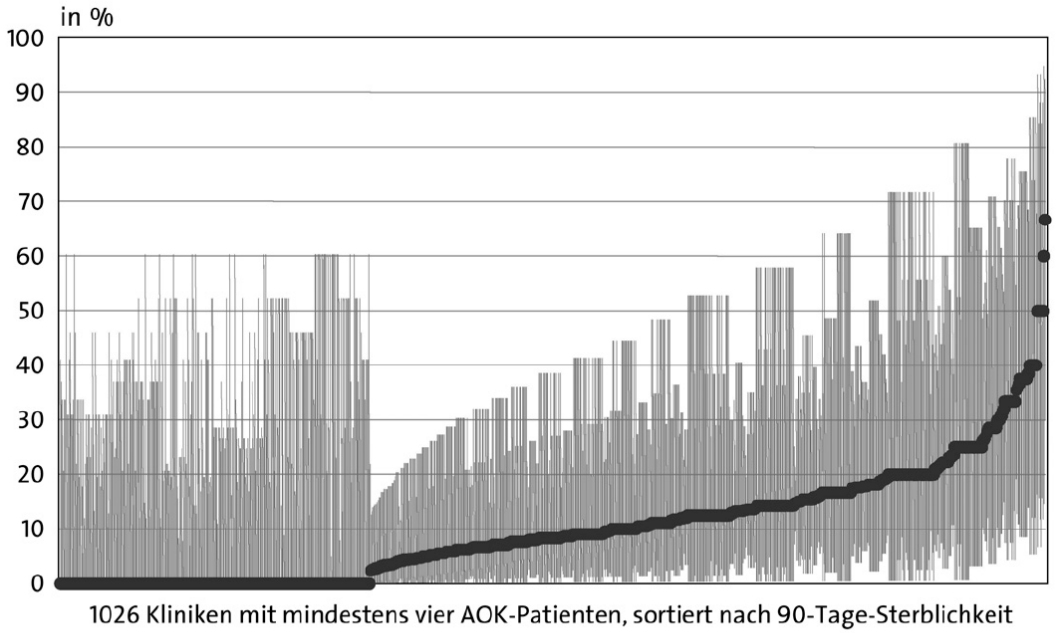
- Switzerland – after a review of available systems – has decided to introduce HELIOS quality indicators as a Swiss national quality indicator system
  - Swiss view: HELIOS compared favourably to AHRQ
- Currently we are in close cooperation for transferring our system to Switzerland (different coding systems etc.)
- Swiss data is already available at the ministry (BAG)
- Introduction is scheduled for this summer
  - Thus, Swiss results will be available for comparison with HELIOS

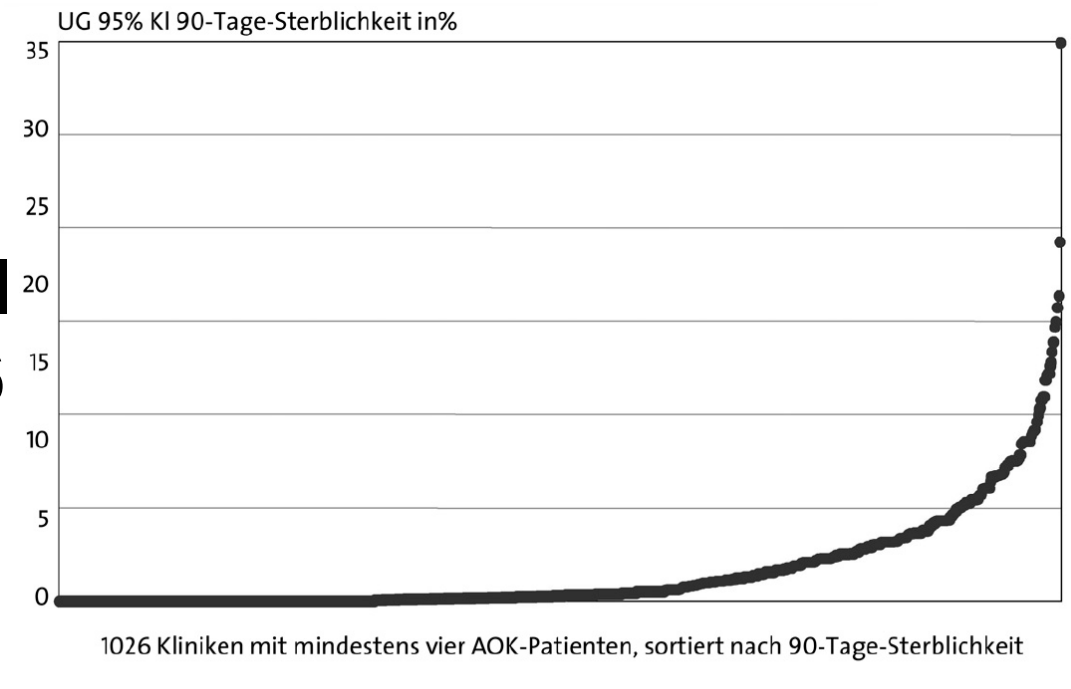
Extending the scope: QSR
(quality assurance with routine data)

