

Capital Markets Day, 8 June 2018

Helios.health

Views on Health Care – Germany

Andreas Meier-Hellmann – CMO Helios Kliniken

The Best of Both Worlds



Key Take-Aways

- Increasing efficiency while maintaining superior quality levels
- Scale matters – creation of specialized medical centers fosters quality improvements

The German Hospital Market

External factors on efficiency

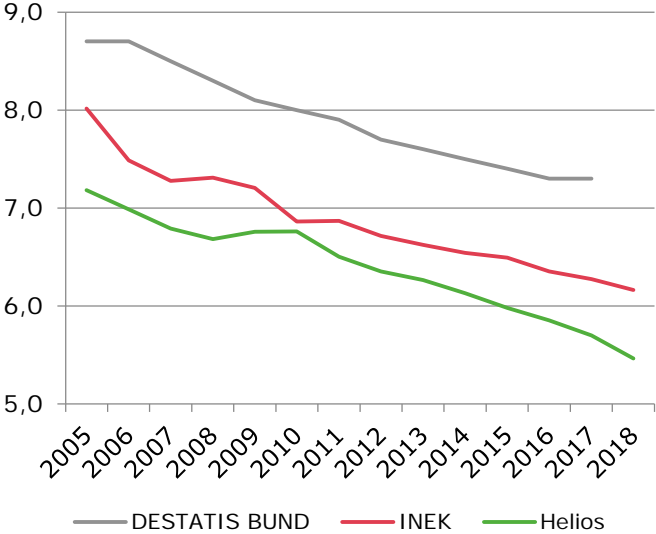
- Fixed prices
- Given nurse-to-patient-ratio in near future
- Too many hospitals

Steerable factors we focus on

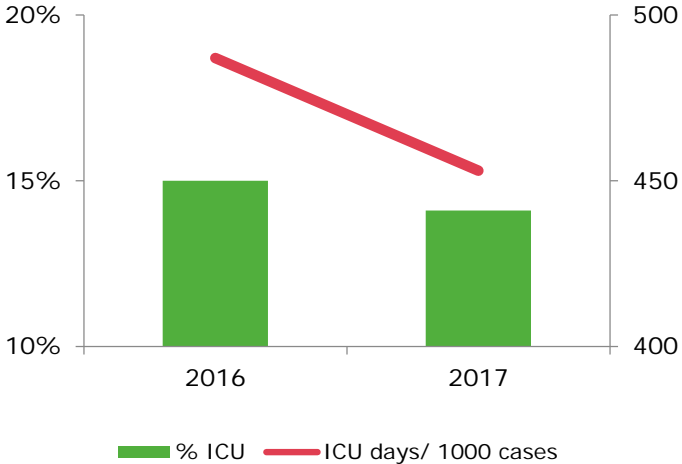
- Extended length of stay
- Too many intensive care beds
- Strict separation of outpatient and inpatient care
- Complex medical interventions in too many hospitals with insufficient frequency

LOS and Use of Intensive Care Resources

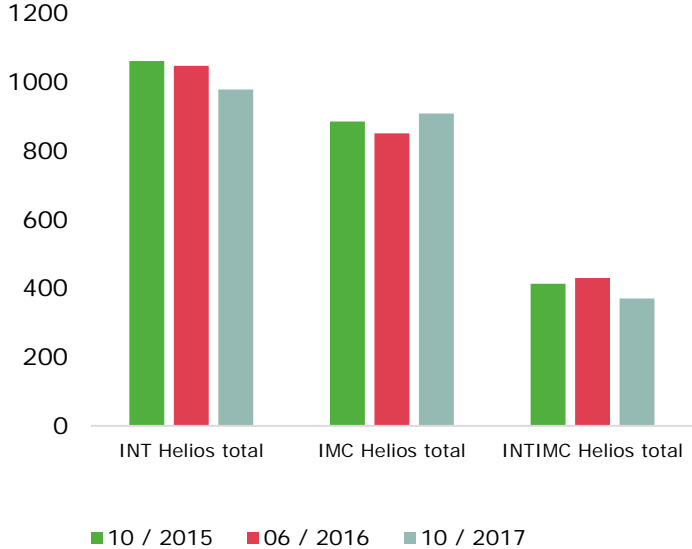
LOS Germany



Intensive Care Unit Usage



Volume of INT and IMC beds



LOS = Length of stay INEK = German Institute for Hospital Reimbursement
 ICU = Intensive Care Unit INT = Intensive Care IMC = Intermediate Care

