

Implementing health financing reforms: *DRG-based hospital payments in Germany*



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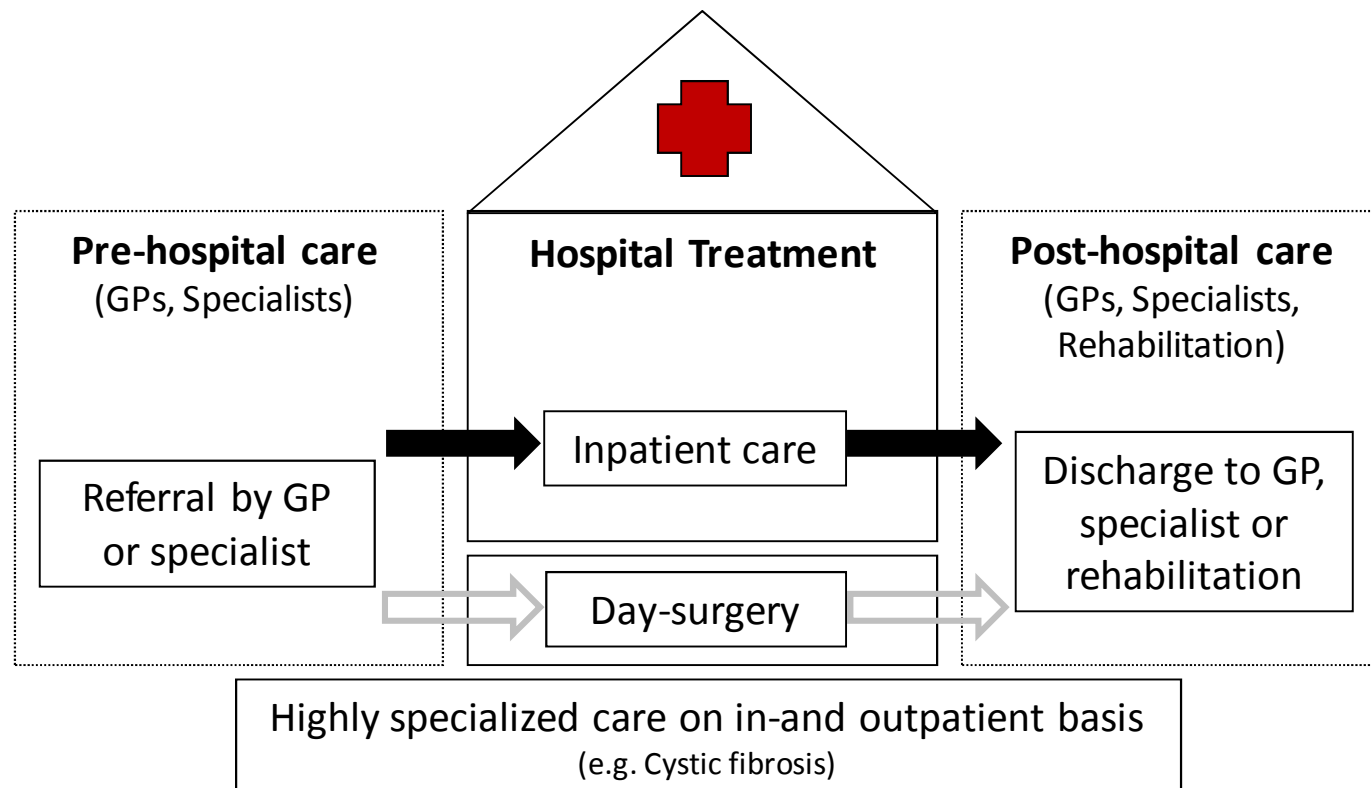


- 1) German hospital landscape
- 2) The G-DRG system
- 3) System evaluation
- 4) Future trends and challenges

Hospital facts (Data year 2007)

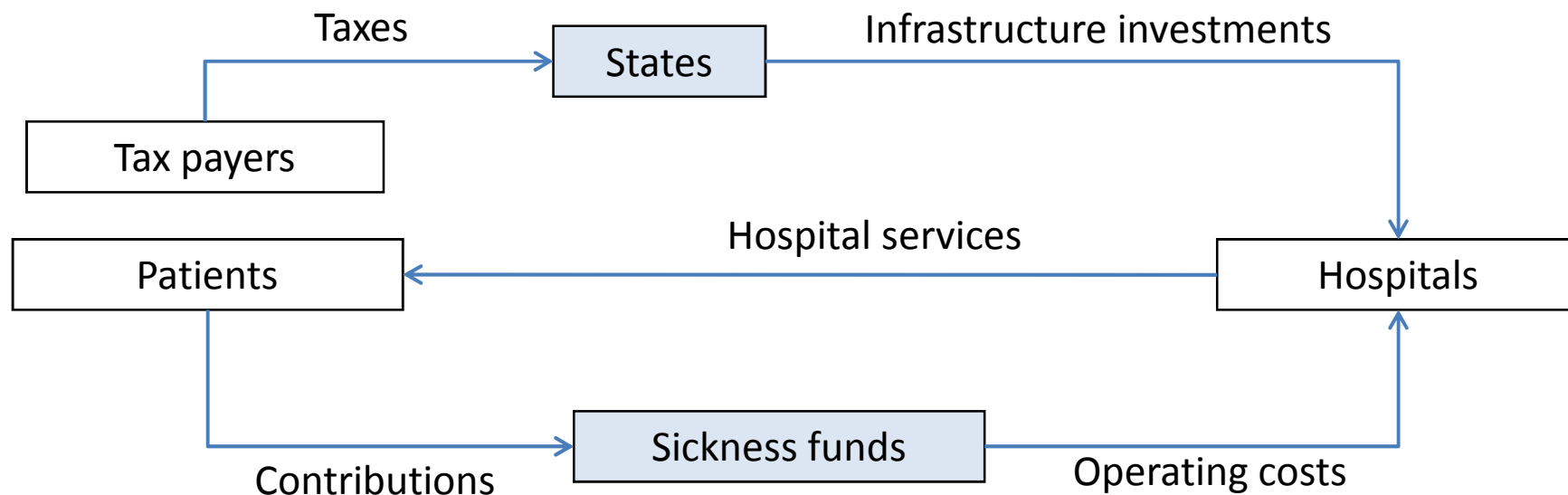
Size and type of ownership	Hospitals overall	Beds	Beds per 100 000 inhabitants	Occupancy	Cases	Cases per 100 000 inhabitants	ALOS*
	Number (Share in %)	Number (Share in %)	Number	[%]	Number	Number	Days
Hospital size in beds	2 087 (100)	506 954 (100)	616	77.2	17 178 573	20 883	8.3
< 49	407	7 572	9	64.9	210 028	255	8.5
50 - 99	264	19 354	24	73.3	529 579	644	9.8
100 - 149	302	36 995	45	74.2	1 108 285	1 347	9.0
150 - 199	208	35 903	44	74.8	1 179 137	1 433	8.3
200 - 299	326	79 578	97	76.1	2 612 288	3 176	8.5
300 - 399	203	69 613	85	77.4	2 361 352	2 871	8.3
400 - 499	131	58 258	71	77.6	1 953 598	2 375	8.4
500 - 599	96	52 545	64	77.1	1 870 325	2 274	7.9
600 - 799	64	43 654	53	78.8	1 564 800	1 902	8.0
> 800	86	103 482	126	80.7	3 789 184	4 606	8.0
Public hospitals	677 (32.4)	250 345 (49.4)	304	78.9	8 697 755	10 573	8.3
under private law	380	133 957	163	77.5	4 804 914	5 841	7.9
under public law	297	116 388	141	80.5	3 892 841	4 732	8.8
- legally dependent	161	54 319	66	79.5	1 755 576	2 134	9.0
- legally independent	136	62 069	75	81.4	2 137 266	2 598	8.6
Non-profit hospitals	790 (37.9)	177 632 (35.0)	216	75.3	5 970 324	7 258	8.2
Private hospitals	620 (29.7)	78 977 (15.6)	96	76.2	2 510 494	3 052	8.7

