

# P4P: the English experience of rewarding hospitals on the basis of patient reported outcomes

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- English context
- Best practice tariffs
- Patient reported outcomes
- Lessons for Spain

# English context

Hospital income = Actual number of patients of type j x National price per patient of type j

- Equal pay for equal work
  - Equal work – patients described by DRG
  - Equal pay – national price
- No incentive for good practice

- Performance based payment
  - Bonus (penalty) based on meeting (missing) some standard
  - Payments for meeting best practice
  - Patient-specific payments based on outcomes

# Best Practice Tariffs

- Prices designed to improve quality for chosen service areas to incentivise clinical and cost effectiveness
- Developed with clinical experts, providers and commissioners
- Focused on service areas characterised by:
  - significant unexplained variation in current practice
  - strong evidence base
  - clear consensus of clinical best practice

- 2010/11:
  - Cholecystectomy (gall bladder removal)
  - Cataract pathway
  - Fragility hip fracture care
  - Acute stroke care
- 2011/12:
  - Interventional radiology
  - Incentivising higher daycase rates for 12 procedures
  - Primary total hip and knee replacements
  - Adult renal dialysis
  - Transient ischaemic attack (TIA)
  - Paediatric diabetic medicine

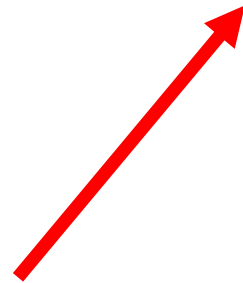


- Fragility hip fracture care
  - Best practice payment higher than the base tariff
- Incentivising higher daycase rates
  - Day case prices are higher than inpatient prices
- Interventional radiology
  - Developed specific DRGs to make reimbursement for them more visible

# Patient Reported Outcomes

- 2009/10
  - Hip replacement
  - Knee replacement
  - Varicose vein removal
  - Inguinal hernia repair
- Instruments
  - EuroQoL EQ-5D
  - EuroQoL VAS
  - Oxford hip score
  - Oxford knee score
  - Aberdeen varicose veins score
- Before and after measures

Hospital income = Actual number of patients of type j x National price per patient of type j