- The largest German sickness fund (AOK) together with HELIOS has developed a new system to derive quality indicators from routine insurance claim data
  - due to availibility of long term data and data from other sectors (outpatient, drugs …), the approach is much wider
  - patient careers can be followed over years (up to lifetime)
  - indicators for long term outcome can be measured !
- Complications identifiable by specific readmissions
  - e.g. replacement of an endoprothesis due to any reason, any time after first implantation
  - readmission due to deep vein thrombosis
  - re-operation after colon resection due to abscess

QSR includes all hospitals with at least 4 AOK cases with a particular tracer indication

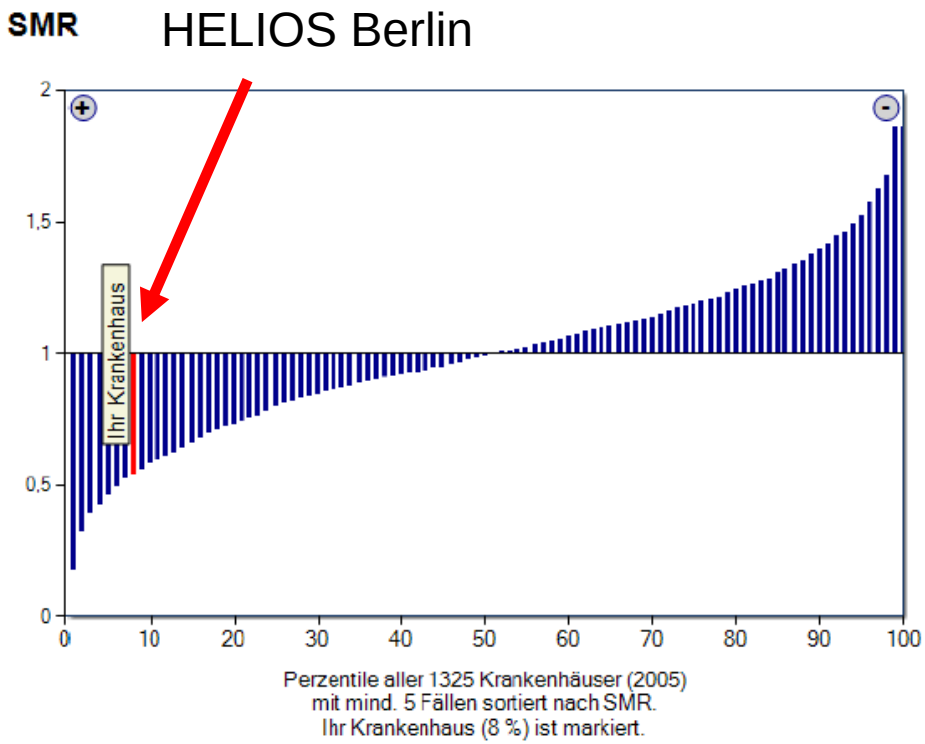
example: 90-day-mortality after colorectal cancer surgery in 1,026 hospitals (top with 95% CI; bottom: lower limit of 95% CI)





