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DRG-based hospital payment and medical innovation in Europe

Results of the EuroDRG project

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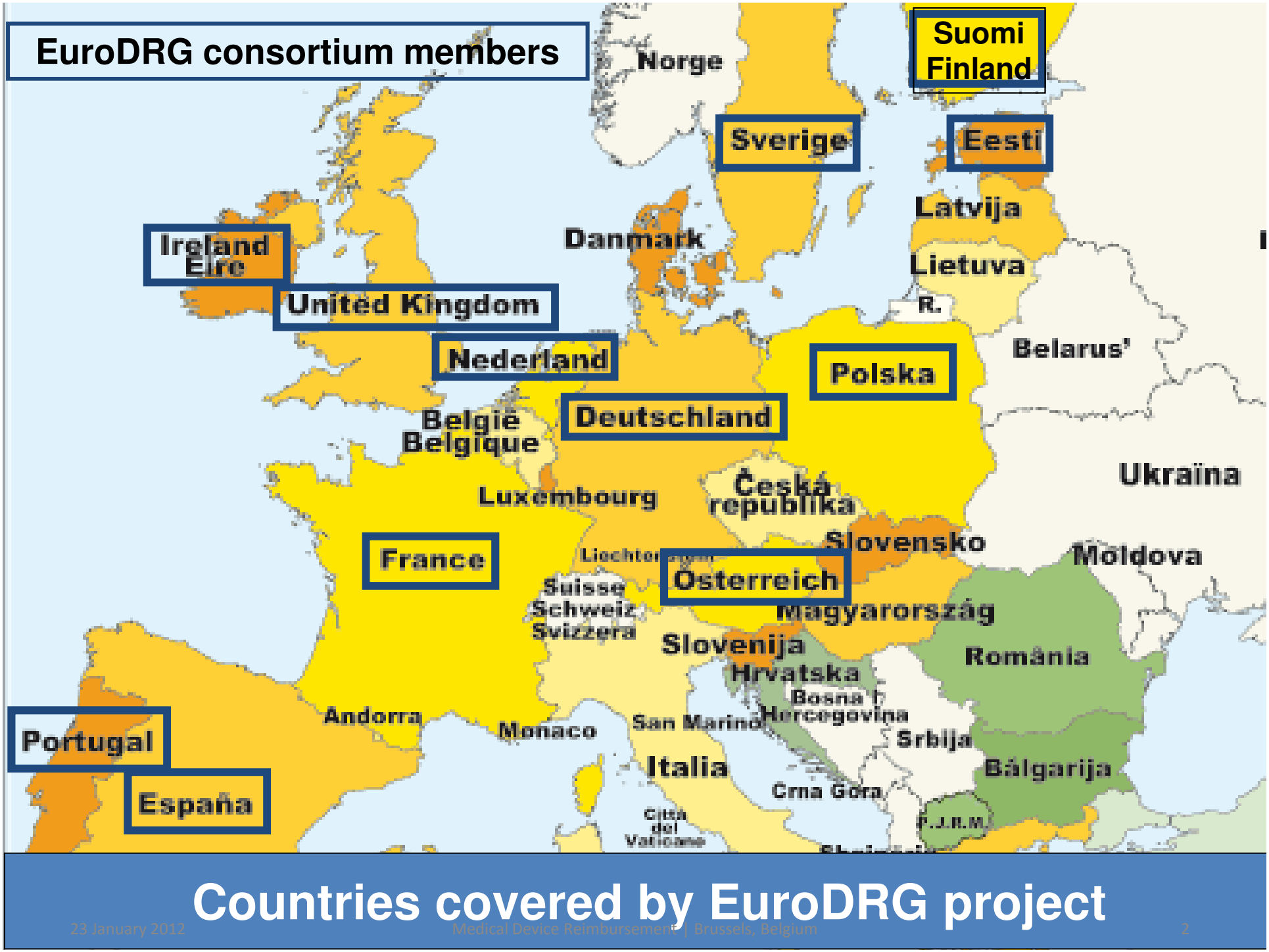
European Observatory on Health Systems and Policies

Euro DRG

European Observatory on Health Systems and Policies



Countries covered by EuroDRG project

EuroDRG consortium

Austria	Department for Medical Statistics, Informatics and Health Economics, Innsbruck Medical University
England/ UK	Centre for Health Economics, University of York
Estonia	PRAXIS Center for Policy Studies, Tallinn
Europe	European Health Management Association, Brussels
Finland	National Institute for Health and Welfare , Helsinki
France	École des hautes études en santé publique, Rennes & Institut de recherche et documentation en économie de la santé, Paris
Germany	Department of Health Care Management, Technische Universität Berlin
Ireland	Economic and Social Research Institute, Dublin
Netherlands	Institute for Health Policy & Management, Erasmus Universitair Medisch Centrum Rotterdam
Poland	National Health Fund, Warsaw
Portugal	Avisory board member Céu Mateus
Spain	Institut Municipal d'Assistència Sanitària, Barcelona
Sweden	Centre for Patient Classification, National Board of Health and Welfare, Stockholm

Outline

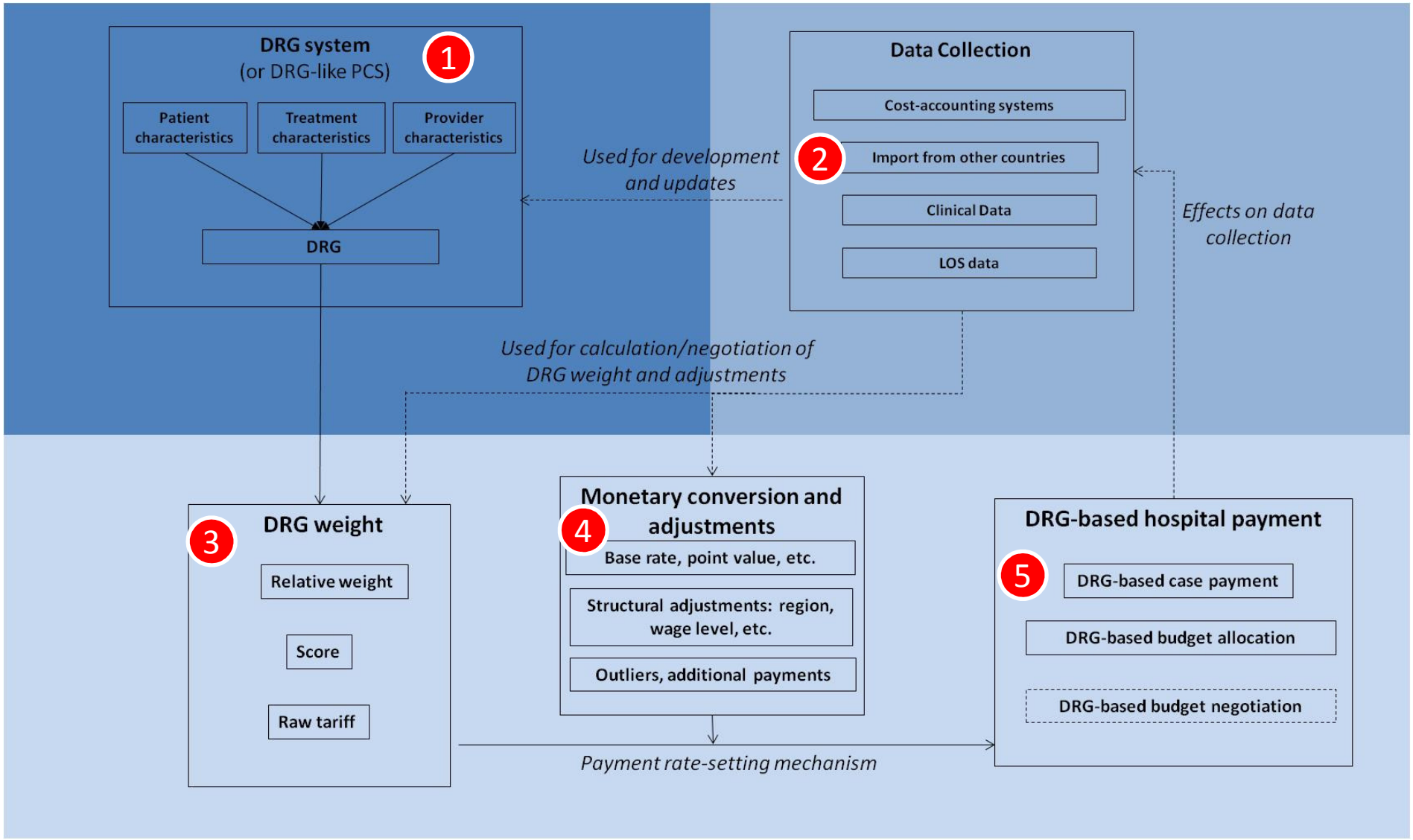
1. DRG-based hospital payment
   - How does it work?
   - What are the incentives?