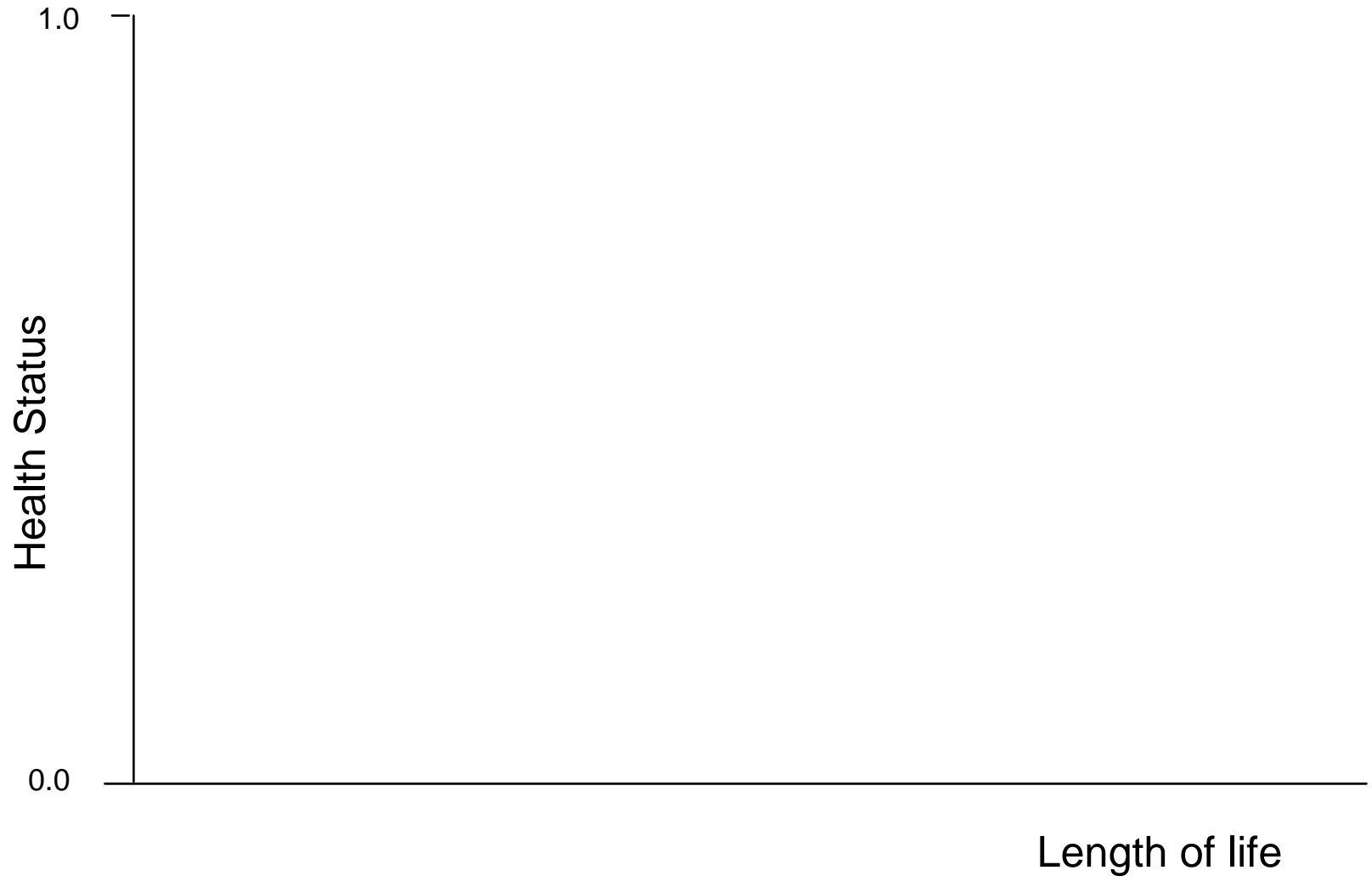
Incentives operate through price

National price per patient of type j = Fixed price per patient of type j x *p* [Outcome based payment per patient of type j]