QSR: cross-sectional benchmarking
Example HELIOS Klinik Berlin Buch, heart failure

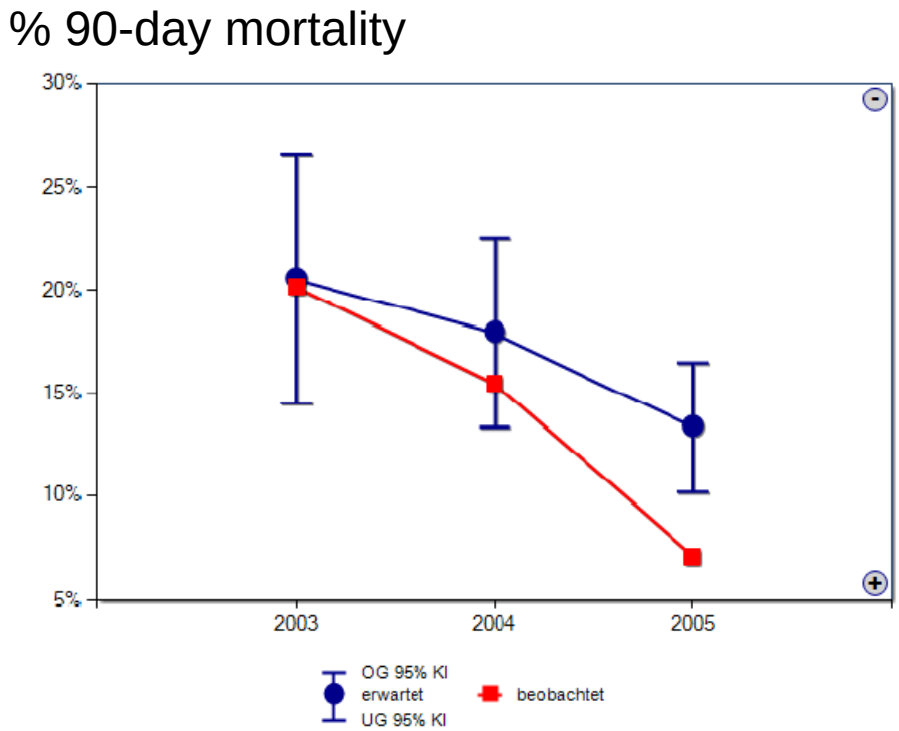
- 1,411 hospitals in Germany treat heart failure patients
- 90-day mortality ratio in Berlin-Buch in 2005 was 0.54, which is on the 8th percentile
- Such results have not yet been available on a routine basis in Germany



SMR = standardized mortality ratio; here SMRs of German hospitals, ordered by value (1 = German average)

QSR: year-by-year vs. average
Example HELIOS Klinik Berlin Buch, heart failure

- HELIOS quality management processes for heart diseases were set up in 2003
- 90-day heart failure mortality in Buch declined well below the adjusted German average
  - 2003 to 2005 is currently available from AOK