2. DRG-based hospital payment and Innovation
   - Effects of innovation on costs and quality?
   - Effects of DRGs on innovation?

3. Findings of the EuroDRG project: DRGs and Innovation
   - Short term instruments
   - Long-term updating mechanisms

4. Discussion and Conclusion

DRG-based hospital payment: overview



Purposes of DRG systems in 12 European countries

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Country	Year of DRG introduction	Original purpose(s)	Principal purpose(s) in 2010
Austria	1997	Budgetary allocation	Budgetary allocation, planning
England	1992	Patient classification	Payment
Estonia	2003	Payment	Payment
Finland	1995	Description of hospital activity, benchmarking	Planning and management, benchmarking, hospital billing
France	1991	Description of hospital activity	Payment
Germany	2003	Payment	Payment
Ireland	1992	Budgetary allocation	Budgetary allocation
Netherlands	2005	Payment	Payment
Poland	2008	Payment	Payment
Portugal	1984	Hospital output measurement	Budgetary allocation
Spain (Catalonia)	1996	Payment	Payment, benchmarking
Sweden	1995	Payment	Benchmarking, performance measurement, hospital payment

DRG systems : history

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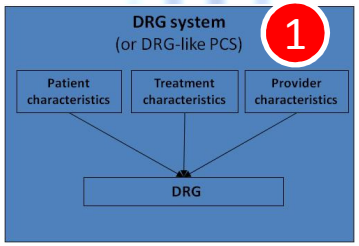
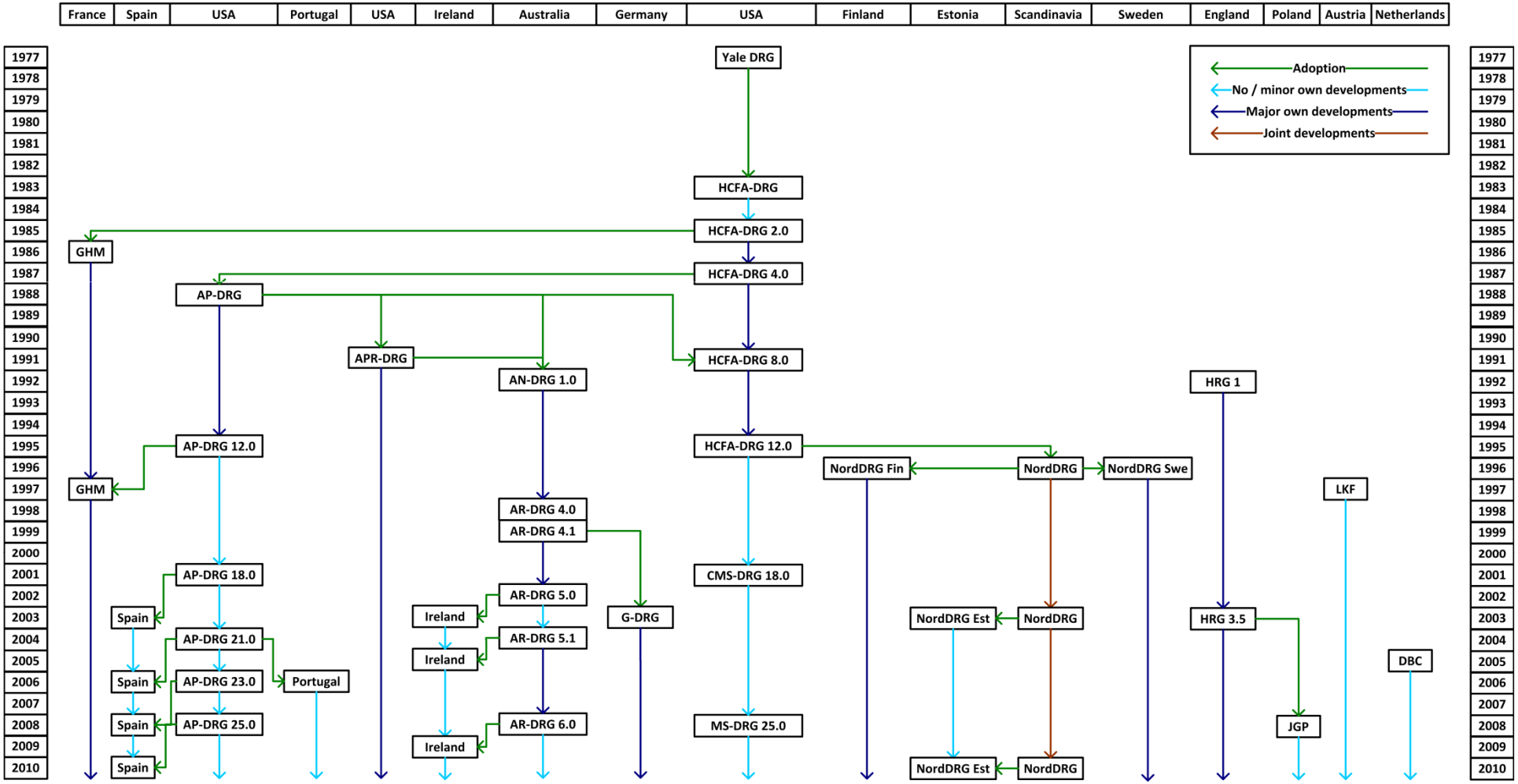
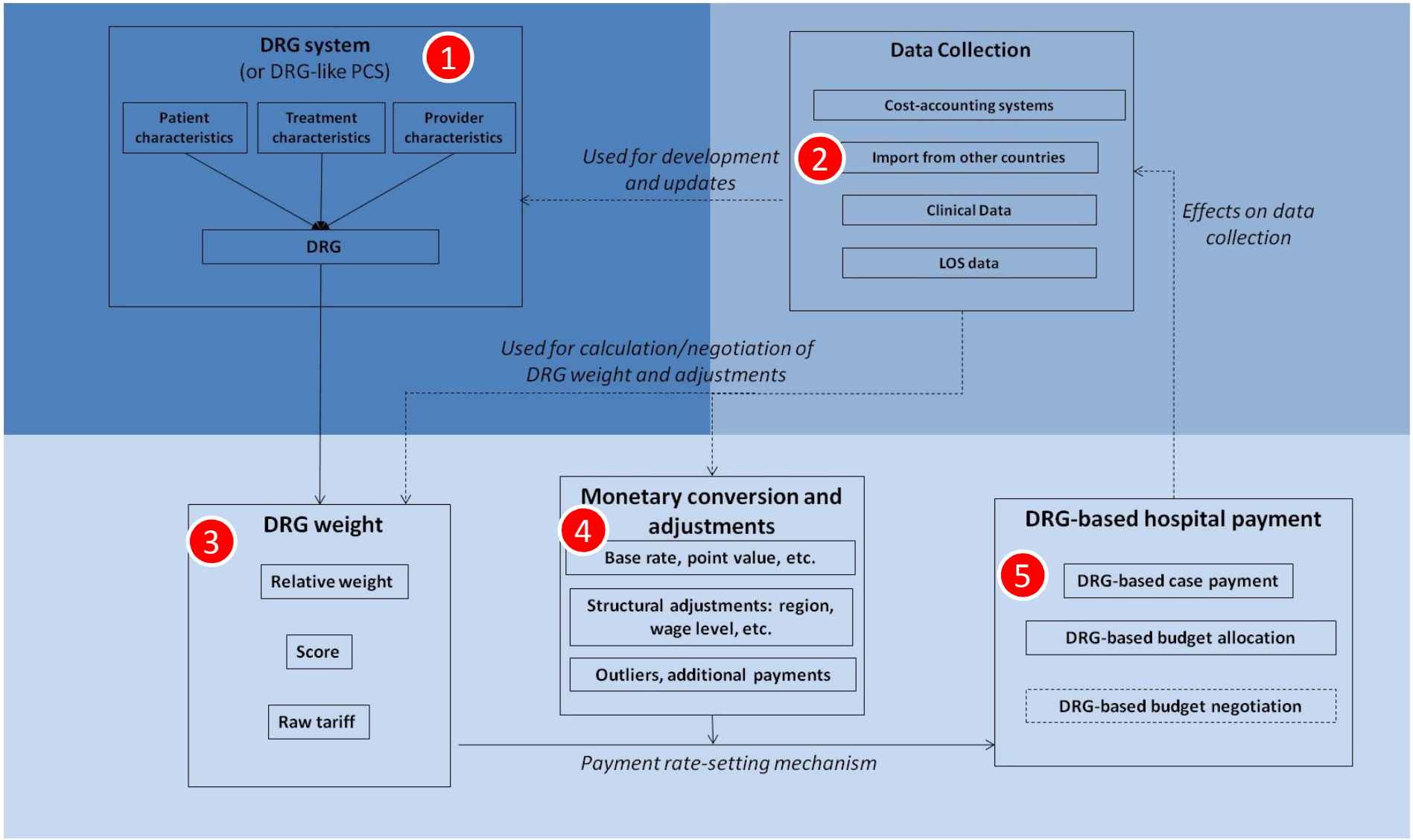