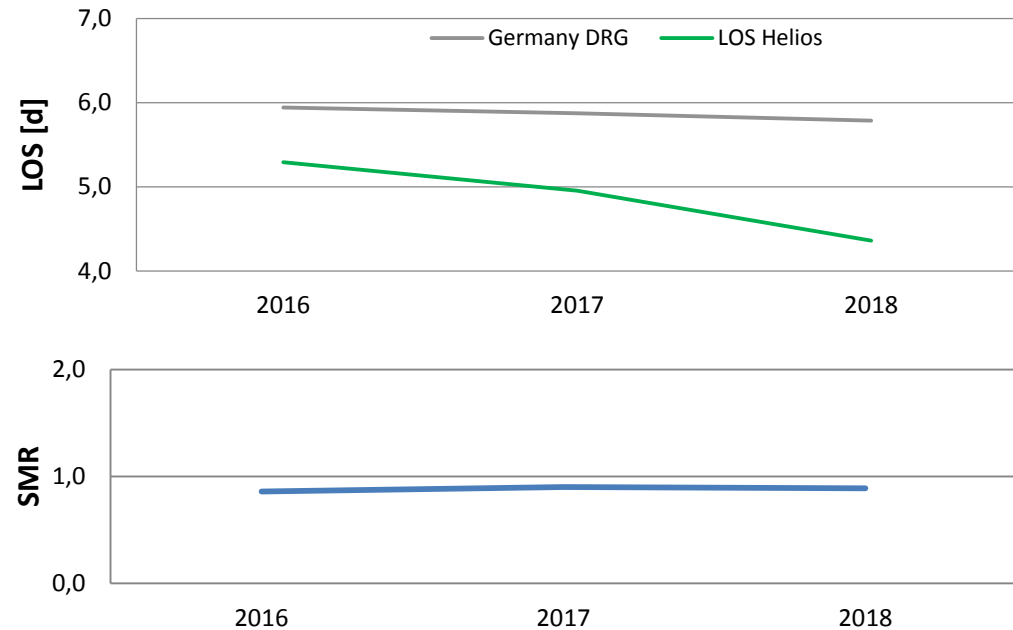
DESTATIS BUND = German statistical data

Too Many Beds / Extended LOS

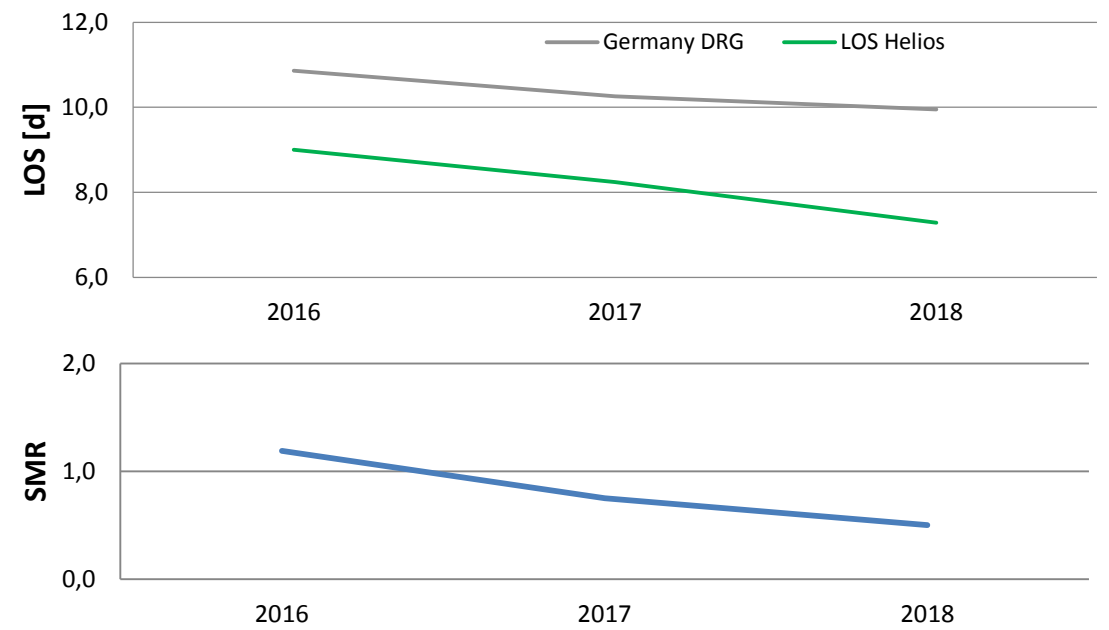
- Standard Operating Procedures (SOPs) with clear setting of patient pathways improve patient outcome
- SOPs decrease LOS
- Introduction of SOPs for an increased number of patient cohorts
- Our excellent track-record of quality management demonstrates that we can sustainably improve treatment & care of our patients

SOPs Decrease LOS

AMI w/PCI
2016 till 2018/04 (2018 after SOP implementation)



Hip replacement, Coxarthrosis
2016 till 2018/04 (before and after SOP implementation)



Increasing efficiency while maintaining superior medical quality levels

SOP = Standard Operating Procedures LOS = Length of stay AMI = Acute Myocardial Infarction PCI = Percutaneous Coronary Intervention
 SMR = Standard Mortality Rate

Strict Separation of Outpatient and Inpatient Market

What we can learn from Spain

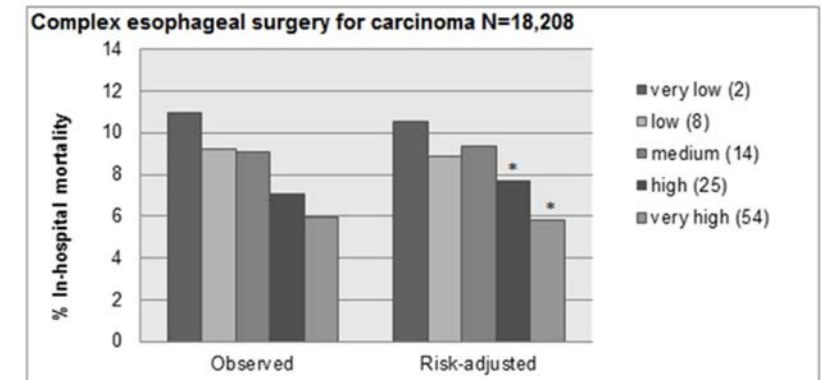
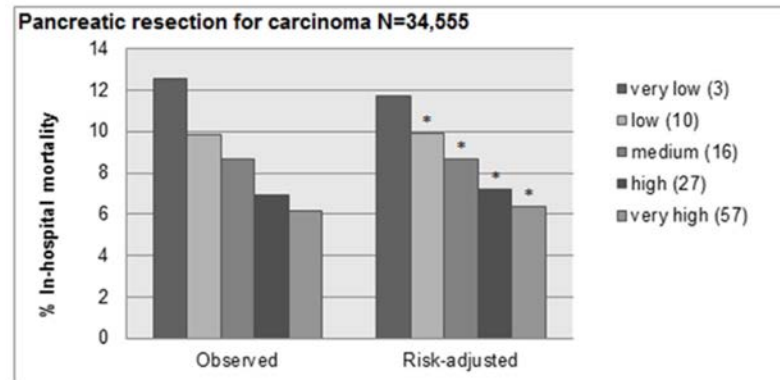
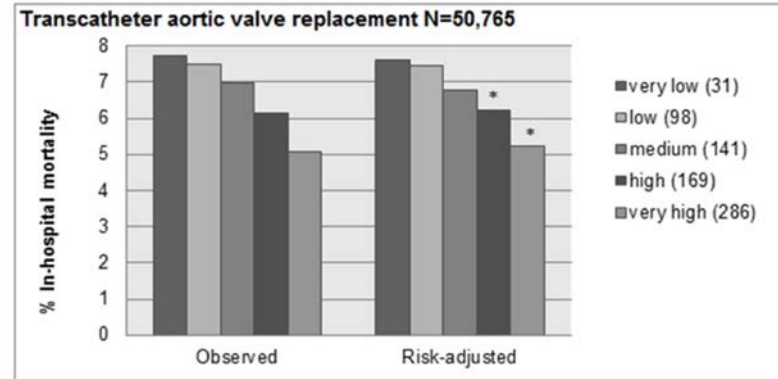
125,000 saved days (\approx 350 beds) due to supply of small interventions in outpatient setting!