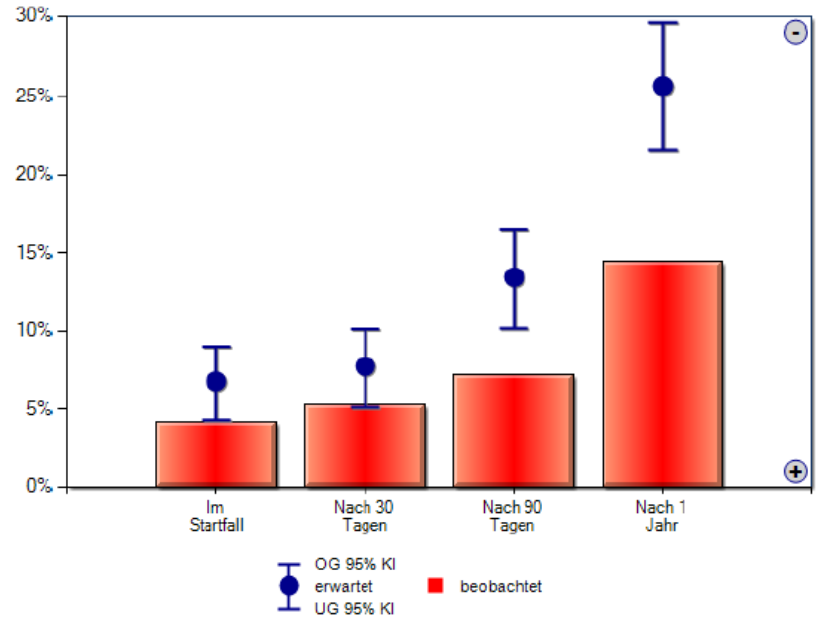
Germany with 95% confidence interval

HELIOS Berlin-Buch

QSR: quality beyond discharge
Example HELIOS Klinik Berlin Buch, heart failure