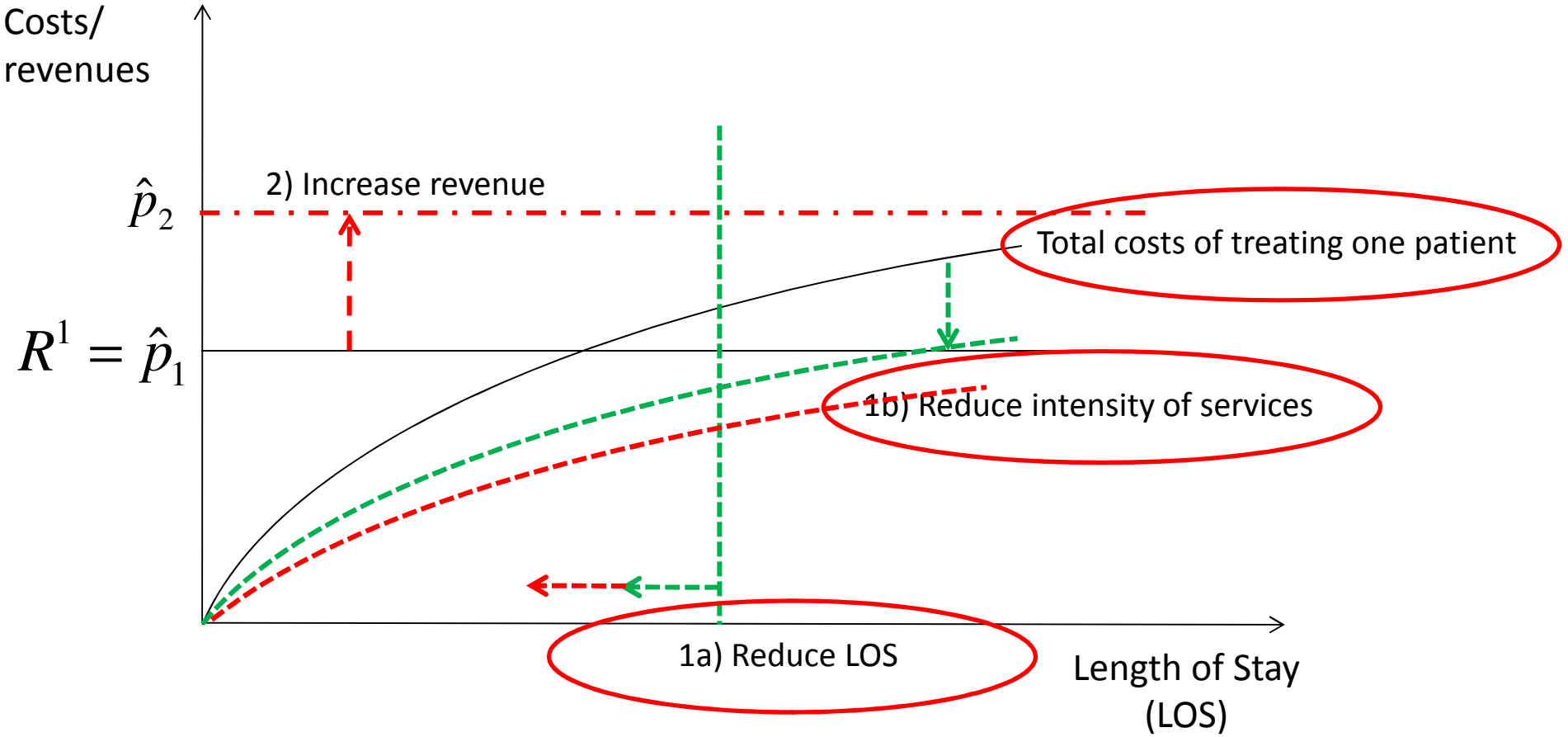
Choosing a PCS: copied, further developed or self-developed?