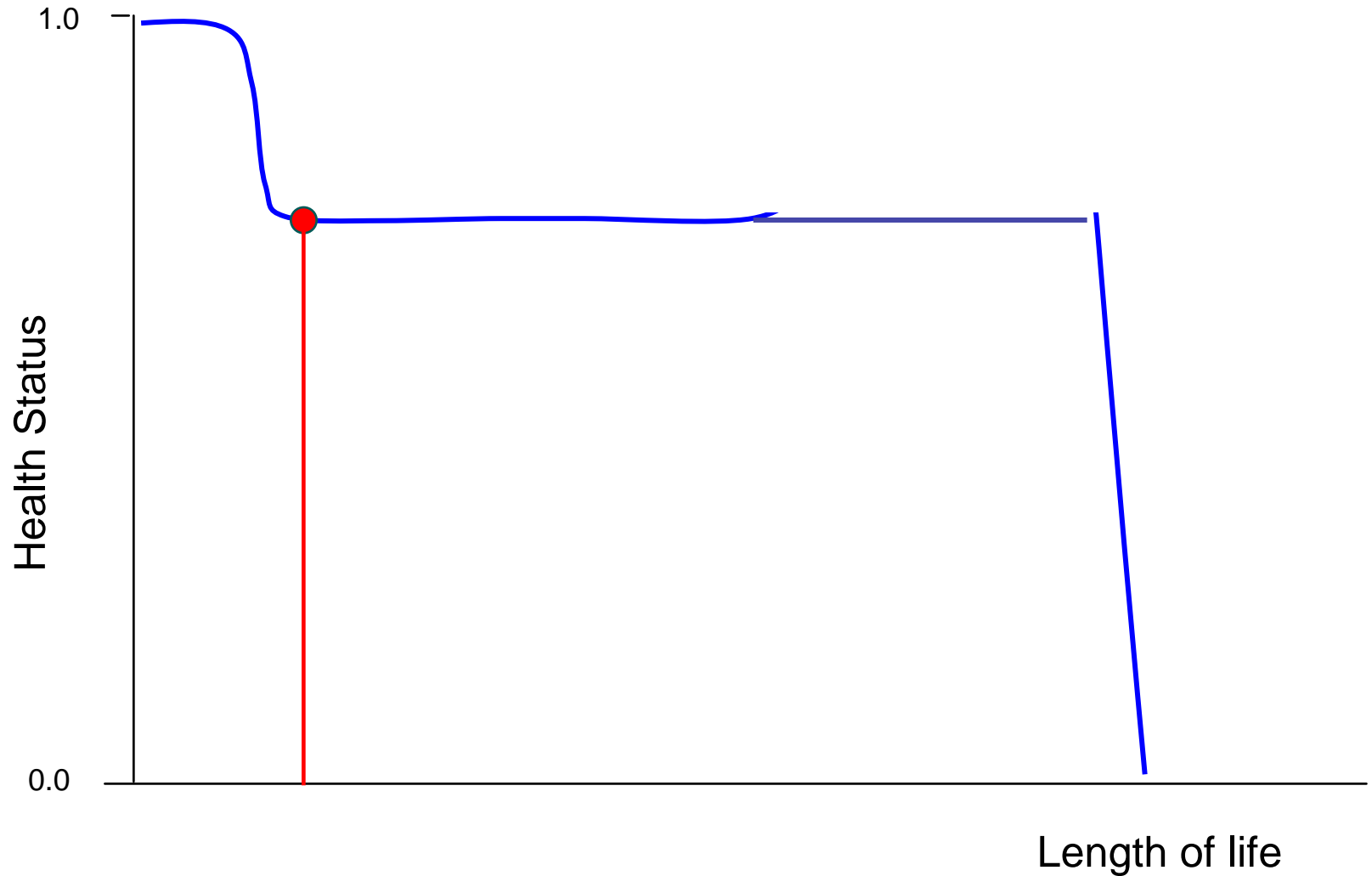
Price = A x *p* [B]

	A	$p$	[B]
Activity payment	Fixed payment	n/a	n/a
Outcome payment	zero	$p=1$	Fixed payment
Mixed payment	Lower fixed payment	$0 < p < 1$	Lower fixed payment