- Risk adjusted heart failure mortality in Berlin-Buch is not only lower at discharge,
  but can still be observed after 1 year

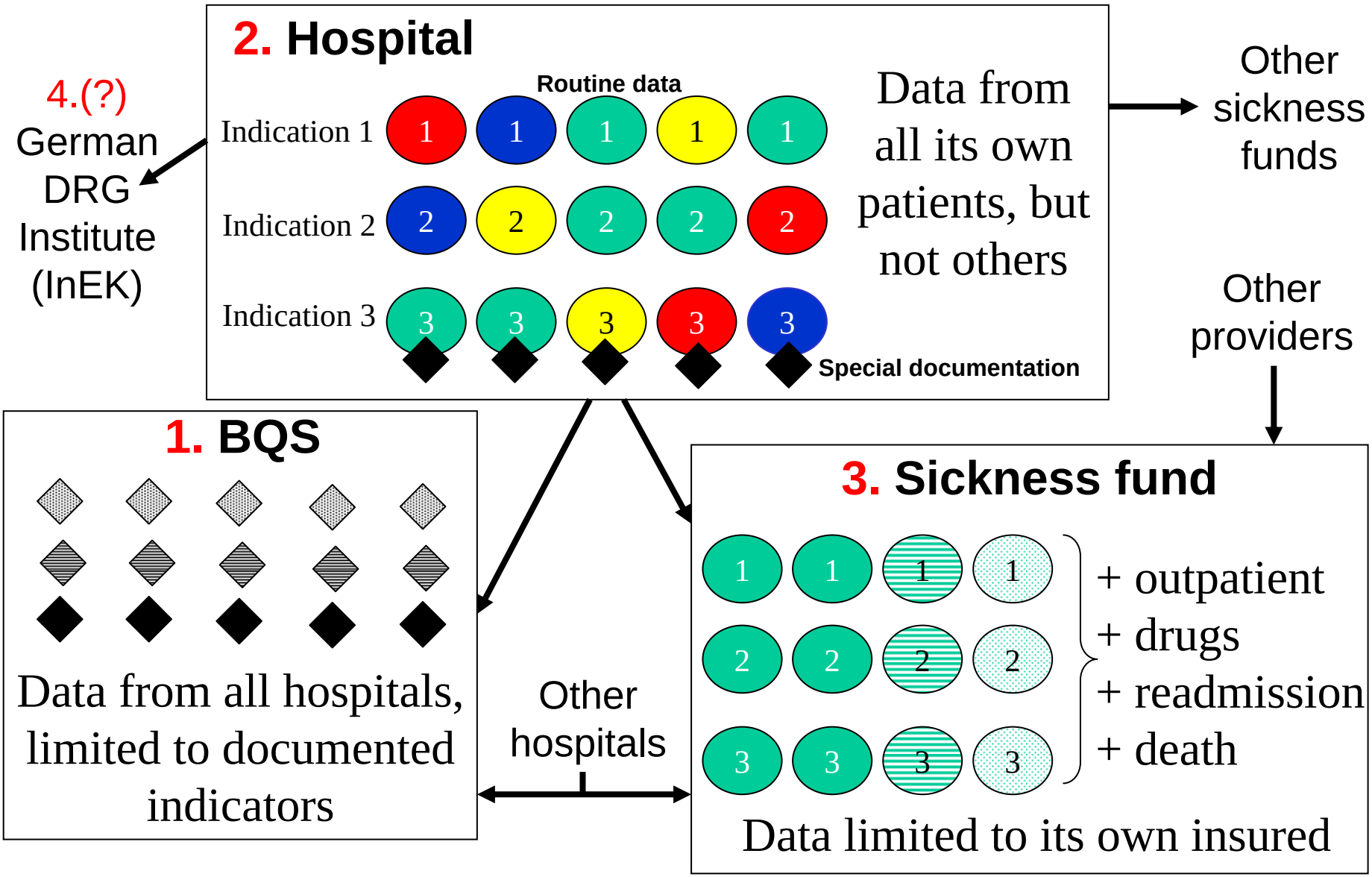
% mortality at discharge,
after 30-days, 90-days, 1 year