DRG-based hospital payment: incentives



Incentives of DRG-based hospital payment

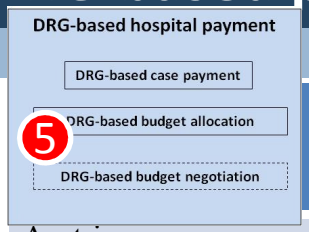


What determines the strength of incentives?

1. Type of Hospital payment
   - DRG-based case-payment?
     → Within or without global budgets?
   - DRG-based budget allocation?

2. Percentage of total revenues related to DRGs
   → Availability of other funding sources?

DRG-based payment: type and importance



	DRG-based hospital payment model	% of hospital revenues related to DRGs	Other payment components
Austria	DRG-based budget allocation	≈ 96	Per diems
England	DRG-based case payments	≈ 60	GB, additional payments
Estonia	DRG-based case payments	39	FFS (33%), per diem (28%)
Finland	In 13 out of 21 districts: DRG-based case payments (within GB)	Varies	Varies
France	DRG-based case payments, MLPC	≈ 80	GB, additional payments
Germany	DRG-based case payments (within GB)	≈ 80	GB, additional payments
Ireland	DRG-based budget allocation	≈ 80	GB, additional payments
Netherlands	DRG-based case payments (within GB for 67% of DRGs)	≈ 84	GB, additional payments
Poland	DRG-based case payments, MLPC	≥ 60	GB, additional payments
Portugal	(1) DRG-based budget allocation (NHS) (2) DRG-based case payments (health insurance)	≈ 80	Additional payments
Spain (Catalonia)	DRG-based budget allocation (Catalonia)	≈ 20	GB (based on structural index), FFS, additional payments
Sweden	DRG-based case payments with volume ceilings or GBs (region-specific allocation methods)	Varies	Varies

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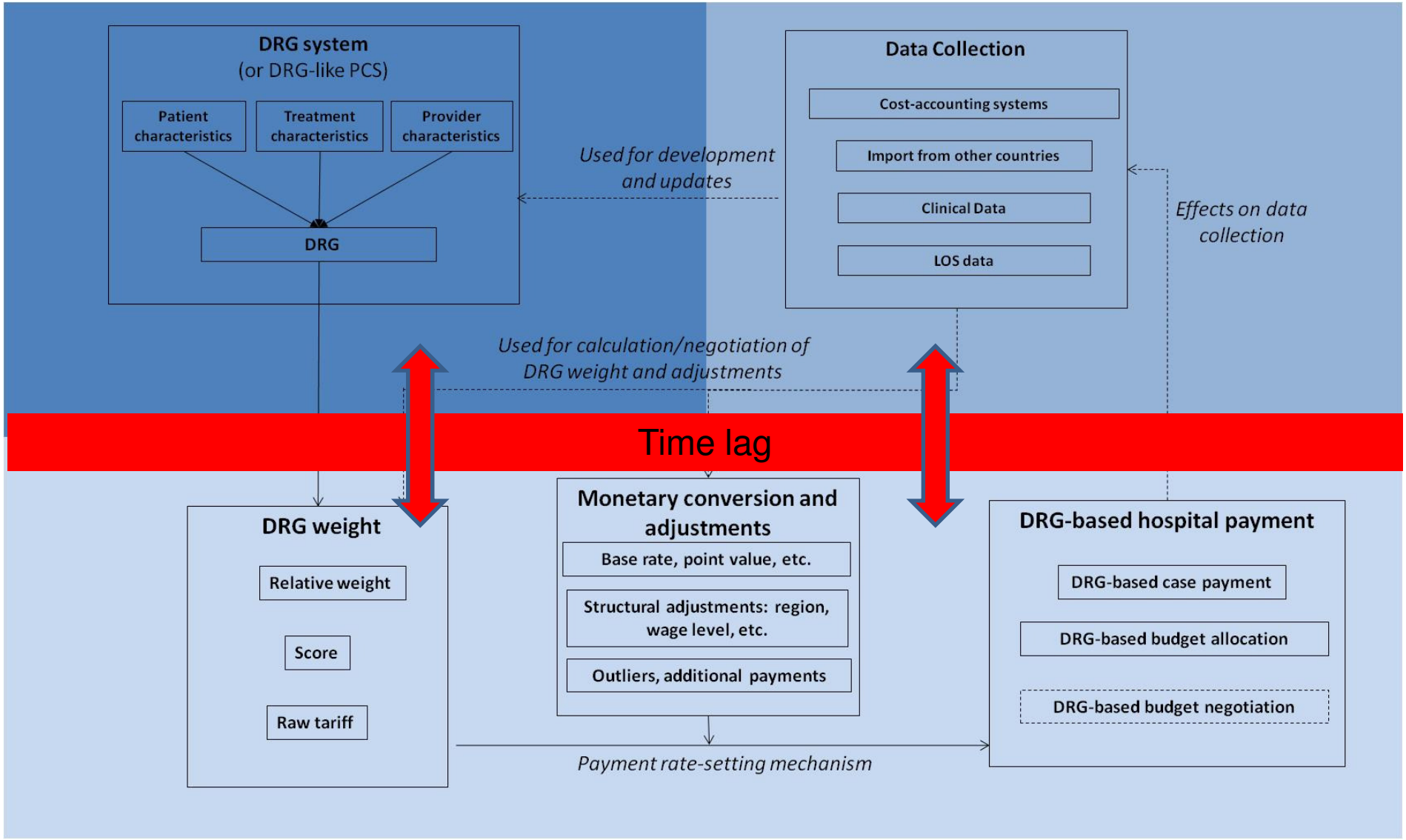
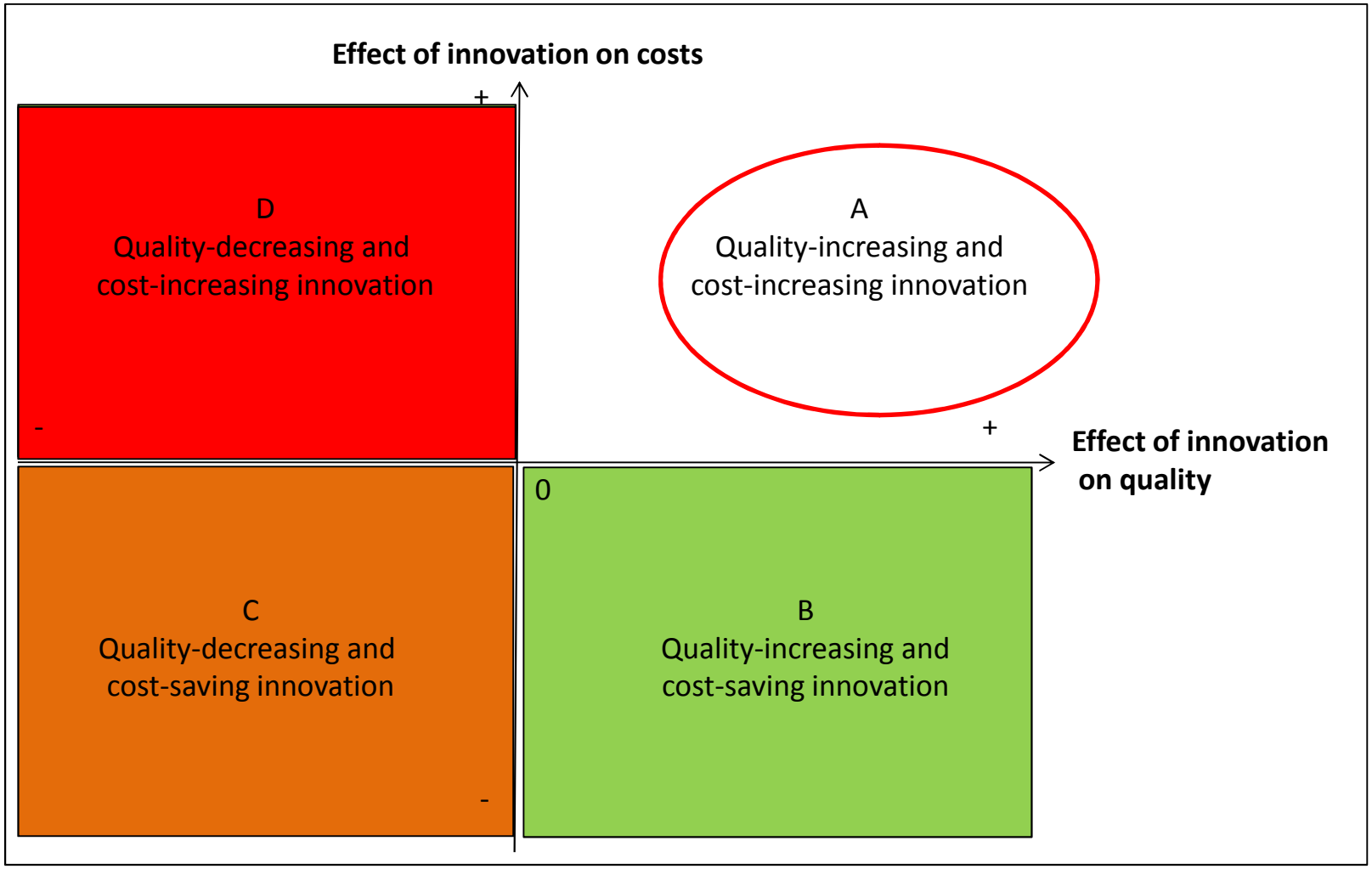
DRG-based hospital payment: time lag