What will we do in Germany

- Seizing opportunities to penetrate the outpatient market:
 - Building units for outpatient surgery
 - Extending the offer of outpatient medicine

Proven Inverse Correlation Between Case Numbers and Mortality

- Centralization
- Creating medical centers with a volume at least as high as or even higher than the biggest centers we currently have in Germany

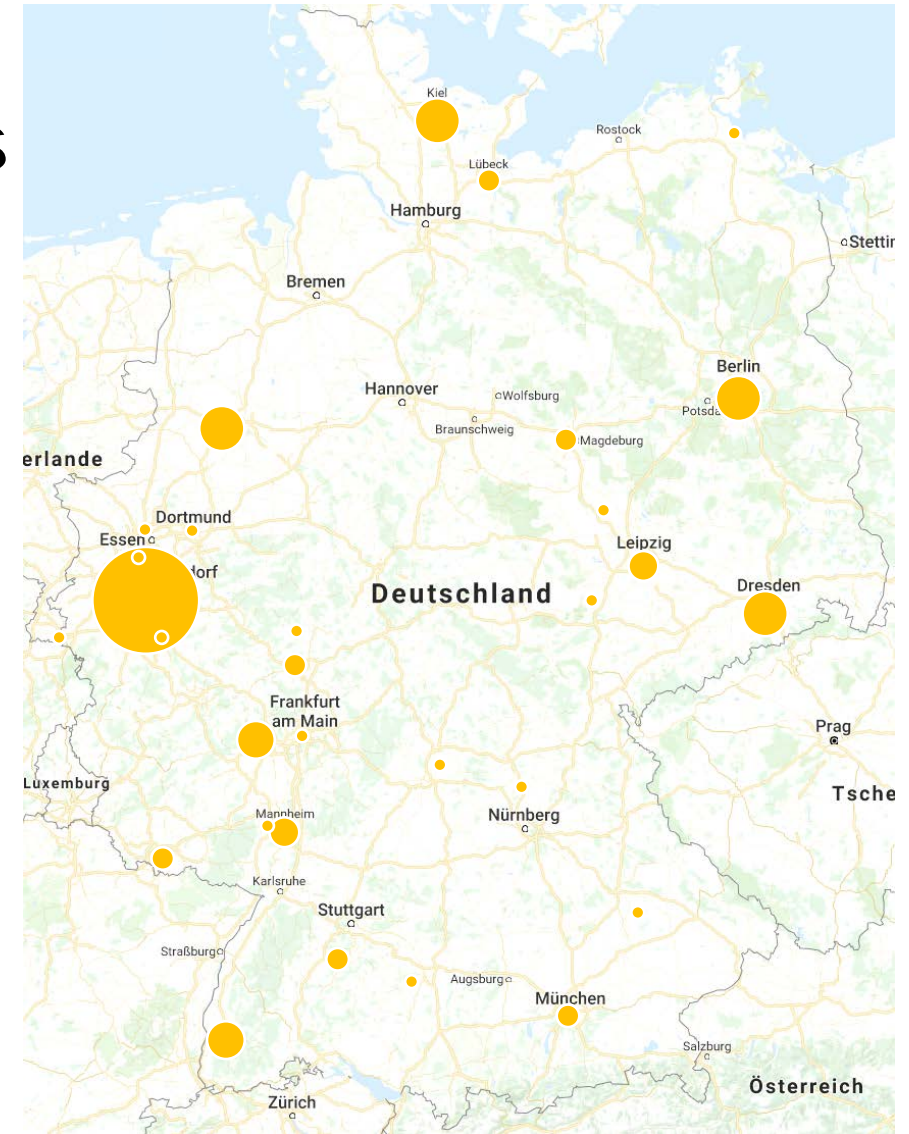
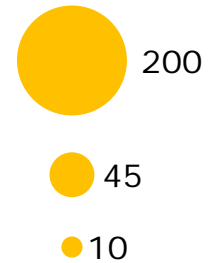


Nimptsch U, Mansky T. BMJ Open 2017;7:e016184. doi: 10.1136/bmjopen-2017-016184

Oesophagectomies at German University Hospitals

Location	Cases
Uni Köln	185
Charité – Berlin	82
Uni Dresden	76
Uni Münster	73
Uni Freiburg	72
Uni Heidelberg	58
Uni Mainz	58
Uni Kiel	48