Germany with 95% confidence interval

HELIOS Berlin-Buch

Comparison of three approaches



Disease Management Programs
(since 2002)

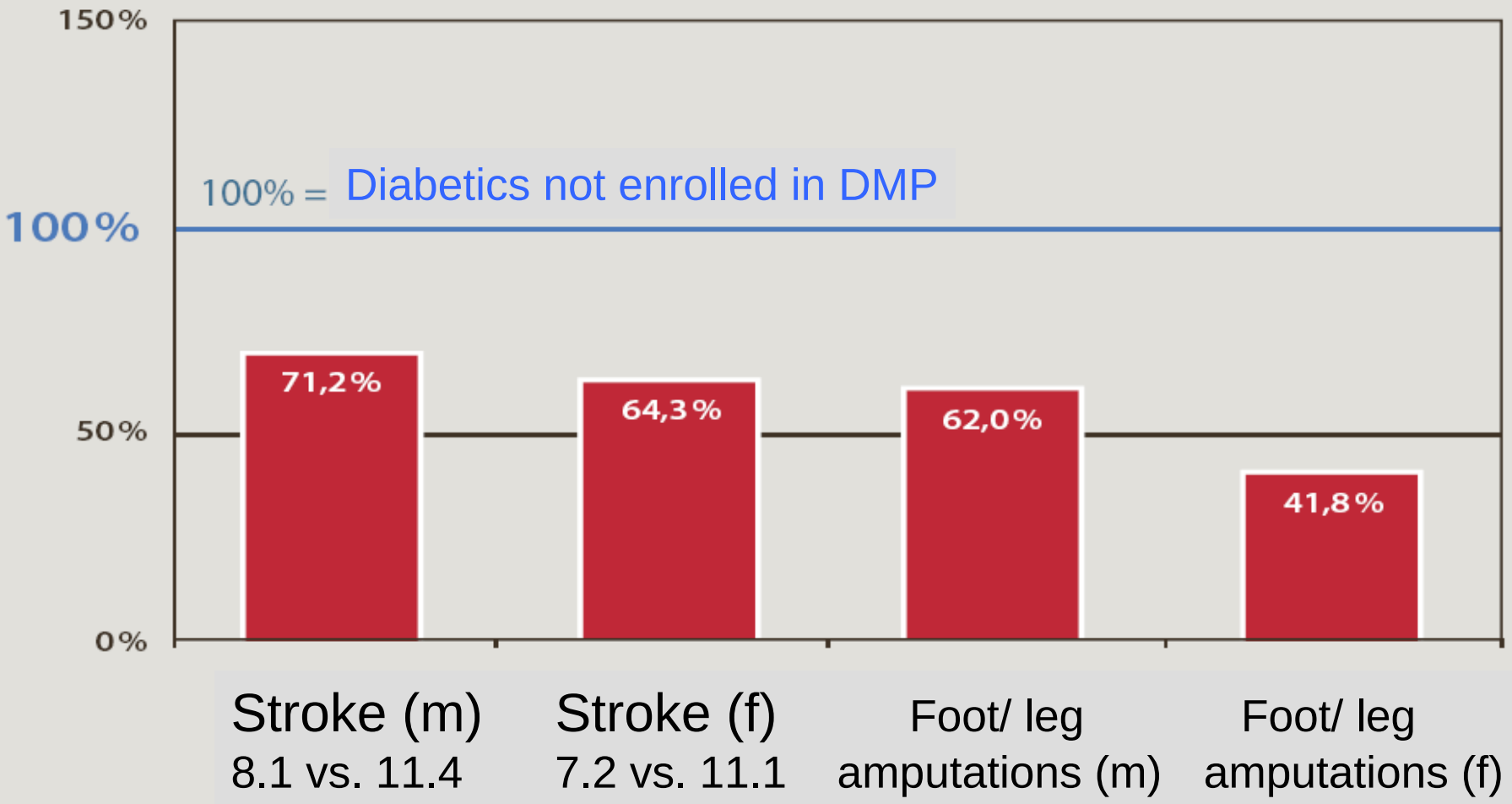
- Compensate sickness funds for chronically ill better (make them attractive) = reduce faulty incentives to attract young & healthy
- Address quality problems by guidelines/ pathways
- Tackle trans-sectoral problems by "integrated" contracts for diabetes I/ II, asthma/ COPD, CHD, breast cancer
- = introduce Disease Management Programs meeting certain minimum criteria and compensate sickness funds for average expenditure of those enrolling