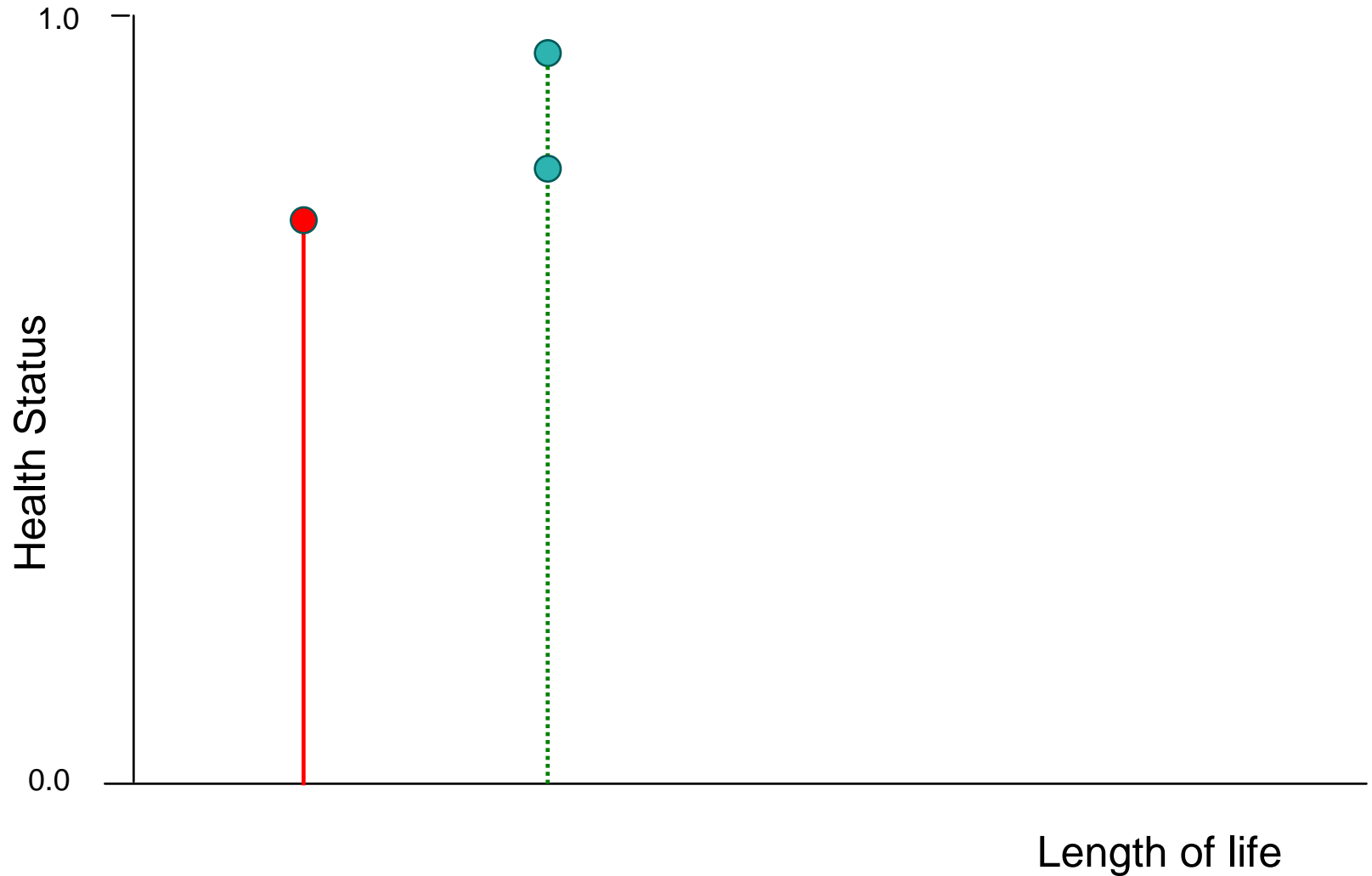
- Which **instrument** should you use?
- **Timing**: when should you administer it?
- From clinical trials to **routine practice**
  - Randomisation
  - Risk adjustment











## Counter-factual

- We don't observe what would happen in the absence of treatment

## Treatment pathways

- Limited observations make it difficult to capture true treatment effect ...
- And to identify differences in treatment effects

## Risk-adjustment

- Few patients are entered into RCTs
- Risk adjustment is necessary using observational data
- Before treatment HS measurement allows conditioning on initial health

## EQ-5D

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- 5 dimensions
- 3 levels
- describes 243 health states

Please indicate which statements best describe your own health state today. Tick one box for each group of statements.

### Mobility

I have no problems in walking about

I have some problems in walking about

I am confined to bed

### Self-Care

I have no problems with self-care

I have some problems washing or dressing myself

I am unable to wash or dress myself

### Usual Activities

I have no problems with performing my usual activities  
(e.g. work, study, housework, family or leisure activities)

I have some problems with performing my usual activities

I am unable to perform my usual activities

### Pain/Discomfort

I have no pain or discomfort

I have moderate pain or discomfort

I have extreme pain or discomfort

### Anxiety/Depression

I am not anxious or depressed

I am moderately anxious or depressed

I am extremely anxious or depressed

Q1 \ Q2	no prob (=1)	some prob (=2)	extreme prob (=3)	Total
no prob (=1)				
some prob (=2)				
extreme prob (=3)				
Total				24,879

Q1 \ Q2	no prob (=1)	some prob (=2)	extreme prob (=3)	Total
no prob (=1)				
some prob (=2)	12,149			
extreme prob (=3)	23	92		
Total				24,879