Effects of innovation on costs

Technological innovation	Effect on costs		
	capital	operating	total
Cost-increasing technology	+	+	+
Cost-decreasing technology	–	–	–
Capital cost-increasing technology	+	–	+/–
Operating cost(s)-increasing technology	–	+	+/–

Effect of innovation on costs and quality



Source: Adapted from Black, 1990.

Effects for technological innovation

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Main incentives of DRG systems	Effects related to technological innovation
1. Reduce costs per admission	• Promoting the use of cost-decreasing technological innovations
	• Encouraging the concentration of capital cost-increasing innovations in fewer institutions, leading to specialization of hospitals for certain technologies
	• No effect on technological innovations that are cost neutral
	• Discouraging the introduction of cost-increasing technologies • Encouraging HTAs before introduction of new technologies
2. Increase number of admissions	• Encouraging the use of technologies promoting hospital reputation
	• Promoting the use of technological innovations valued by patients/admitting physicians

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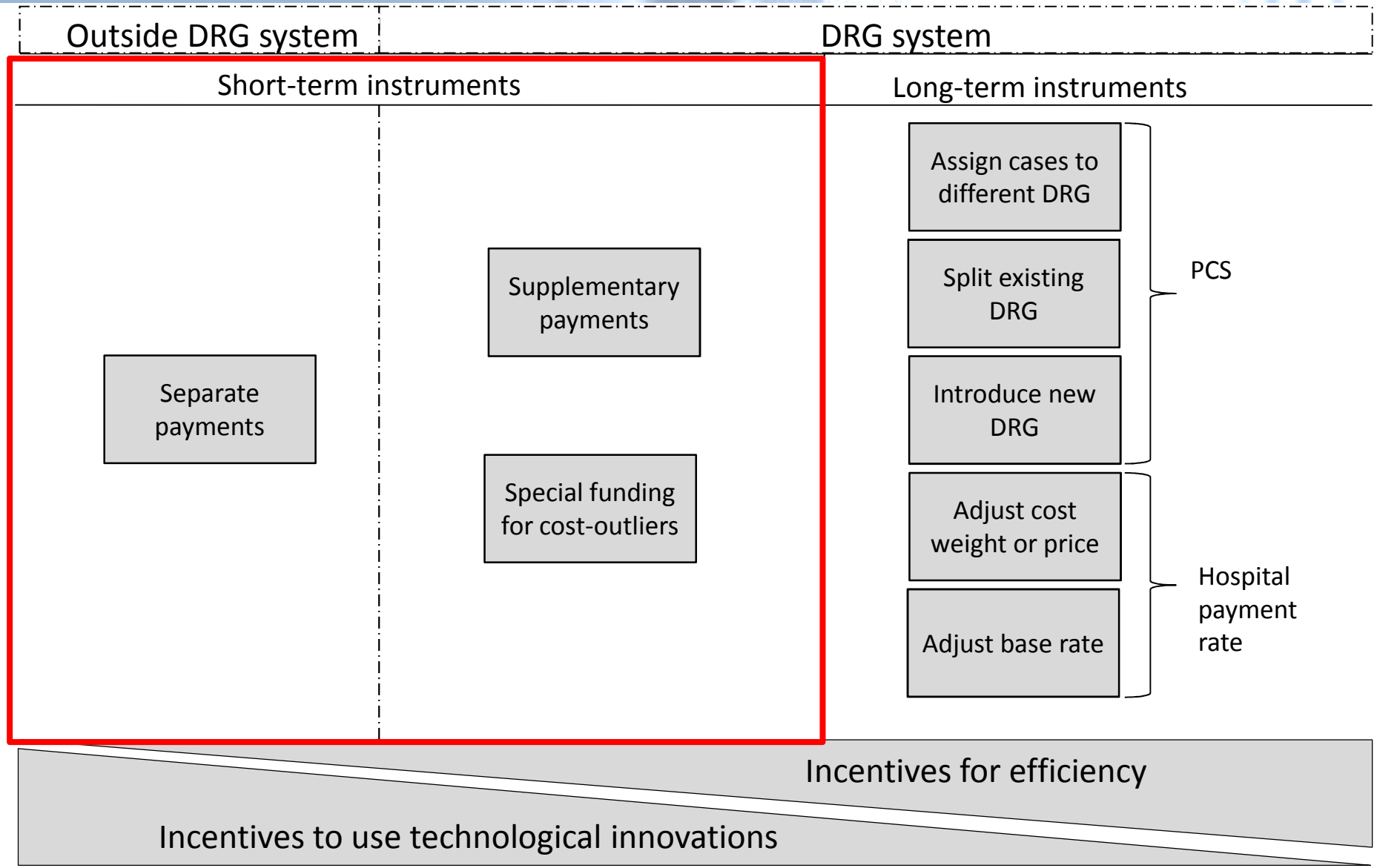
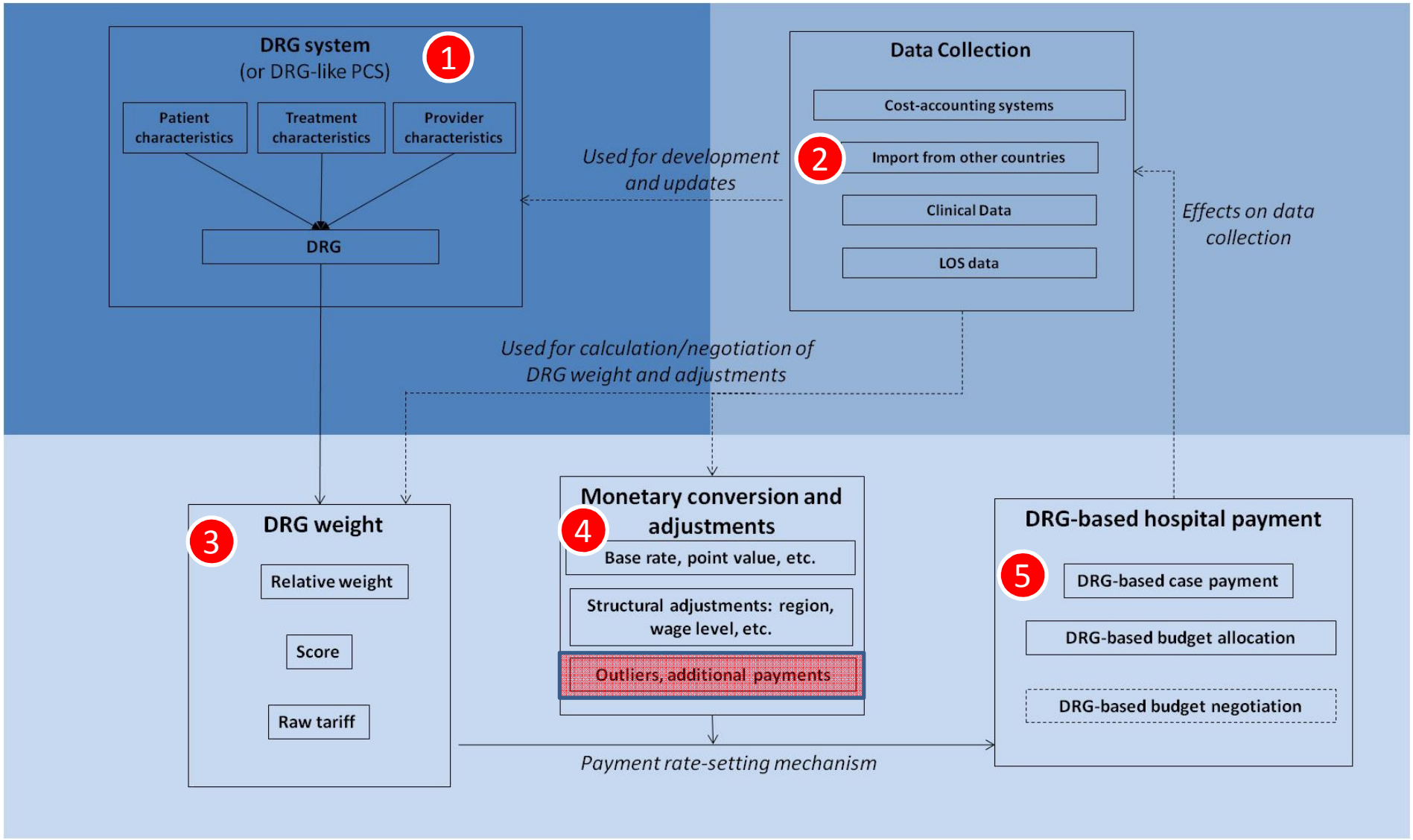
Framework: DRGs and Innovation