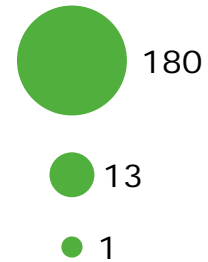
University hospitals



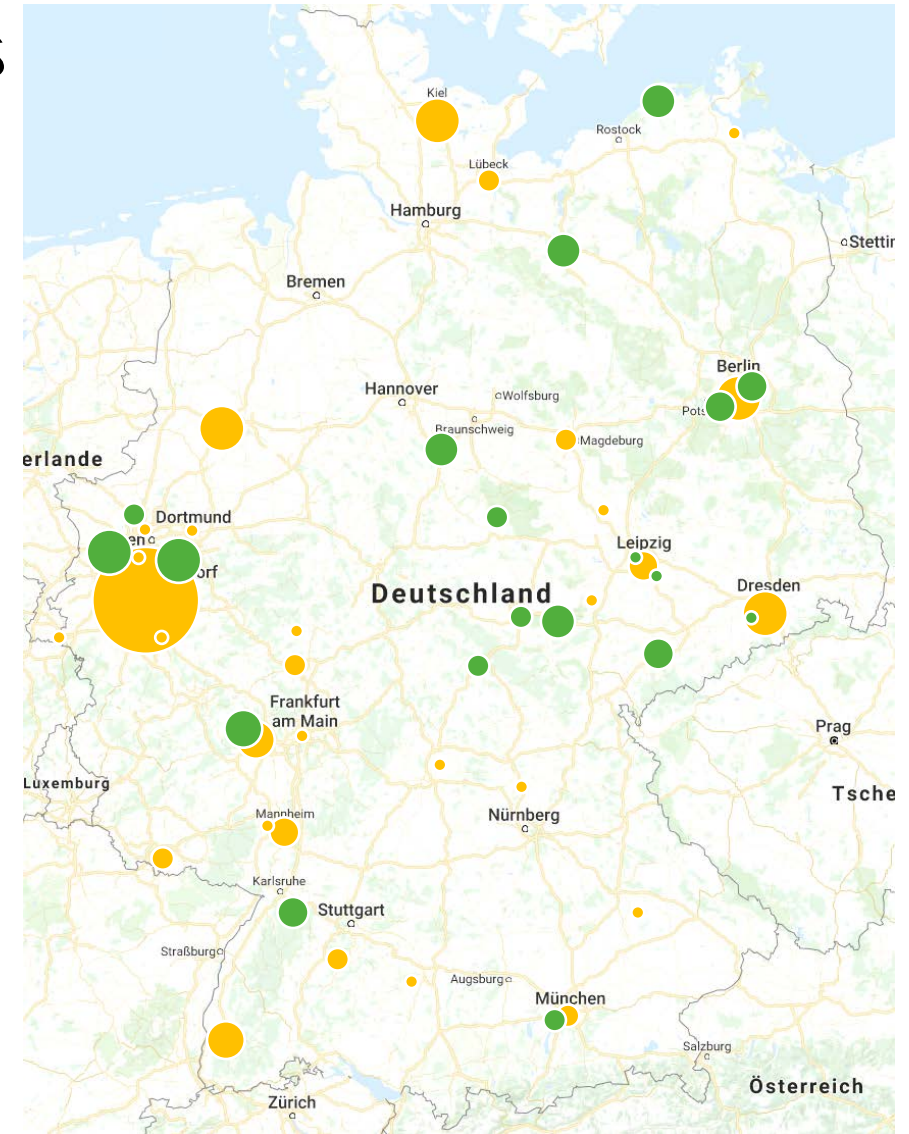
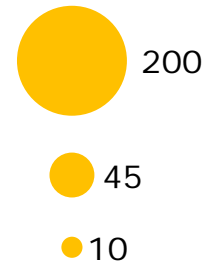
Oesophagectomies in Helios

Location	Cases
HSK Wiesbaden	22
EvB Berlin	20
Krefeld	17
Hildesheim	16
Berlin-Buch	14
Erfurt	13
Wuppertal	12
Hanseklinikum Stralsund	10
Pforzheim	10
Schwerin	10
Total	172

Helios hospitals



University hospitals

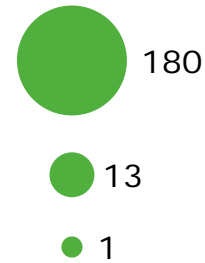


A Lighthouse (in the North Sea)

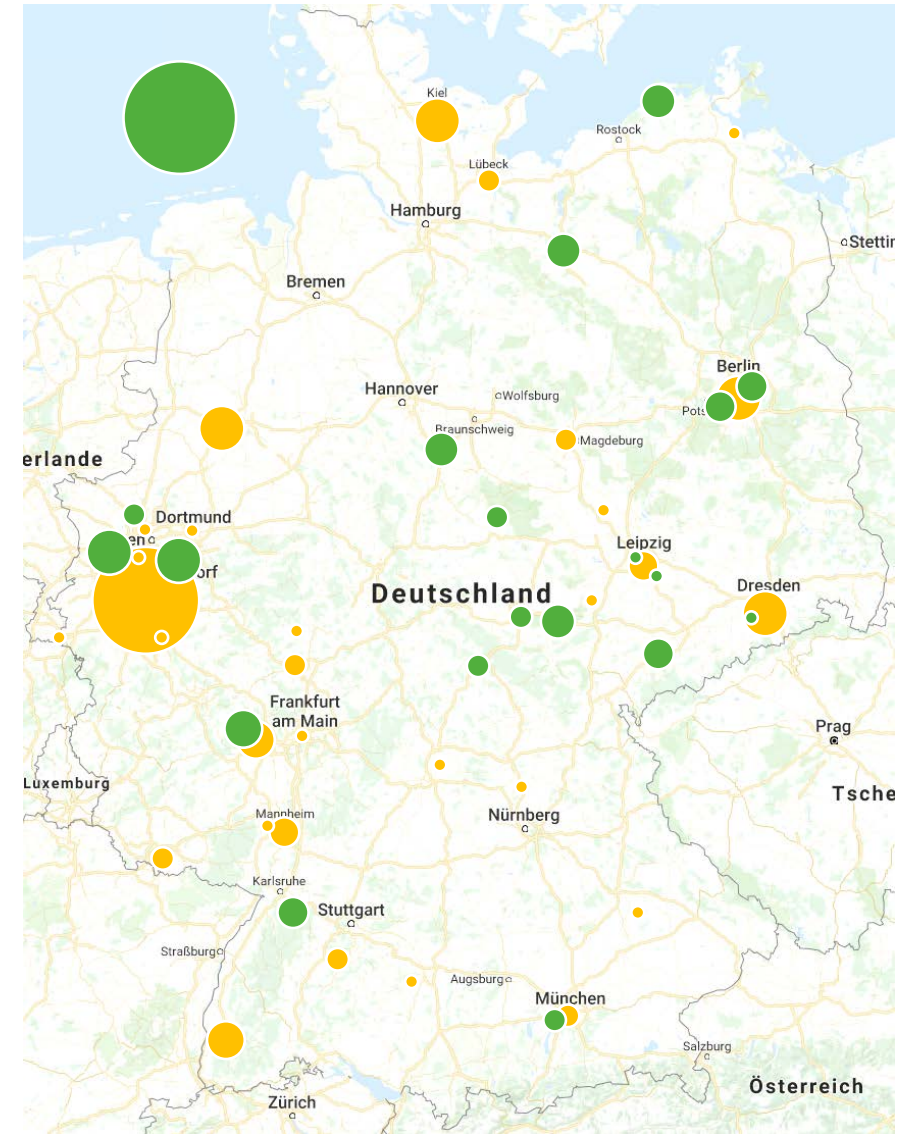
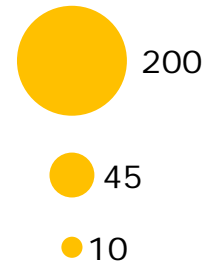
Location	Cases
HSK Wiesbaden	22
EvB Berlin	20
Krefeld	17
Hildesheim	16
Berlin-Buch	14
Erfurt	13
Wuppertal	12
Hanseklinikum Stralsund	10
Pforzheim	10
Schwerin	10
Total	172