Q1 \ Q2	no prob (=1)	some prob (=2)	extreme prob (=3)	Total
no prob (=1)	1,269			
some prob (=2)	12,149	11,032		
extreme prob (=3)	23	92	5	
Total				24,879

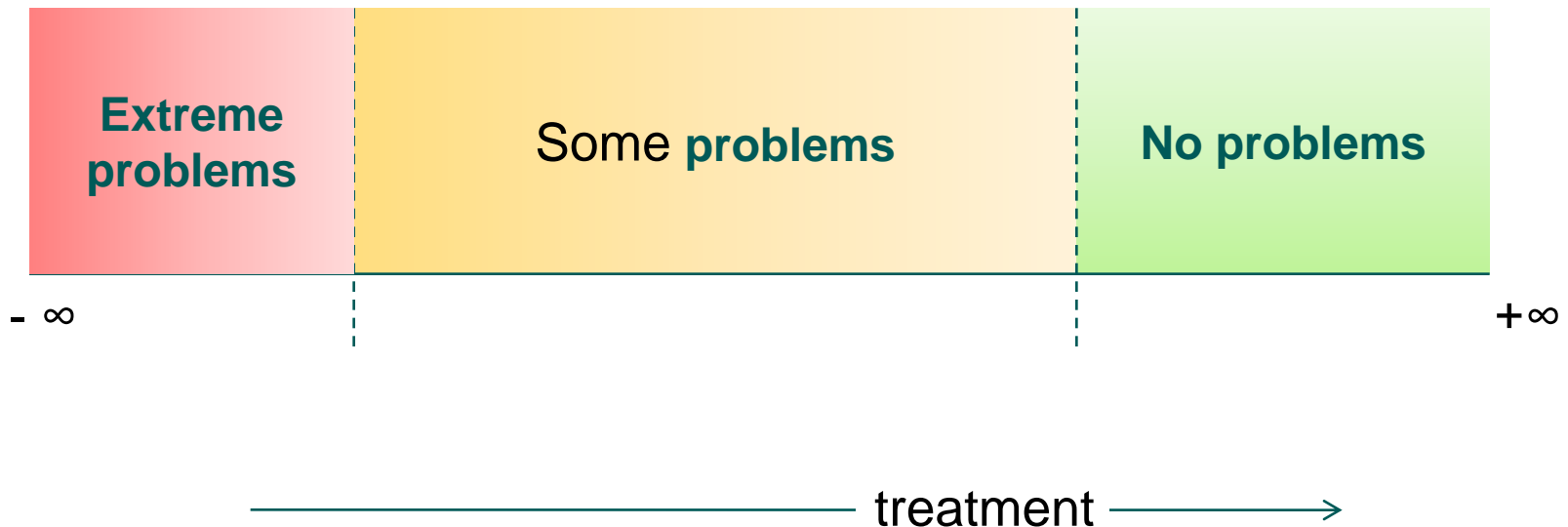


Q1 \ Q2	no prob (=1)	some prob (=2)	extreme prob (=3)	Total
no prob (=1)	1,269	295	0	1,564
some prob (=2)	12,149	11,032	14	23,195
extreme prob (=3)	23	92	5	120
Total	13,441	11,419	19	24,879