double incentive for sickness funds:
potentially lower costs + extra compensation!
By end of 2007: 3.8 mn enrolled (5.5% of SHI insured)

DMP diabetes – first results

(age- but not severity-adjusted; ***not*** from official evaluation with post-intervention no control group design)

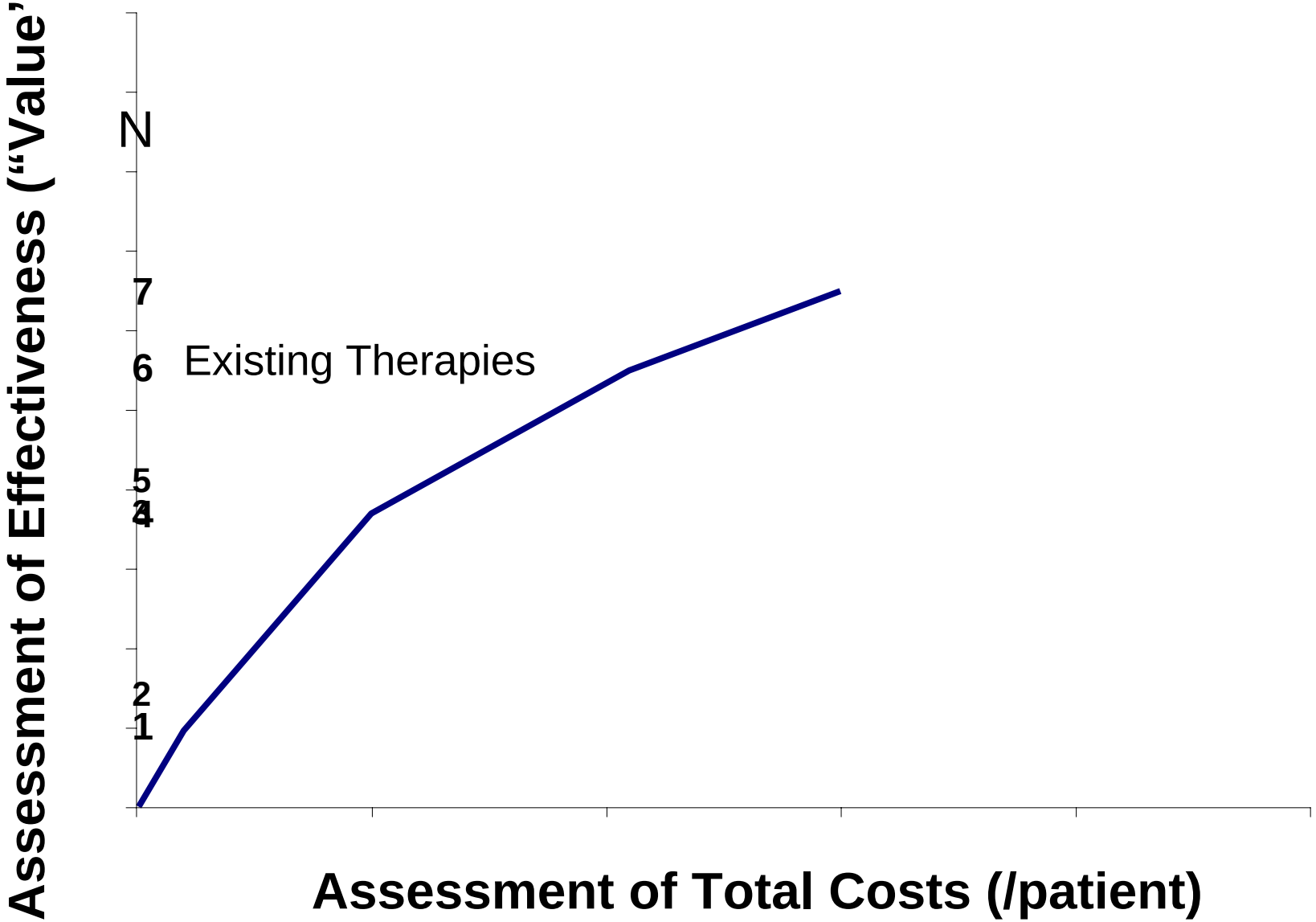
Source: Ulrich, Marshall & Graf in Diabetes, Stoffwechsel und Herz 2007; 16(6): 407-414



Evaluation of pharmaceuticals

- Federal Joint Committee (FJC; founded 2004) has task to group drugs according to equal effectiveness (-> same reference price)
- may commission an evaluation through its Institute for Quality and Eficiency in Healthcare (IQWiG; founded 2004)
- 2007 reform extended FJC‘s mandate to set maximum reimbursement price for drugs of superior effectiveness; necessitates cost-effectiveness evaluation through IQWiG