Location	Cases
Uni Köln	185
Charité – Berlin	82
Uni Dresden	76
Uni Münster	73
Uni Freiburg	72
Uni Heidelberg	58
Uni Mainz	58
Uni Kiel	48

HELIOS hospitals



University hospitals



Scale Fosters Medical Quality Improvements

- First complete centralizations of complex medical interventions started
- Helios has critical size of hospitals to create medical centers with at least as many or more patients than the largest provider in Germany

Intervention	University hospital with highest number of interventions (n)	All Helios hospitals (n)
Pancreatectomy	Heidelberg 543	632
Cystectomy	Munich 126	437

- Growing efforts to educate patients on quality/mortality implications likely to overcome resistance to travel larger distances
- Virtuous circle: Increase of quality and reputation will attract even more patients

Further decrease of LOS and centralization of complex medical interventions will provide sustainable growth in Germany!

Capital Markets Day, 8 June 2018

Helios.health

Views on Health Care – Spain

Leticia Moral, MD, PhD –
Quality & Innovation Director Quirónsalud

The Best of Both Worlds



Key Take-Aways

- Positive patient experience is key driver of Quirónsalud's growth
- Integration of outpatient and inpatient care drives improved efficiency
- Cross-border knowledge transfer between Quirónsalud and Helios improves clinical practice

Integration of Outpatient and Inpatient Care Drives Improved Efficiency

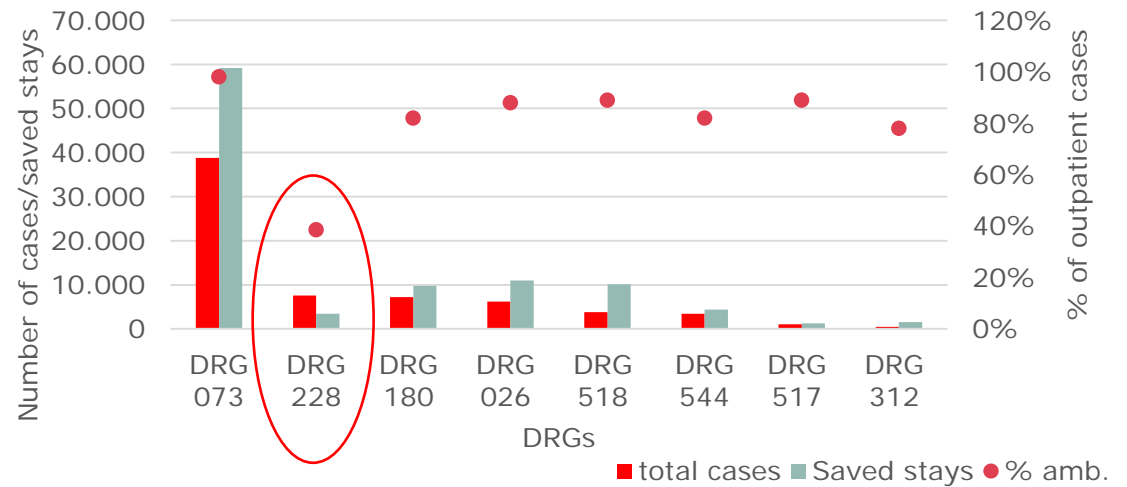
	2017	2016
Average length of stay (days)	4.25	4.29
% Substitution index in ambulatory surgery*	67.3%	67.2%

Hip replacement	2017	2016	Dif.	
			absolute	%
Number of cases	4,391	3,996	395	10%
Length of stay	6.32	6.95	-0.63	-9%
Total real stays	27,751	27,772		

LOS reduction in hip replacement increases the activity by 10% and saves 7.58 beds/day

* % of major surgeries performed as day cases (outpatient)
Quirónsalud data base 2017; APR DRG 32.0 version

Saved stays by outpatient surgery (day cases)



Example: Performing ~ 72,000 surgical procedures as outpatient surgery (day cases) saves 125,000 stays per year = 350 beds daily

... and gives us the opportunity to improve DRGs with "low" outpatient rate (e.g. DRG 228 Hernia procedures)

(Assumption) Saved days = length of stay of inpatient cases X n° of ambulatory surgeries

Positive Patient Experience as Key Driver of Quirónsalud's Growth

Patients want ...

- Services provided on time
- Empathy, their educational, emotional, and spiritual needs taken care of

Patients expect ...