Short-term instruments

Instrument	Characteristic of Instrument
Outside DRG system	
Separate payments	• When information about costs and effects is still scarce • Easy/quick to implement • Flexible, e.g. France for individual patients
Inside DRG system	
Supplementary payments	• General mechanisms of DRG-based hospital payment systems to increases homogeneity of DRGs by excl. certain services/procedures • Payment on top of standard payment requires establishment of relationship to specific DRG or set of DRGs • More time needed to implement
Special funding for cost-outliers	• If treatment costs for a specific patient exceed a predefined threshold, hospitals receive additional reimbursement

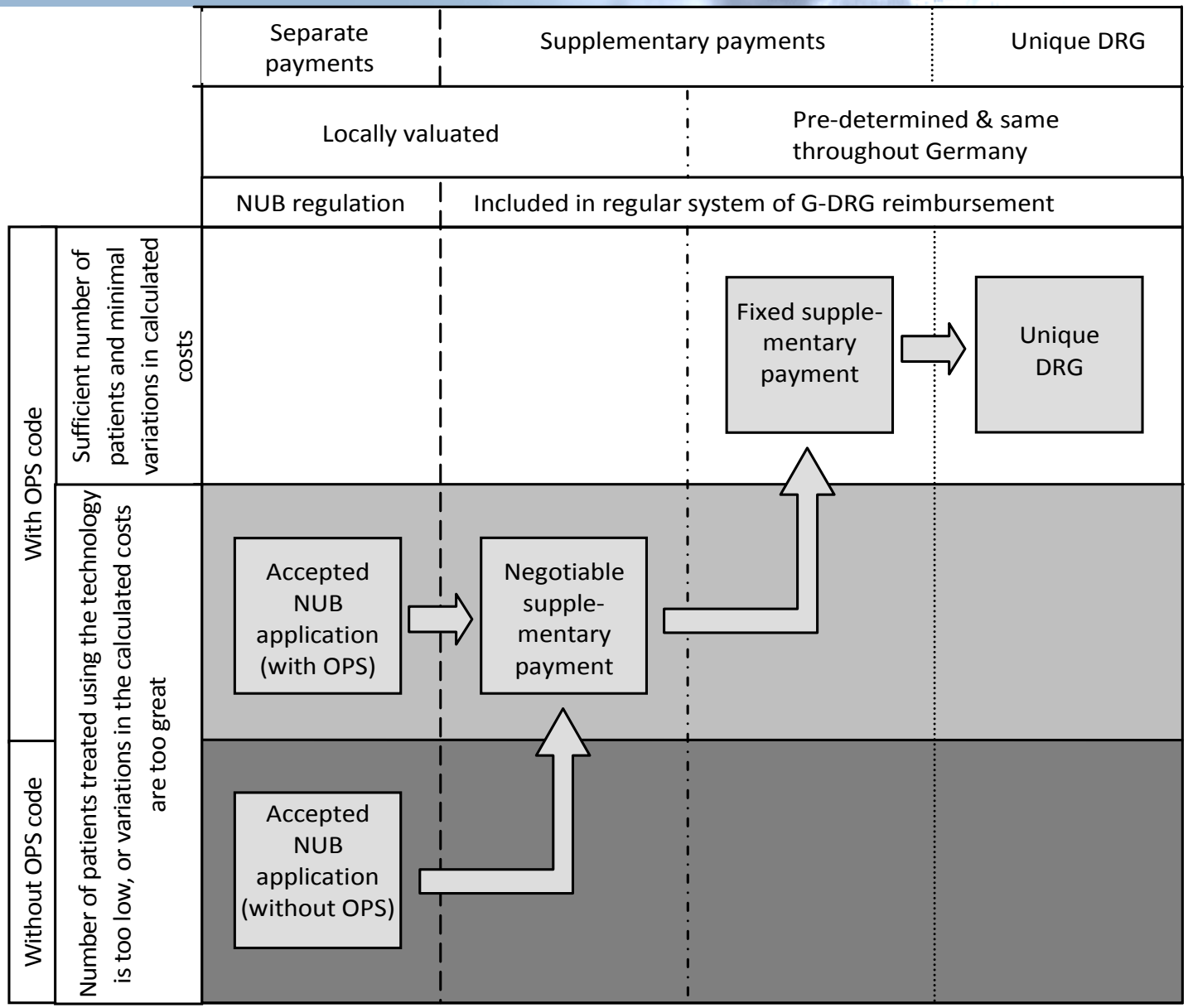
DRG-based hospital payment: overview



Short-term instruments in Europe

	Instruments used to provide extra payments for technological innovations		
	Separate payments	**Supplementary payments**	**Cost-outlier funding**
Austria	No	No	No
Catalonia (Spain)*	Yes (for certain procedures)	No	No
England/ UK	Yes (for up to 3 years)	Yes (for certain high-cost services)	No
Estonia	Yes (for certain high-cost services)	No	Yes
Finland	Depending on hospital district, both instruments are used		Yes
France	Yes	Yes	No
Germany	Yes	Yes (for certain high-cost services)	No
Ireland	Yes	No	No
Netherlands	Yes (for certain high-cost drugs)	Yes (envisaged to start in 2012)	No
Poland	No	Yes (for certain high-cost services)	No
Portugal	No	No	No
Sweden	Depending on the county council, all instruments are used		

Short-term instruments in Germany



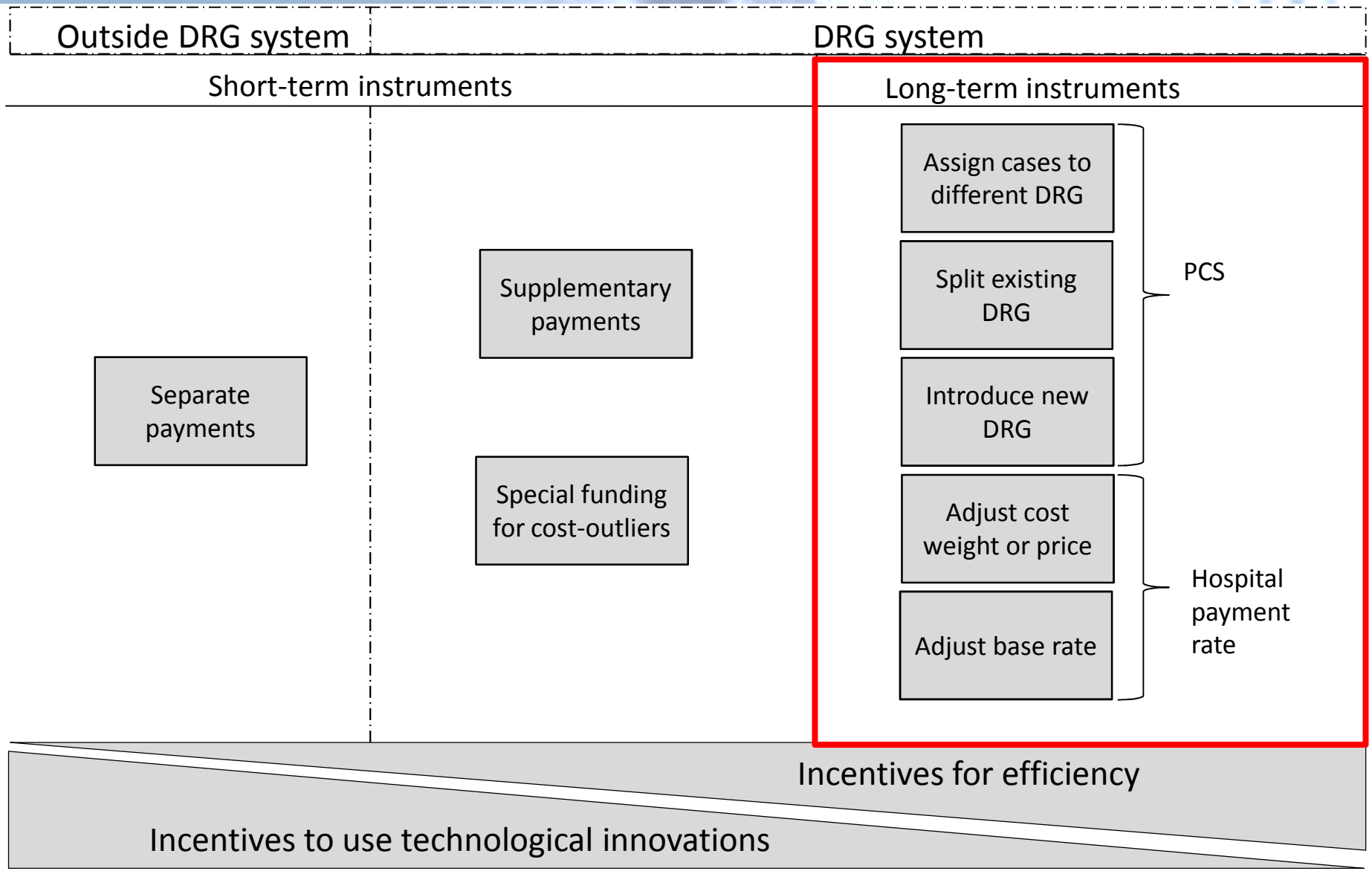
Source: Henschke et al.,2010

Coverage with Evidence Development (CED)