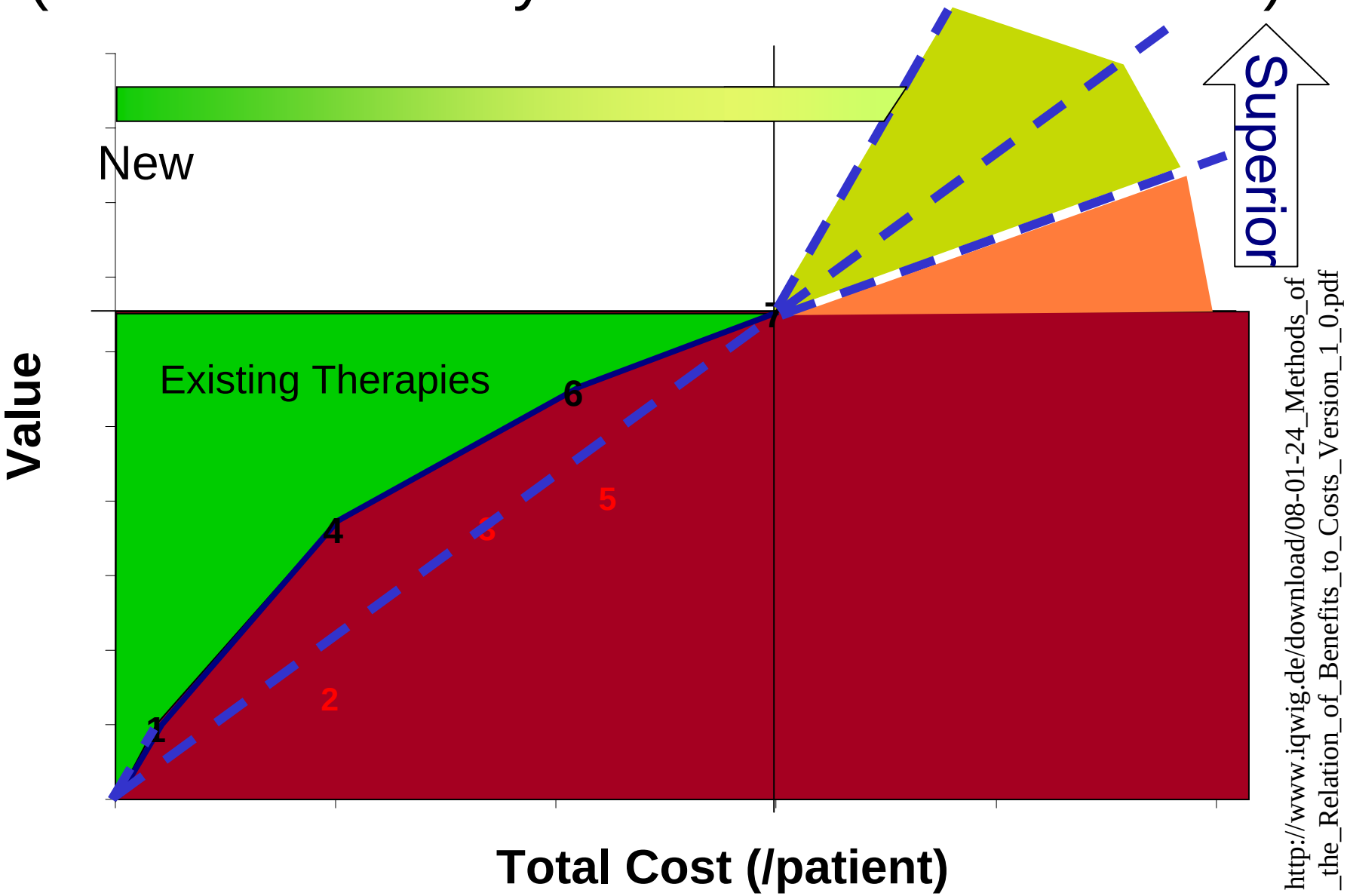
Proposed IQWiG methodology (Jan. 2008): frontier analysis for the relevant therapeutic area



http://www.iqwig.de/download/08-01-24_Methods_of_the_Relation_of_Benefits_to_Costs_Version_1_0.pdf

Decision zones

(decision taken by Federal Joint Committee)



http://www.iqwig.de/download/08-01-24_Methods_of_the_Relation_of_Benefits_to_Costs_Version_1_0.pdf

Conclusions

- Germany might have been slow with real quality innovations, but:
- Legal requirements provide framework for uniform approaches, providing benchmarking opportunities *(too little used, however)*
- Recently, IT improvements, better coding (DRGs!) and data availability have brought true innovative approches *(unfortunately usually not published internationally)*

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This presentation and more material can be found on the following websites:

http://mig.tu-berlin.de

www.observatory.dk

European Observatory on Health Systems and Policies