- High quality & safe care
- Innovative & affordable care

Patient Experience

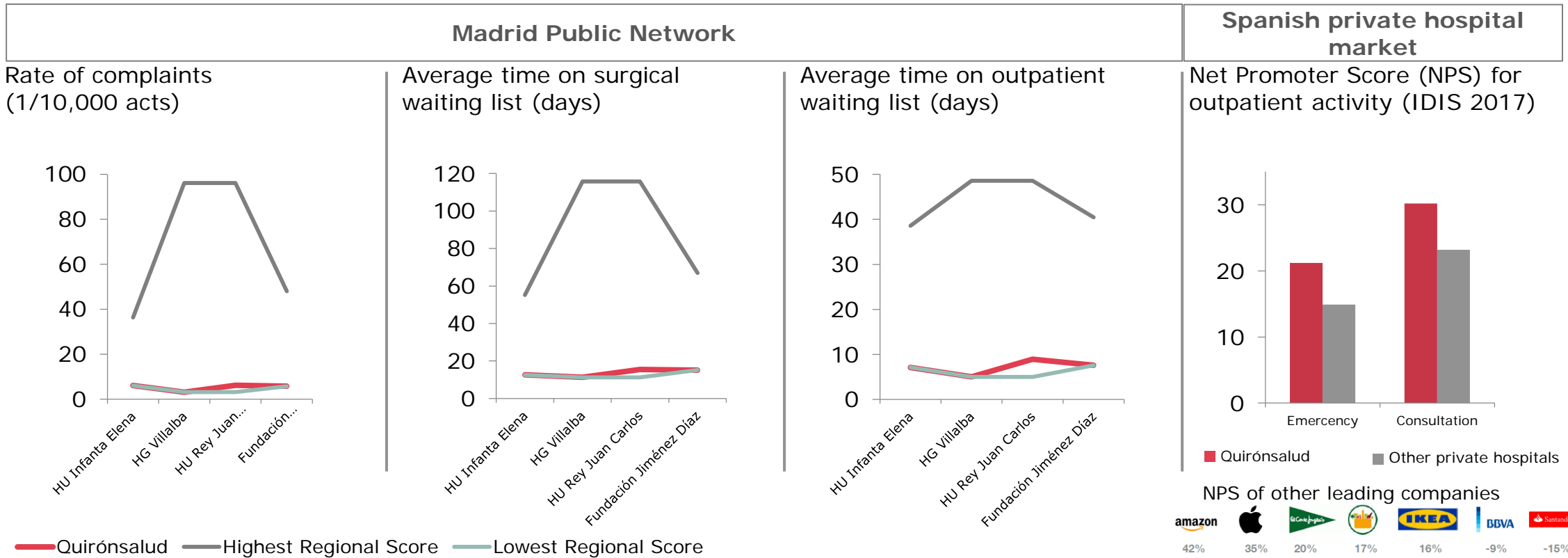
We have to offer ...

- Patient-centered care:
 - "Care & caring" program: we teach our employees how to treat patients
 - Focus groups with patients to improve services
 - Daily monitoring of patient experience through Net Promoter Score (NPS): 184,117 patients in year 2017
- Good accessibility, short waiting list: process standardization and on time control of waiting times
 - Outpatient: less than 15 days, less than 15 minutes
 - Emergency Department: first medical attention under 30 minutes

We have to guarantee ...

- High quality & safe care
- Innovative & affordable care
- Efficiency

Positive Patient Experience + Short Waiting Times = Success

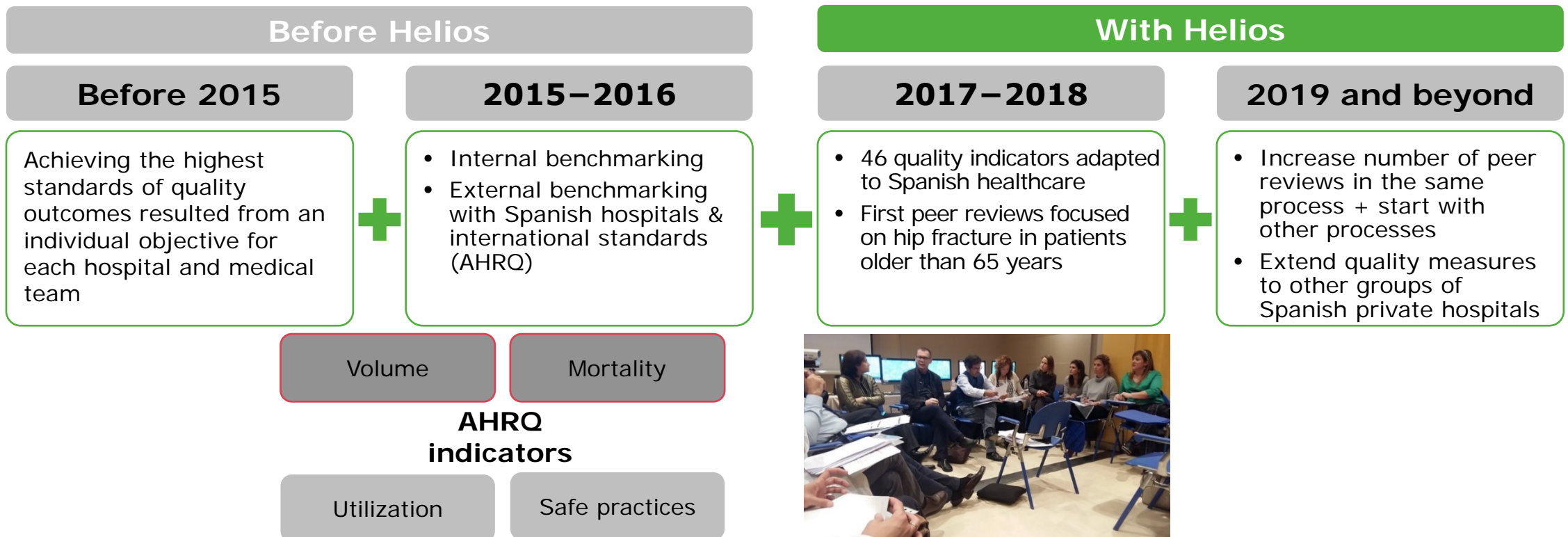


* http://www.madrid.org/cs/Satellite?cid=1354183538063&language=es&pagename=PortalSalud%2FPagina%2FPPTSA_servicioPrincipal&vest=1354183538063 as of 28 May 2018

Quirónsalud hospitals lead rankings

Excellent Clinical Practice & Patient Safety Have Always Been Central to Quirónsalud ...