Range of activities and services in hospital sector



Hospital financing and capacity planning

- Financing follows the principle of duality since Hospital Financing Act (KHG) in 1972
- Capacities are planned by the state governments on the basis of so-called “hospital requirement plans”

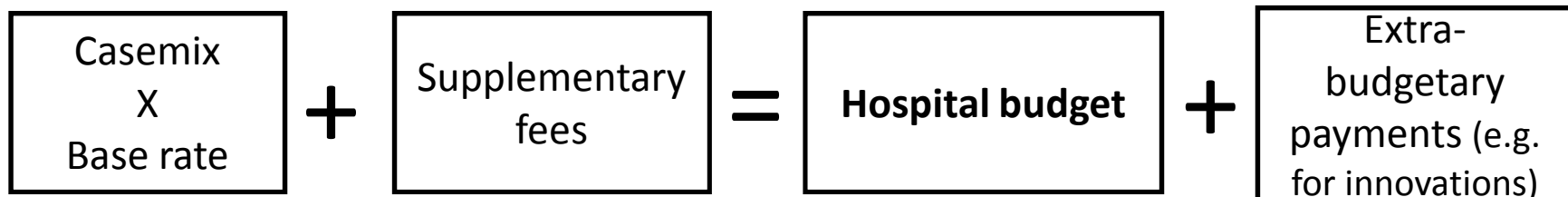


Infrastructure investments

- **Long-term** infrastructural assets require a case-by case grant application by each individual hospital
- Flat-rate grants for **short-term** assets (3–15 years economic life) can be granted
- In practice, infrastructural hospital investments are mainly determined by the budgetary situation of the states and by political considerations

Operating costs

- Sickness funds negotiating activity based DRG budgets every year with every “planned” Hospital



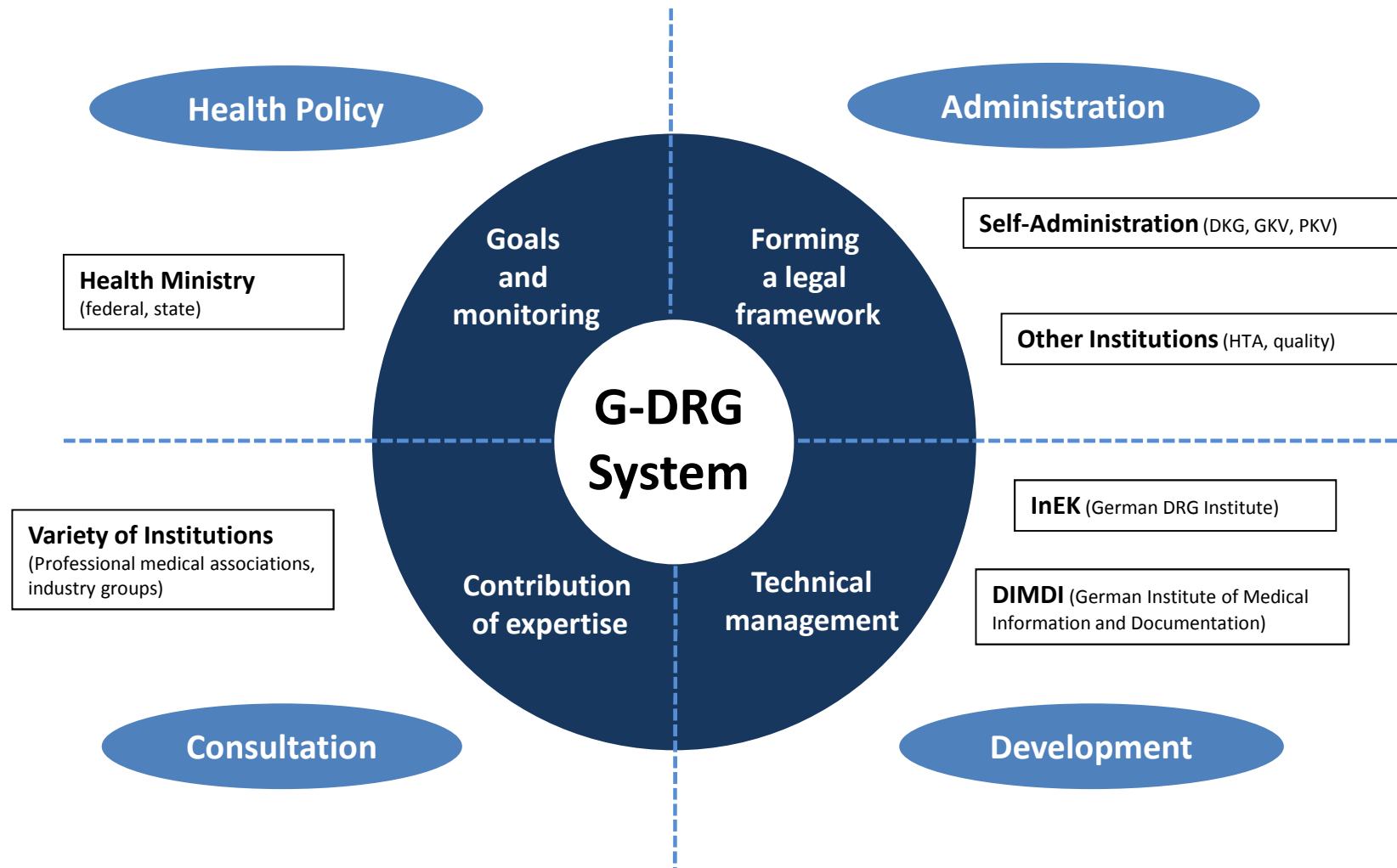
- Budget over-run adjustment (hospital pays back):
 - 65 % (standard DRGs), 25 % (drugs, medical, polytrauma and burns DRGs),
Negotiation for hardly predictable DRGs
- Budget under-run adjustment (hospital receives compensation) :
 - 20% (standard DRGs)