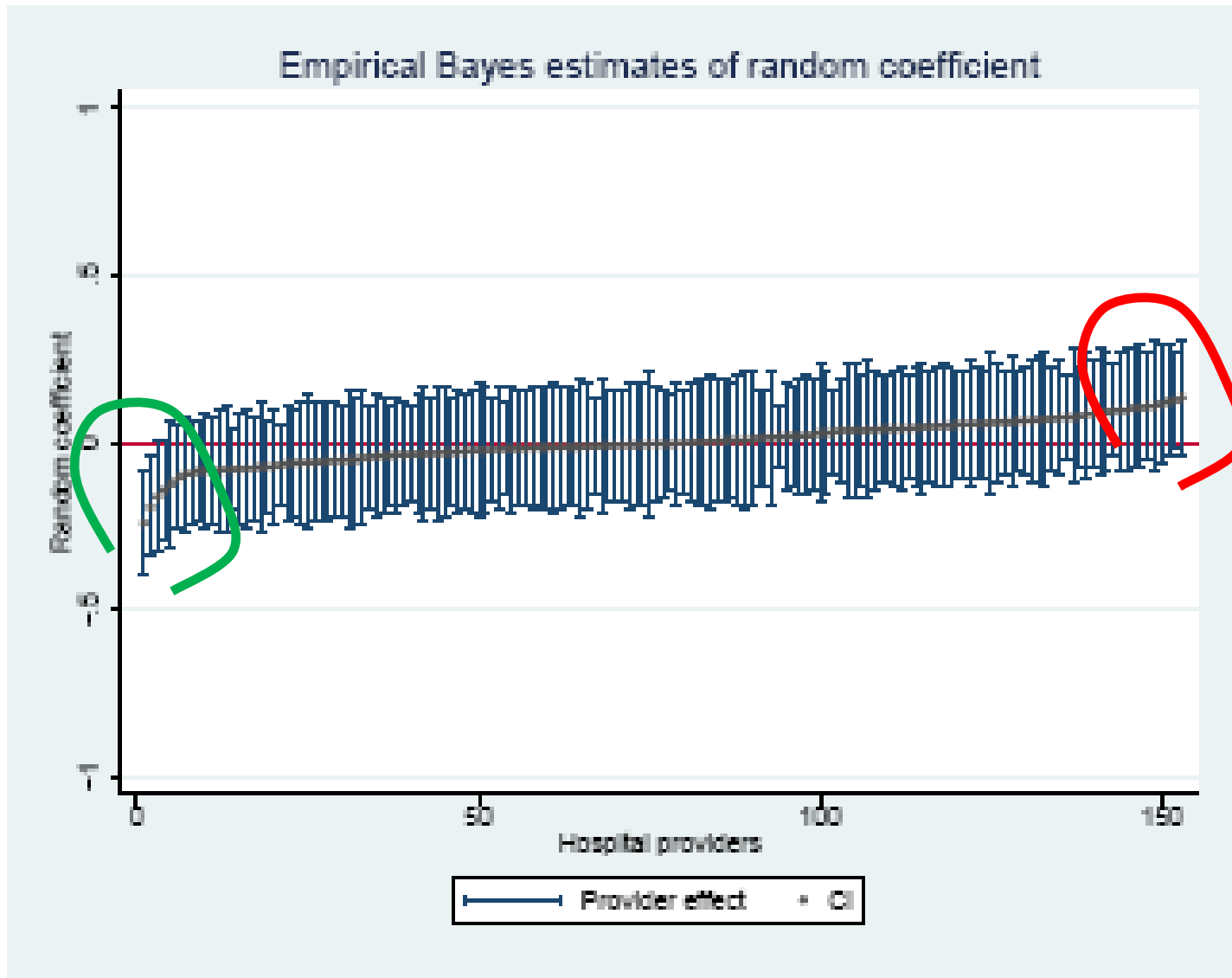
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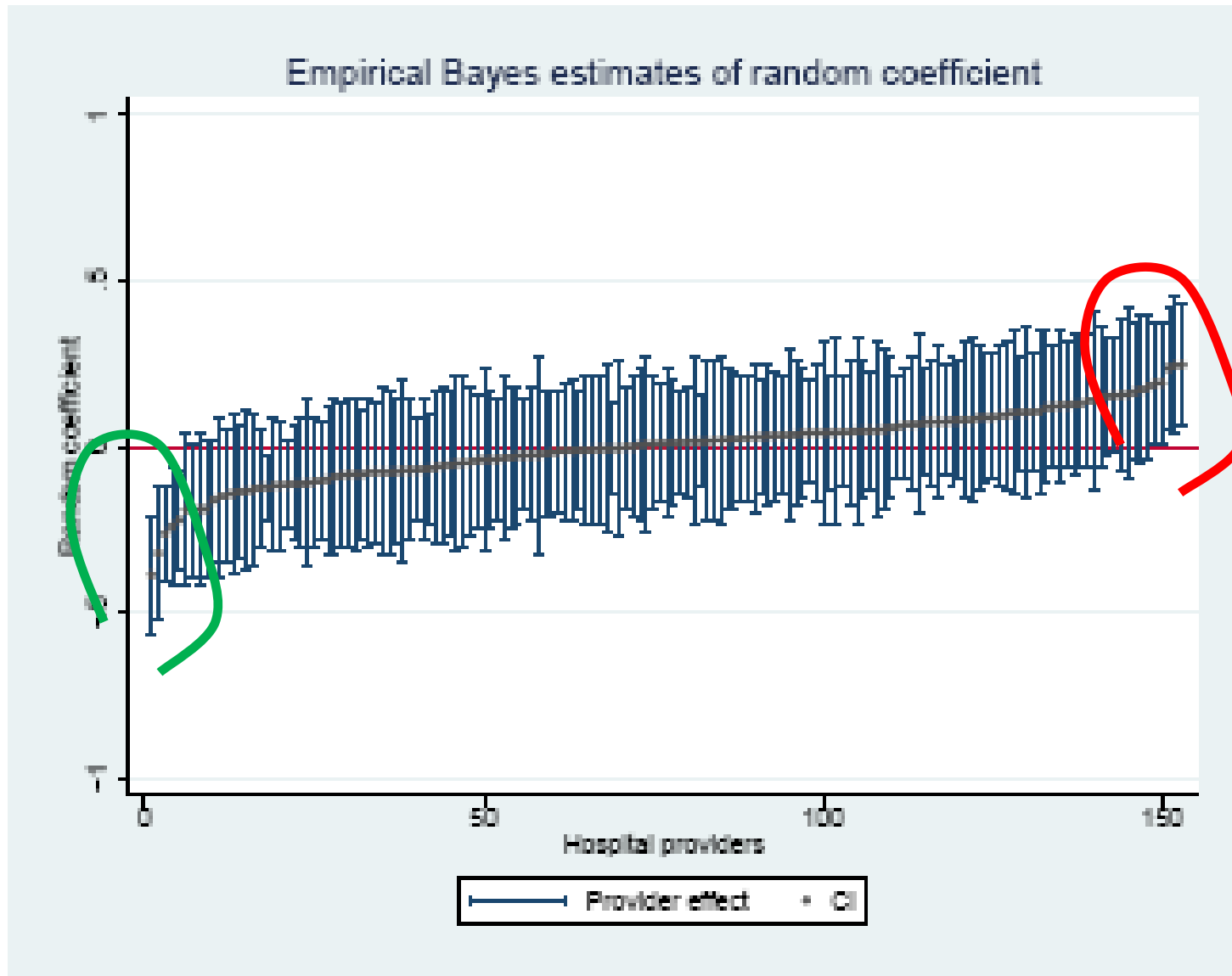
Q1 \ Q2	no prob (=1)	some prob (=2)	extreme prob (=3)	Total
no prob (=1)	13,128	1062	60	14,250
some prob (=2)	6,344	2,804	228	9,376
extreme prob (=3)	552	521	180	1,253
Total	20,024	4,387	468	24,879