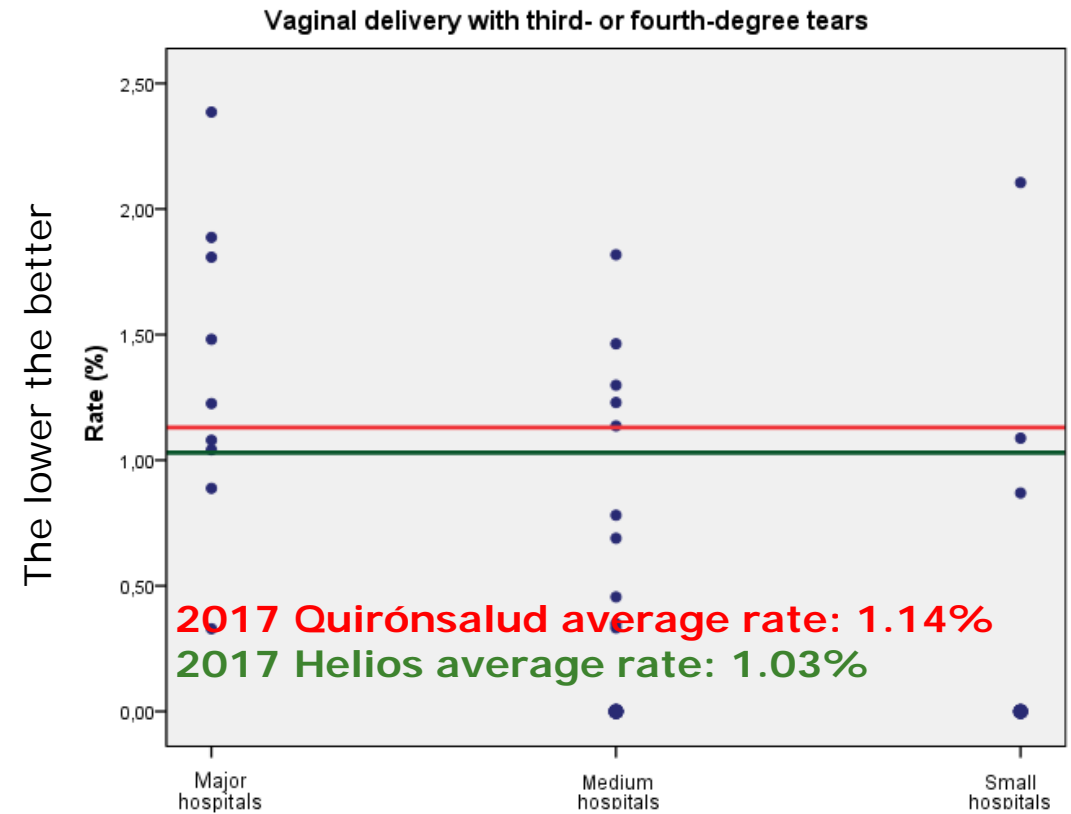
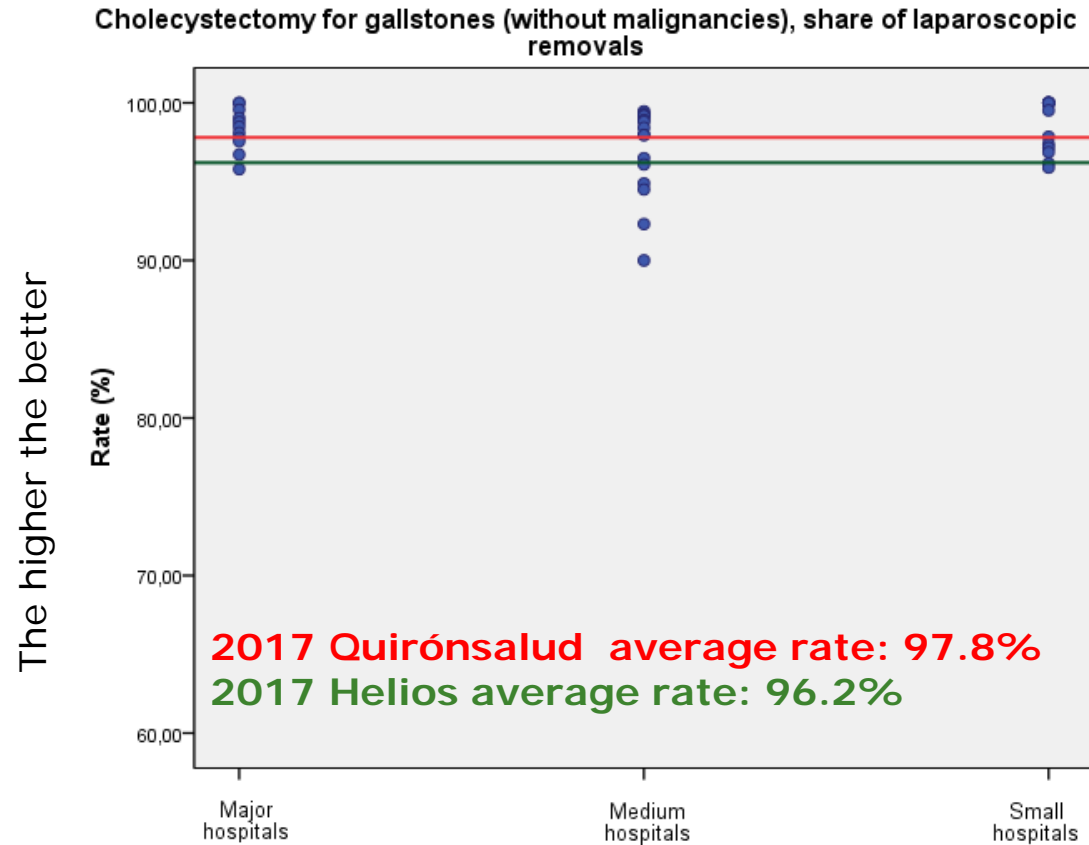
... being part of Fresenius Helios gave us the opportunity to implement an additional tool on corporate level to further improve clinical practice and patient safety