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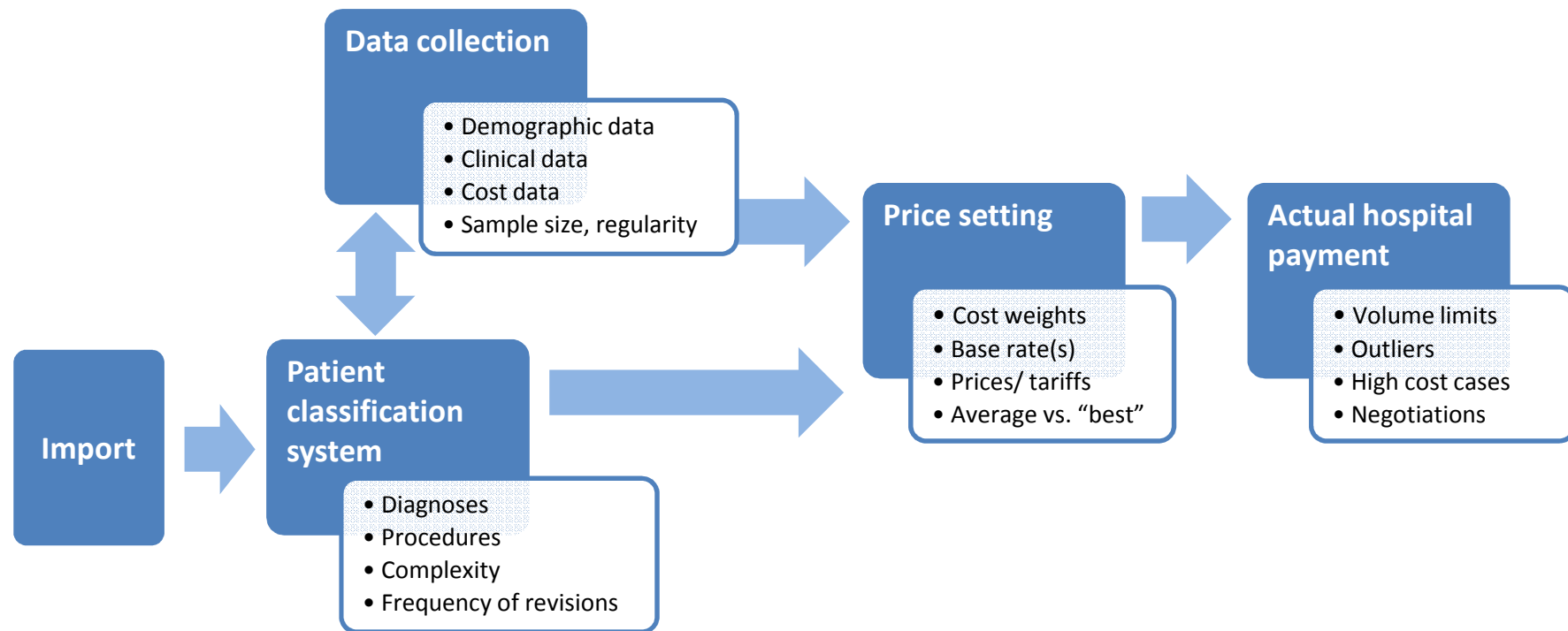
Aims of DRG introduction in Germany

- Facilitating a precise and transparent measurement of the case mix and the level of services delivered by hospitals
- Achieving a more appropriate and fair allocation of resources by utilising DRGs instead of per diem charges
- Increasing efficiency and quality of service delivery due to the improved documentation of internal processes and increased managerial capacity
- Cost containment based on LOS and bed capacity reduction