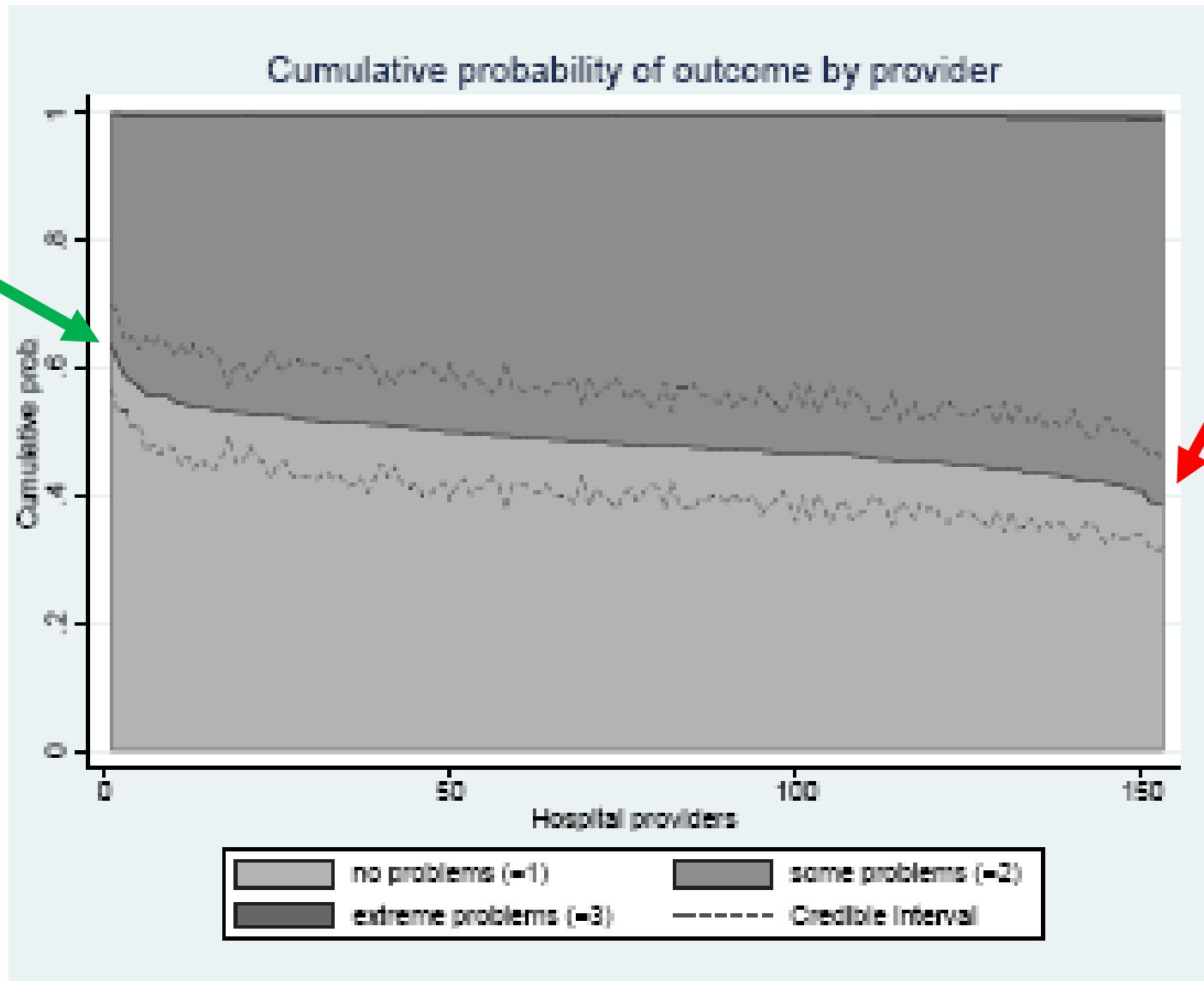
- Mapping three responses to underlying, unobserved continuous health



- Risk-adjustment:
  - male (+)
  - age (-)
  - no of diagnosis (-) and procedures (-)
  - revision (+/-)
- Impact of treatment (+), but varies by patient characteristics and provider










- Hospitals that do well on one dimension are likely to do well on other dimensions
  - High correlation: activity & mobility; activity & discomfort
  - Low correlation: anxiety & self care; anxiety & mobility
  - Do EQ-5D questions overlap?
  - Check sensitivity to alternative instruments

	A	$p$	[B]
Activity payment	Fixed payment	n/a	n/a
Outcome payment	zero	$p=1$	Fixed payment
Mixed payment	Lower fixed payment	$0 < p < 1$	Lower fixed payment



# Lessons for Spain

- Performance is multi-faceted
  - Use different payment mechanisms to incentivise diverse forms of practice
- Need clear definitions of best practice
- Need to measure actual achievement
  - Or provide rewards simply for collecting comparative data
- Risk adjustment is crucial
  - Hospitals should report data!