AHRQ = Agency for Healthcare Research and Quality

Benchmarking in quality indicators

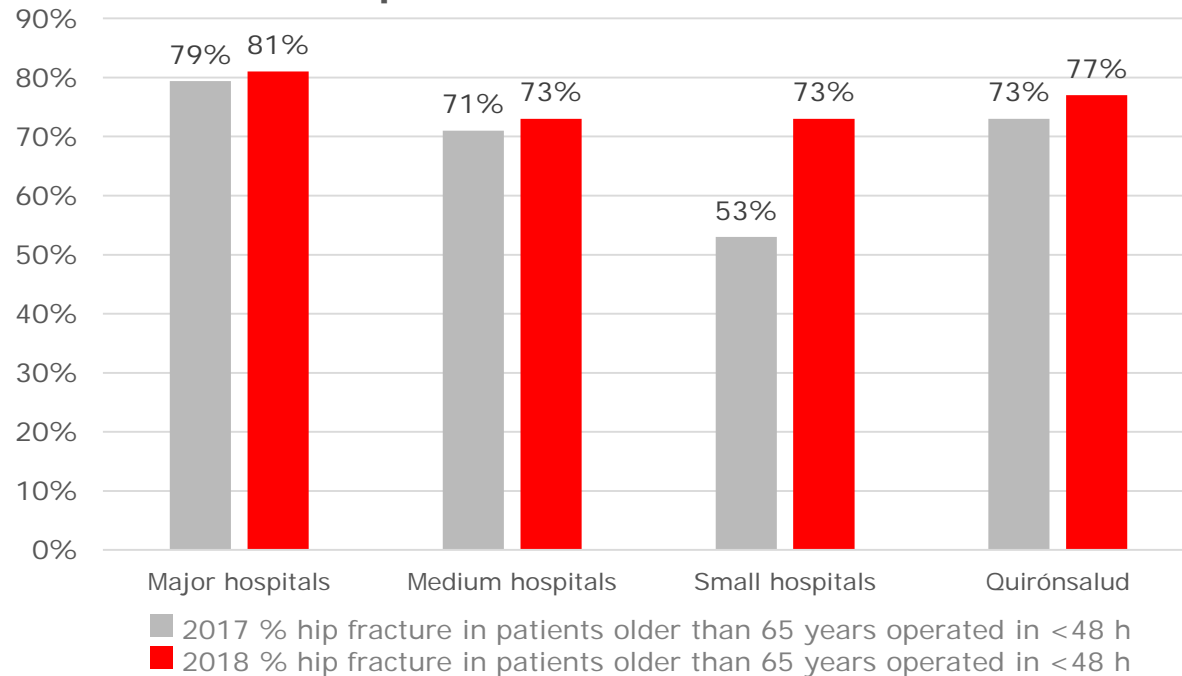
Example: Results of 2 out of 46 adapted indicators



Preliminary Results of Peer Review: Overall Improvement From 73% to 77%

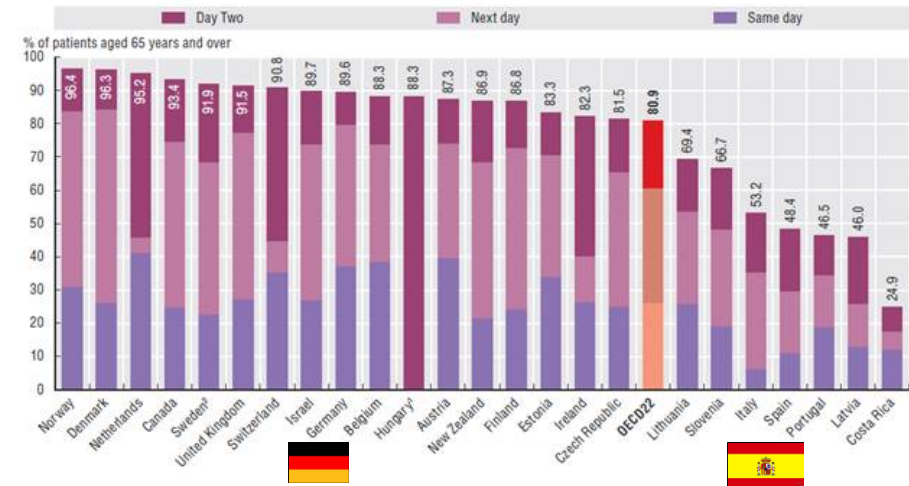
Our target: First to achieve OECD average, German average ... and Norwegian average

Hip fracture in patients > 65 years
operated in < 48 h



Waiting times for hip fracture surgery

6.22. Hip fracture surgery initiation after admission to the hospital, 2015 (or nearest year)



Quirónsalud performs better than Spanish average

Quirónsalud's Strategies to Treat Complex Cases

**Before
Helios**

- 1. Continuous monitoring of complications & mortality: AHRQ volume + mortality indicators**
- 2. Multi-hospital medical teams:**
 - ✓ Maintains accessibility for patients
 - ✓ Guarantees experience of medical teams
- 3. Promoting Quirónsalud network: referring patients from small hospitals to large hospitals**

**With
Helios**

- 4. Concentrating complex services in cities with more than one Quirónsalud hospital (first project: Heart Department in Barcelona).**

Thank you