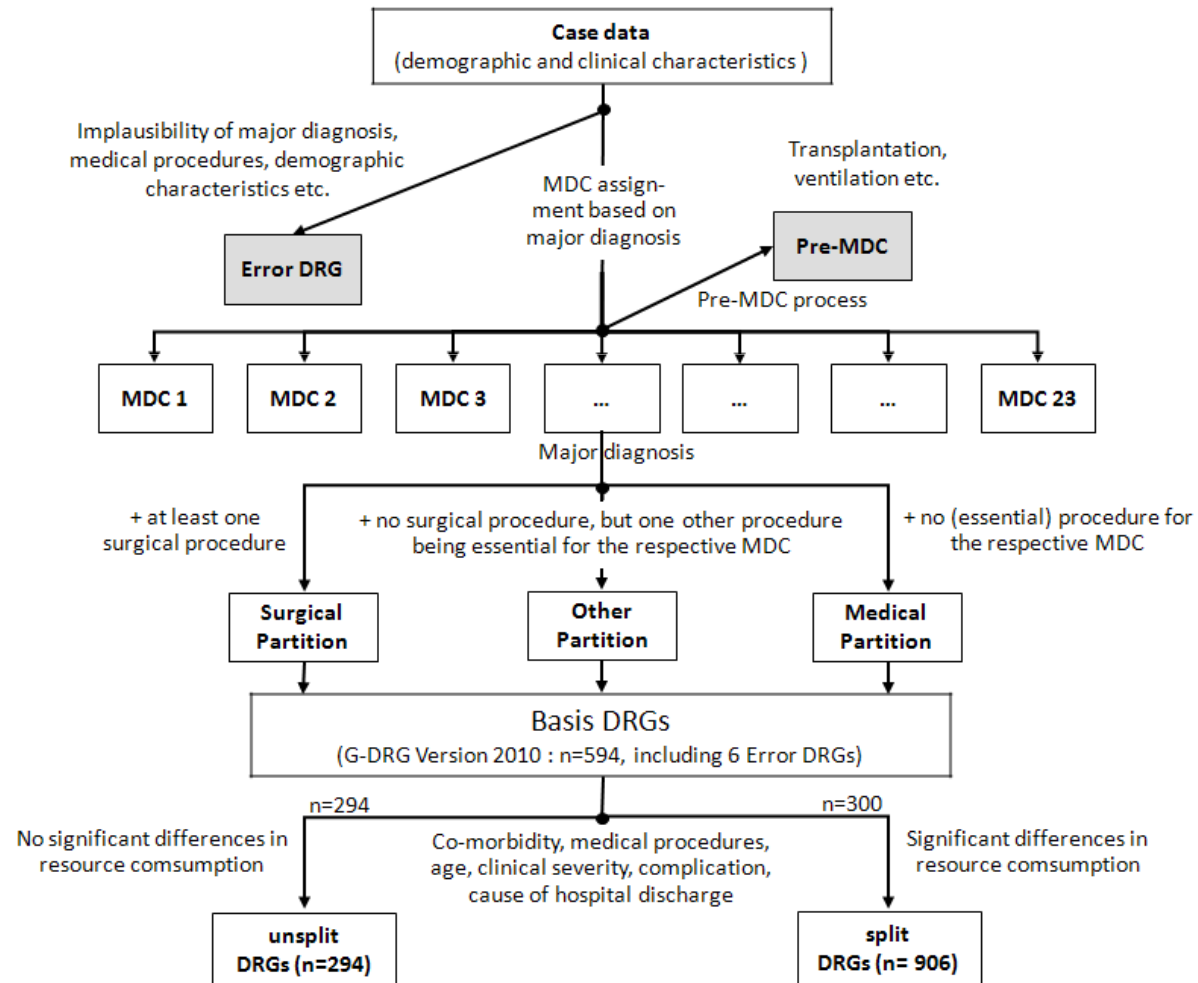
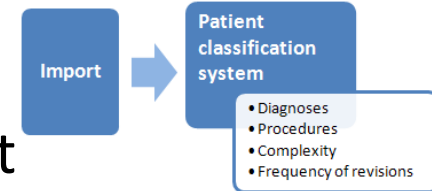
Tasks and stakeholders of the DRG system development