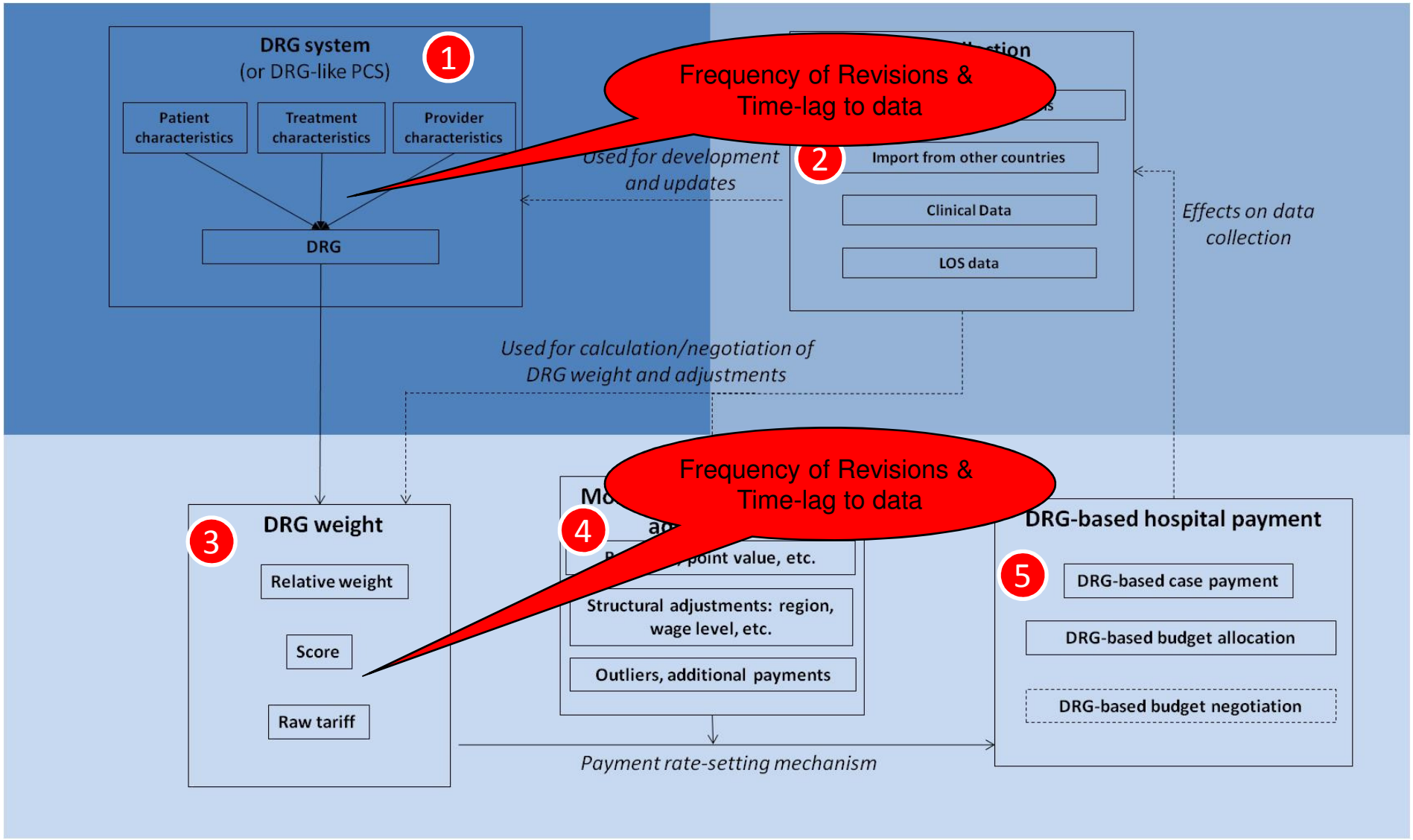
- Since 2006, medications are provisionally included on the expensive (or orphan) drug list(s) for up to 4 years.

- The conditions for inclusion on the list require:
  1. Added therapeutic value
  2. A plan for assessment of cost-effectiveness exists
  3. The drug accounts fo a considerable share of the hospital drug budget

- After 3 years, the data generated in the context of the assessment plan is used to inform decisions about further funding.


Outside DRG system
DRG system
Short-term instruments
Long-term instruments
Assign cases to different DRG
Split existing DRG
Introduce new DRG
PCS
Supplementary payments
Separate payments
Special funding for cost-outliers
Adjust cost weight or price
Adjust base rate
Hospital payment rate
Incentives for efficiency
Incentives to use technological innovations

DRG-based hospital payment: overview



Long-term updating mechanisms

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Country	DRG System		Payment rate	
	Frequency of updates	Time-lag to data	Frequency of updates	Time-lag to data
Austria	Annual	2–4 years	4–5 years	2–4 years
England	Annual	Minor revisions annually; major revisions every 5–6 years	Annual	3 years (but adjusted for inflation)
Estonia	Irregular (first update after 7 years)	1–2 years	Annual	1–2 years
Finland	Annual	1 year	Annual	0–1 year
France	Annual	1 year	Annual	2 years
Germany	Annual	2 years	Annual	2 years
Ireland	Every 4 years	Not applicable (imported DRGs)	Annual	1–2 years
Netherlands	Irregular	Not standardized	Annual or when considered necessary	2 years, or based on negotiations
Poland	Irregular – planned twice per year	1 year	Annual update only of base rate	1 year
Portugal	Irregular	Not applicable (imported DRGs)	Irregular	2–3 years
Spain (Catalonia)	Biennial	Not applicable (imported 3-year-old CMS-DRGs)	Annual	2–3 years
Sweden	Annual	1–2 years	Annual	2 years

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Discussion

- Trade-off exists between encouraging certain technological innovations and the efficiency incentives of DRG-based hospital payment
- Most countries have specific short-term payment instruments targeted at encouraging the adoption and use of technological innovations.
- All countries update their DRG-based hospital payment systems but
  1. the frequency of updates and
  2. the time lag to the data used for updates differ greatly.

Conclusions

- Short-term payment instruments should be used very carefully, and granted only after careful assessments of the likely effects of the concerned technology on quality of care.
  - → Increase European cooperation in HTA
  - → Use Coverage with Evidence Development if uncertain about effects

- Long-term updating mechanisms should assure that DRG systems are as up-to-date as possible:
  - DRG systems can be updated more frequently than is currently the case in some countries
  - The time-lag to data used for updates could be shortened in several countries

EuroDRG consortium members

DRGs and Innovation

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DRG-Based Hospital Payment Systems and Technological Innovation in 12 European Countries

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Department for Health Care Management, Berlin University of Technology, Berlin, Germany

A B S T R A C T

Objectives: To assess how diagnosis-related group–based (DRG-based) hospital payment systems in 12 European countries participating in the EuroDRG project pay and incorporate technological innovation. **Methods:** A standardized questionnaire was used to guide comprehensive DRG system descriptions. Researchers from each country reviewed relevant materials to complete the questionnaire and drafted standardized country reports. Two characteristics of DRG-based hospital payment systems were identified as particularly important: the existence of short-term payment instruments encouraging technological innovation in different countries, and the characteristics of long-term updating mechanisms that assure technological innovation is ultimately incorporated into DRG-based hospital payment systems. **Results:** Short-term payment instruments and long-term updating mechanisms differ greatly among the 12 European countries included in this study. Some countries operate generous short-term payment instruments that provide additional payments to hospitals for making use of technological innovation (e.g., France). Other countries update their DRG-based hospital payment systems very frequently and use more recent data for updates. **Conclusions:** Generous short-term payment instruments to promote technological innovation should be applied carefully as they may imply rapidly increasing health-care expenditures. In general, they should be granted only if rigorous analyses have demonstrated their benefits. If the evidence remains uncertain, coverage with evidence development frameworks or frequent updates of the DRG-based hospital systems may provide policy alternatives. Once the data and evidence base is substantially improved, future research should empirically investigate how different policy arrangements affect the adoption and use of technological innovation and health-care expenditures.

Keywords: DRG, health care, inpatient, pricing, technological change

The McGraw-Hill Companies

New from Open University Press

Diagnosis-Related Groups in Europe

Moving towards transparency, efficiency and quality in hospitals

Reinhard Busse, Alexander Geissler, Wilm Quentin and Miriam M. Wiley (Eds)

Berlin University of Technology, Germany; Berlin University of Technology, Germany; Berlin University of Technology, Germany; Economic and Social Research Institute, Dublin, Ireland

Diagnosis Related Group (DRG) systems were introduced in Europe to increase the transparency of services provided by hospitals and to incentivise greater efficiency in the use of resources invested in acute hospitals. In many countries, these systems were also designed to contribute to improving - or at least protecting - the quality of care. After more than a decade of experience with using DRGs in Europe, this book considers whether the extensive use of DRGs has contributed towards achieving these objectives.

Thank you very much for your time and attention!

more slides are available at

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http://www.mig.tu-berlin.de