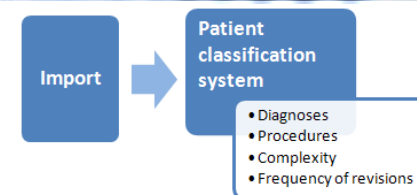


DRG system building blocks



AR-DRGs were the basis for further self development





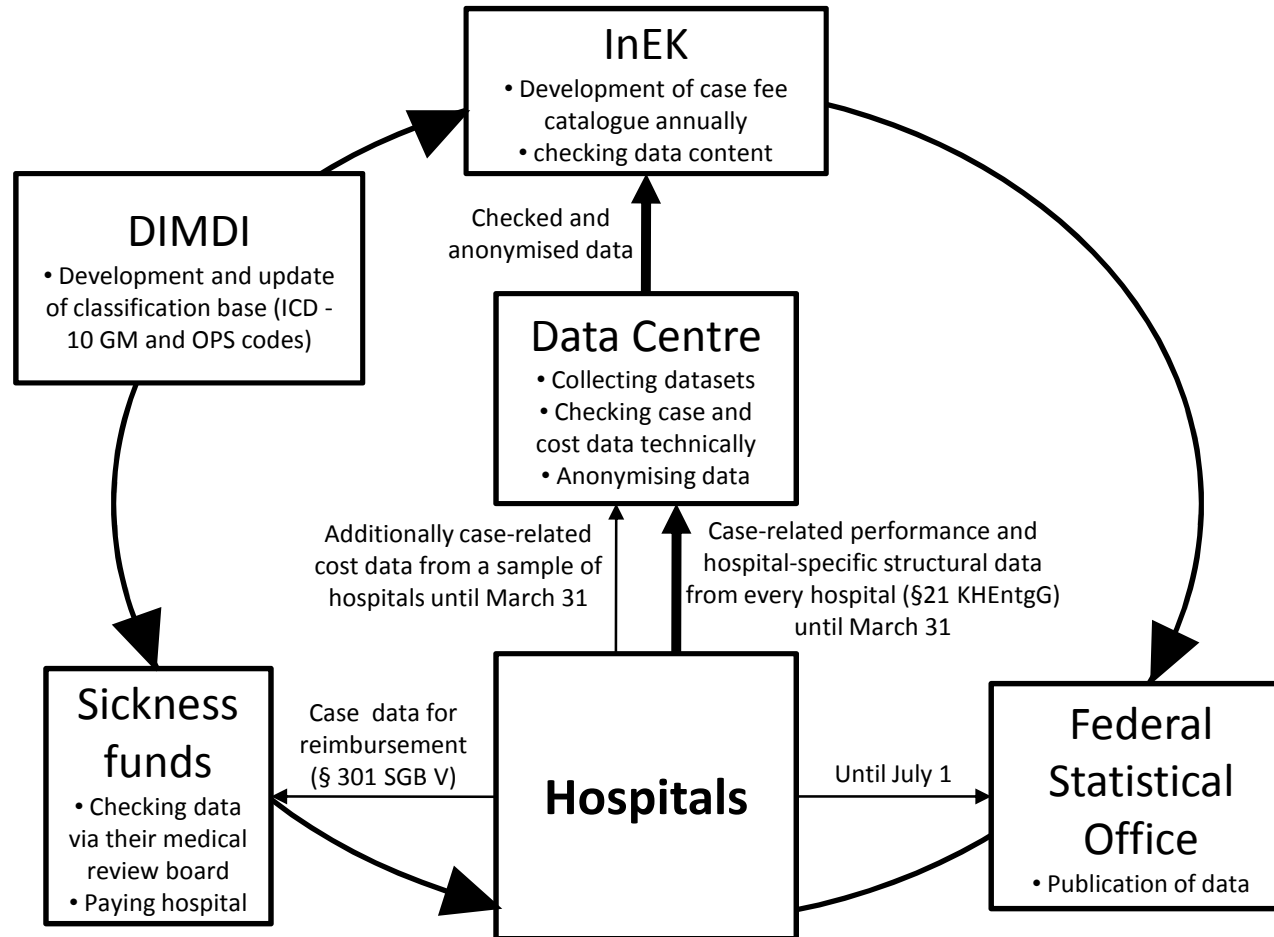
Development over time

- Increased precision due to more cost weights
- Treatment costs were better reflected over time

Year	2003	2004	2005	2006	2007	2008	2009	2010
DRGs total	664	824	878	954	1082	1137	1192	1200
Inpatient DRGs total	664	824	878	952	1077	1132	1187	1195
- valuated	642	806	845	912	1035	1089	1146	1154
- unvaluated	22	18	33	40	42	43	41	41
Range of cost weights: min.-max.(rounded)	0.12 - 29.71	0.11 - 48.27	0.12 - 57.63	0.12 - 65.70	0.11 - 64.90	0.11 - 68.97	0.12 - 78.47	0.13 - 73.76
Day care DRGs total	0	0	0	2	5	5	5	5
- valuated	0	0	0	1	1	1	1	1
- unvaluated	0	0	0	1	4	4	4	4
Supplementary fees	0	26	71	83	105	115	127	143
- valuated	0	1	35	41	59	64	74	81
- unvaluated	0	25	36	42	46	51	53	62

- Data collection**
- Demographic data
 - Clinical data
 - Cost data
 - Sample size, regularity

Data collection process



Data collection

- Demographic data
- Clinical data
- Cost data
- Sample size, regularity

Cost information for cost weight calculation

Year	2003	2004	2005	2006	2007	2008	2009	2010
Hospitals participating in cost data collection	125	144	148	214	263	249	251	253
- excluded for data quality	9	0	0	0	38	28	33	28
- actual	116	144	148	214	225	221	218	225
- included university hospitals	0	12	10	9	10	8	10	10
- number of cases available for calculation	633 577	2 825 650	2 909 784	3 531 760	4 239 365	3 900 098	4 377 021	4 539 763
- number of cases used for calculation after data checks	494 325	2 395 410	2 283 874	2 851 819	2 863 115	2 811 669	3 075 378	3 257 497
R ² all cases	0.4556	0.5577	0.6388	0.6805	0.7072	0.7209	0.744	0.7443
R ² inlier	0.6211	0.7022	0.7796	0.7884	0.8049	0.8166	0.8345	0.843

Data collection

- Demographic data
- Clinical data
- Cost data
- Sample size, regularity

Bottom-up microcosting

- Common cost accounting approach in (voluntary) cost data sample participating hospitals across Germany

→ Example: DRG I03A
(Hip revision or replacement with cc)
Cost weight: 4,192

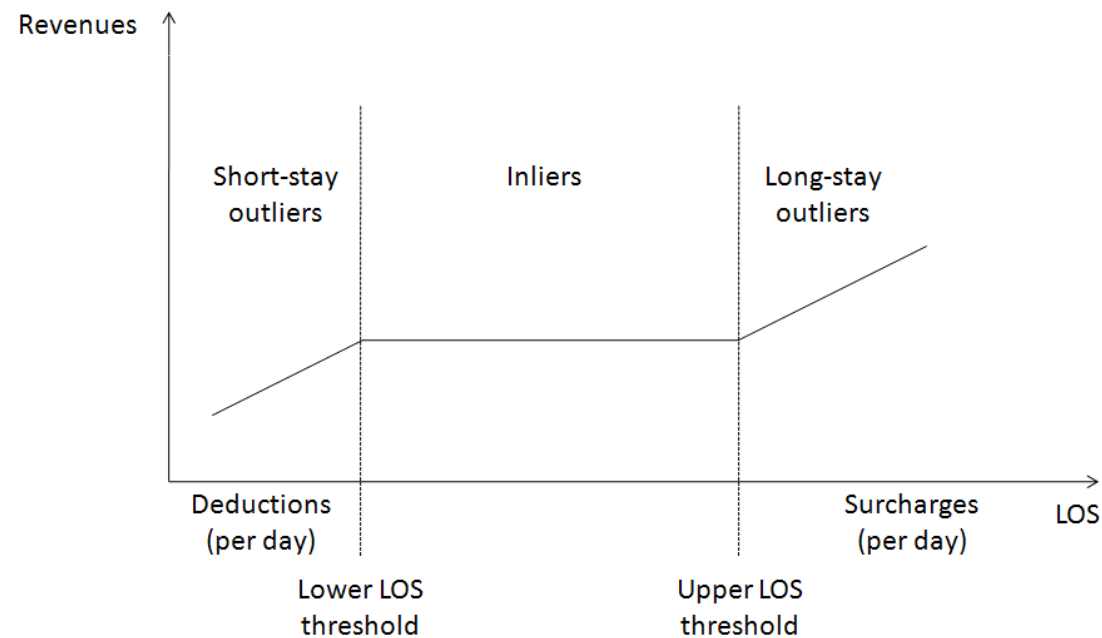
		Cost- Element Groups											
		1: Labour costs of the other medical staff	2: Labour costs of the nursing staff	3: Labour costs of the administrative and technical staff	4a: Drug costs	4b: Drug costs (individual costs/ actual consumption)	5: costs of implants and grafts	6a: Material costs (without drugs, implants and grafts)	6b: Material costs (individual costs/ actual consumption, without drugs, implants/ grafts)	7: Medical infrastructure costs	8: Non- medical infrastructure costs	Total	
		Labour			Material					Infrastructure		Total	
Cost- Centre Groups	01: Normal ward	Hospital units with beds	654	1744	80	156	41	---	131	19	371	1358	4554
	02: Intensive care unit		152	360	10	45	11	---	60	1	64	179	881
	03: Dialysis unit		---	---	---	---	---	---	---	---	---	---	0
	04: Operating room	Diagnostic and treatment areas	623	---	401	23	32	1282	286	109	264	360	3380
	05: Anaesthesia		356	---	236	30	2	---	85	5	50	112	875
	06: Maternity room		---	---	---	---	---	---	---	---	---	---	0
	07: Cardiac diagnostics/ therapy		2	---	2	---	---	---	1	2	1	1	8
	08: Endoscopic diagnostics/ therapy		3	---	3	---	1	---	2	---	2	2	12
	09: Radiology		46	---	67	1	---	2	14	41	24	45	240
	10: Laboratories		18	---	110	6	339	---	75	82	12	50	694
	11: Other diagnostic and therapeutic areas		36	2	271	1	---	---	14	16	15	111	468
Total			1890	2106	1180	261	424	1283	669	276	803	2219	11112

Price setting

- Cost weights
- Base rate(s)
- Prices/tariffs
- Average vs. "best"

Cost weight calculation

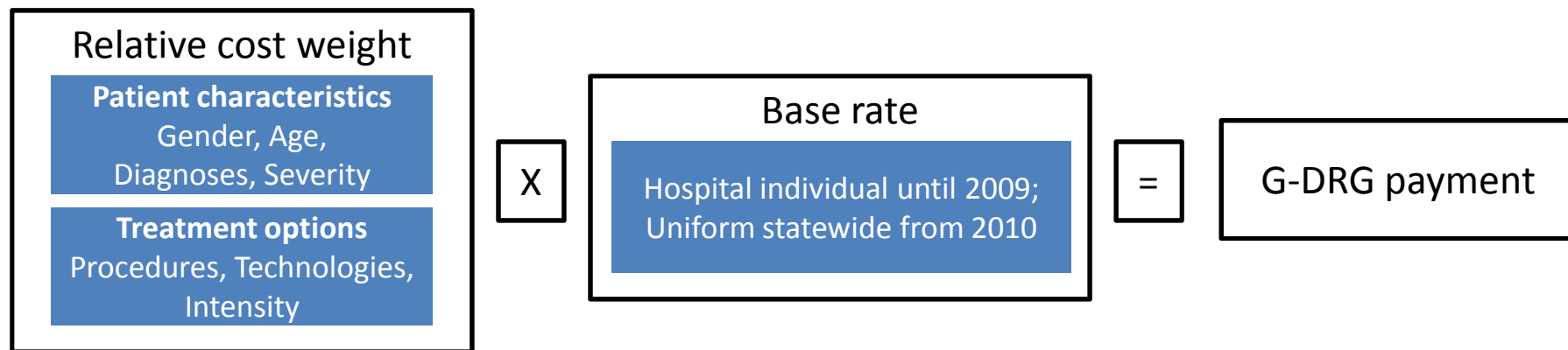
- Average costs of all inlier cases in one DRG are calculated
- DRG cost weight is calculated by deviding average costs of DRG inlier cases to the reference value (i.e. averarge costs of all patients in Germany)
- Cost weight = 1 → Average costs of all patients in Germany



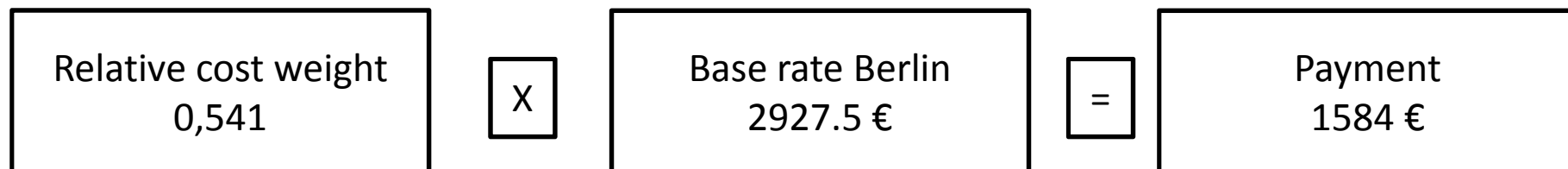
Payment rate

Actual hospital payment

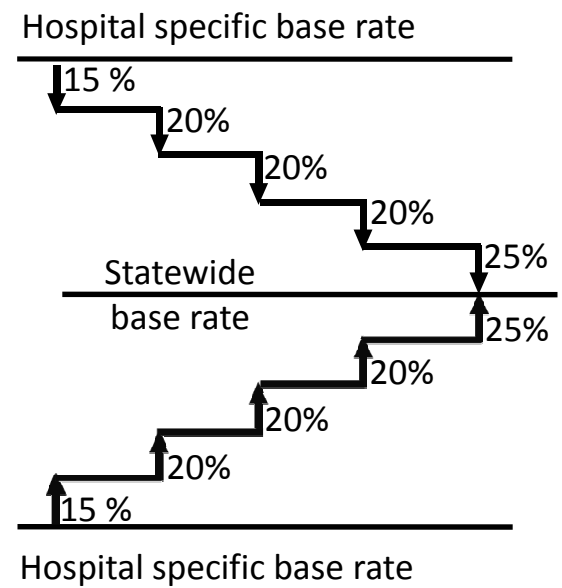
- Volume limits
- Outliers
- High cost cases
- Negotiations



- Payment example: Normal birth without cc in Berlin in 2010



The introduction phases

	2000-2002	2003 - 2004	2005 - 2009	2010 - onwards
1) Phase of preparation		2) Budget-neutral phase	3) Phase of convergence to state-wide base rates	4) Discussion on Policy
		<p>Historical Budget (2003)</p> <p>↓</p> <p>Transformation</p> <p>↓</p> <p>DRG-Budget (2004)</p>	 <p>Hospital specific base rate</p> <p>↓ 15 %</p> <p>↓ 20%</p> <p>↓ 20%</p> <p>↓ 20%</p> <p>↓ 25%</p> <p>Statewide base rate</p> <p>↑ 25%</p> <p>↑ 20%</p> <p>↑ 20%</p> <p>↑ 20%</p> <p>↑ 15 %</p> <p>Hospital specific base rate</p>	<ul style="list-style-type: none"> • Fixed or maximum prices • Selective or uniform negotiations • Quality Assurance (adjustments) • Budgeting (amount of services) • Dual Financing or Monistic

Main facts

- Central role of self-governing bodies
- Data driven system with annual updates
- Detailed analysis of hospital costs
- Ten-year process of introduction

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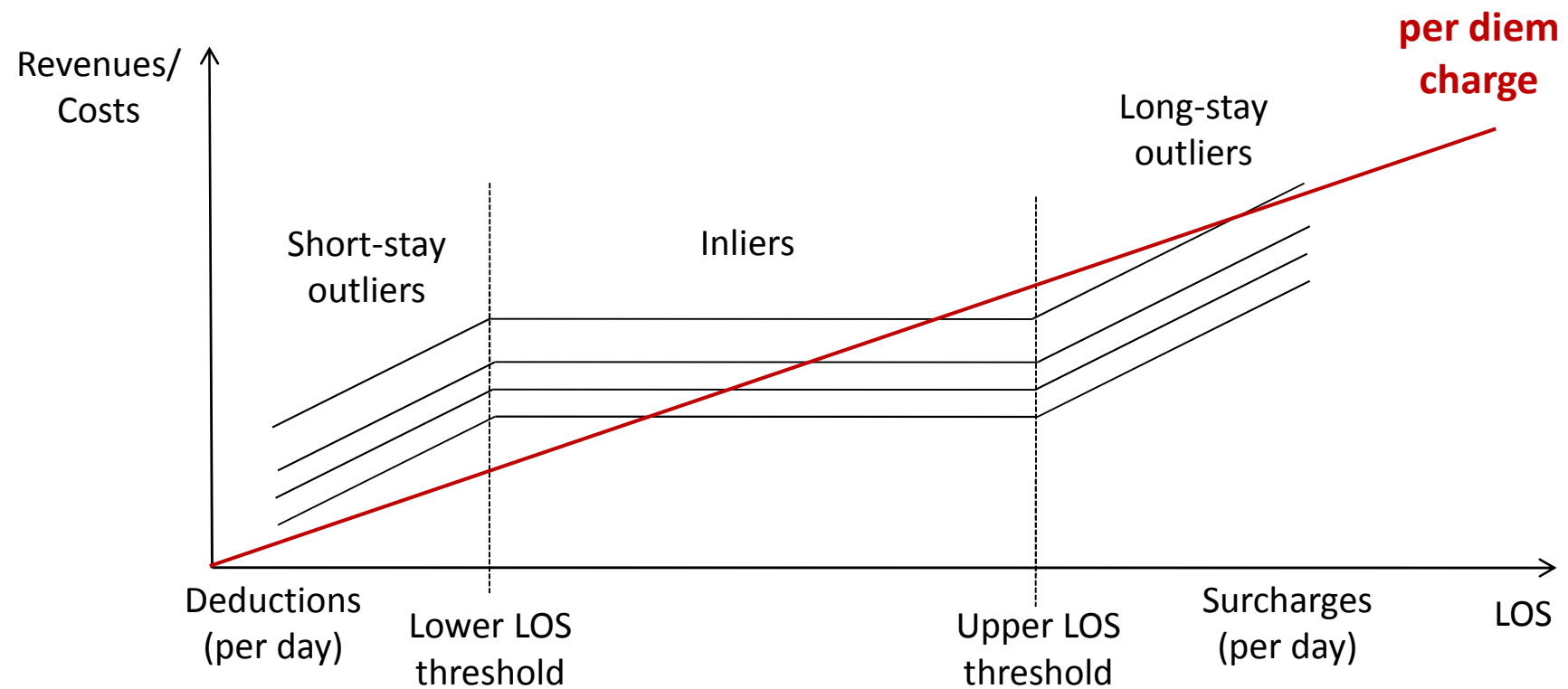
Official evaluations were planned ever since the G-DRG introduction but never made!

- Scientific study shows no negative impact on quality of care (Sens et al. 2009)
- Strengths and weaknesses of the G-DRG system:

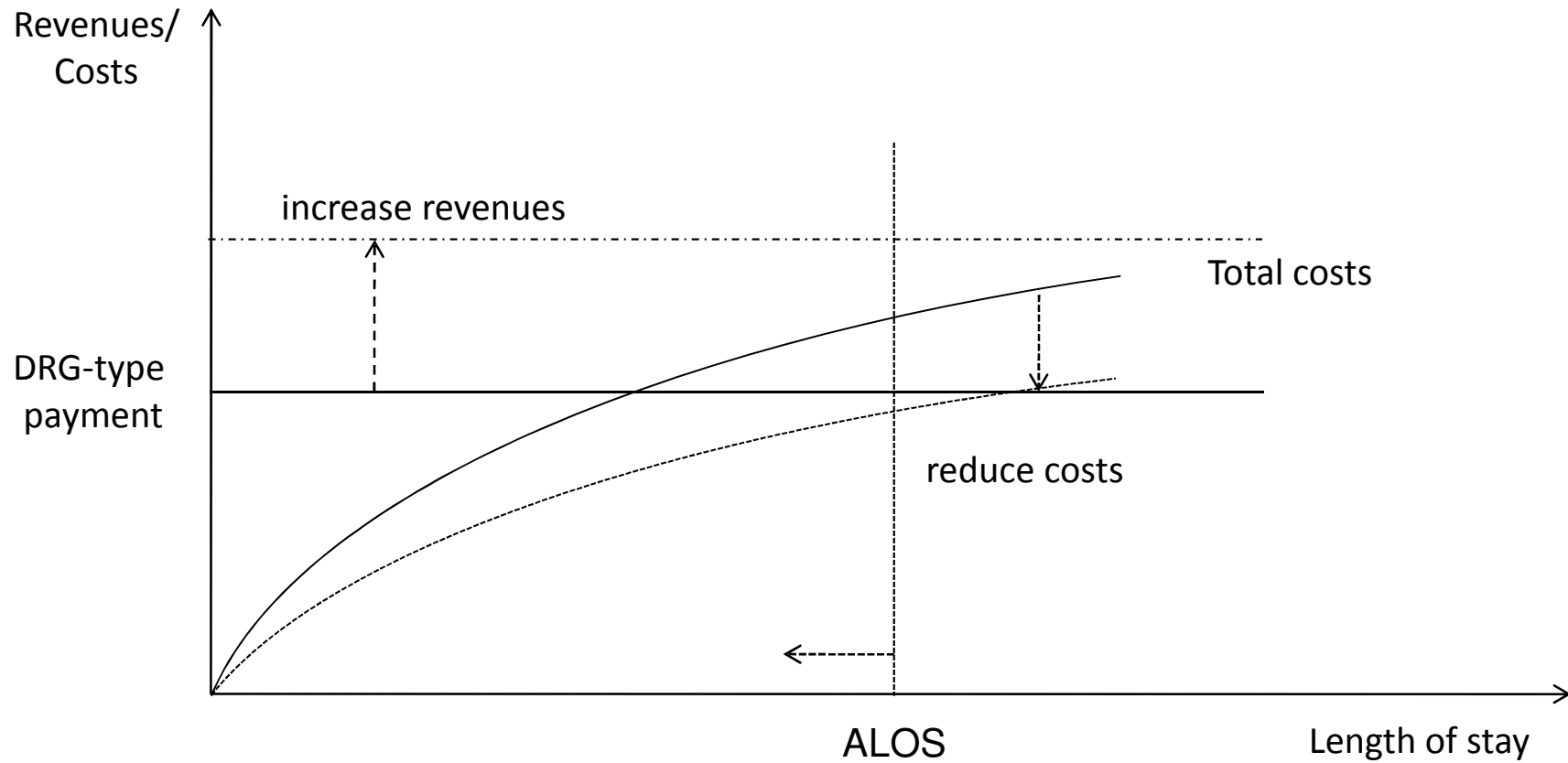
Strengths	Weaknesses
Transparency and documentation	No quality adjustments for reimbursement
Compliance of hospitals	No reflection of different input prices
Reimbursement tool	Uniform accounting system but no full sample of hospitals
Precision	Increasing complexity with number of DRGs

Changes of incentives: DRG-based payment vs. per diem charge

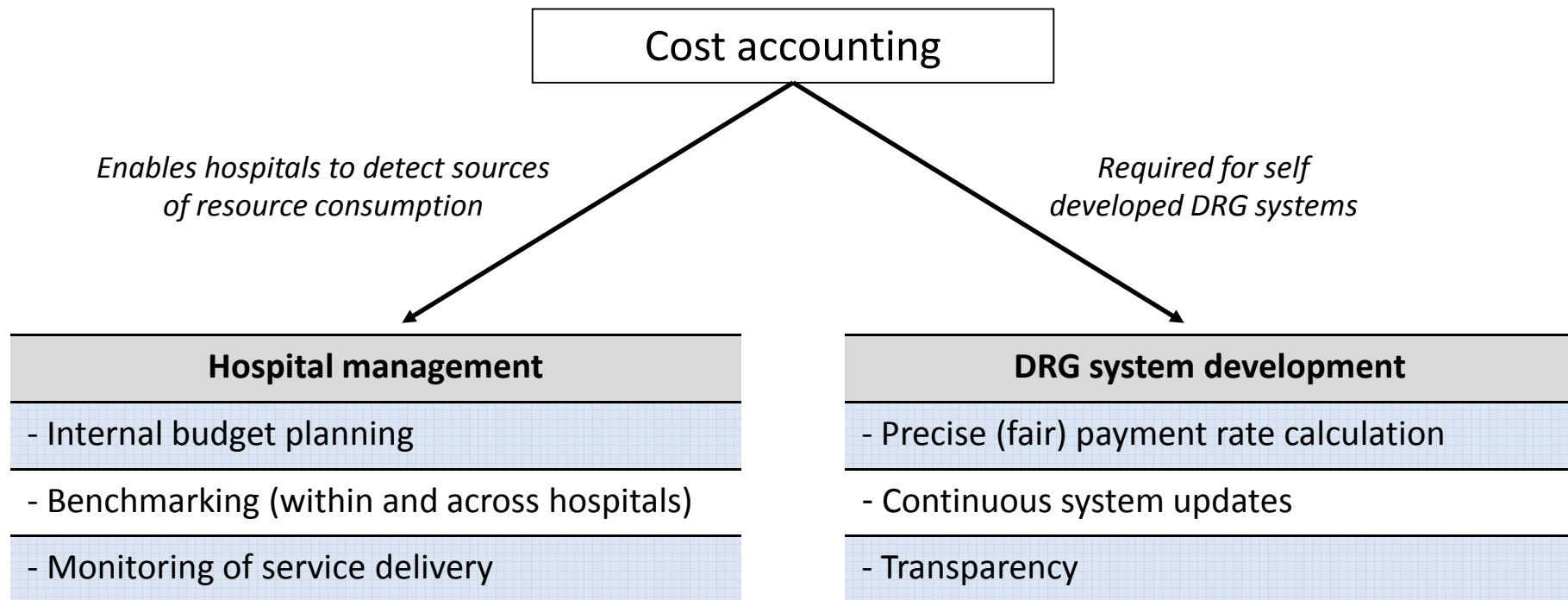
- Patients are no longer “revenue” but “cost” centers
- Every case has a contribution margin



Options for Hospitals to avoid deficits under DRG-based payments



DRGs have improved the cost accounting utilization and vice versa



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DRG introduction was just the first step

Quality assurance (price adjustments):

- Pay for performance elements are broadly agreed as soon as quality is measurable
- Already possible but not done: not paying for non-performance , present on admission marker

Fixed or maximum prices (selective or uniform negotiations):

- In case of maximum prices sickness funds must be able to negotiate selective prices for highly specialized, elective or integrated treatment models
- This could lead to a price challenge with neglecting the quality

DRG introduction was just the first step

Dual or monistic financing of investments:

- Investment lag due to public dept
- Assumption that monistic financing would make investments easier to schedule due to investment surcharges on top of every DRG

Thank you very much for
your time and attention!

All slides are available on:
www.mig.tu-berlin.de

