MYIA

Dr. Andre Dias

A deep dive into outcomes

Agenda

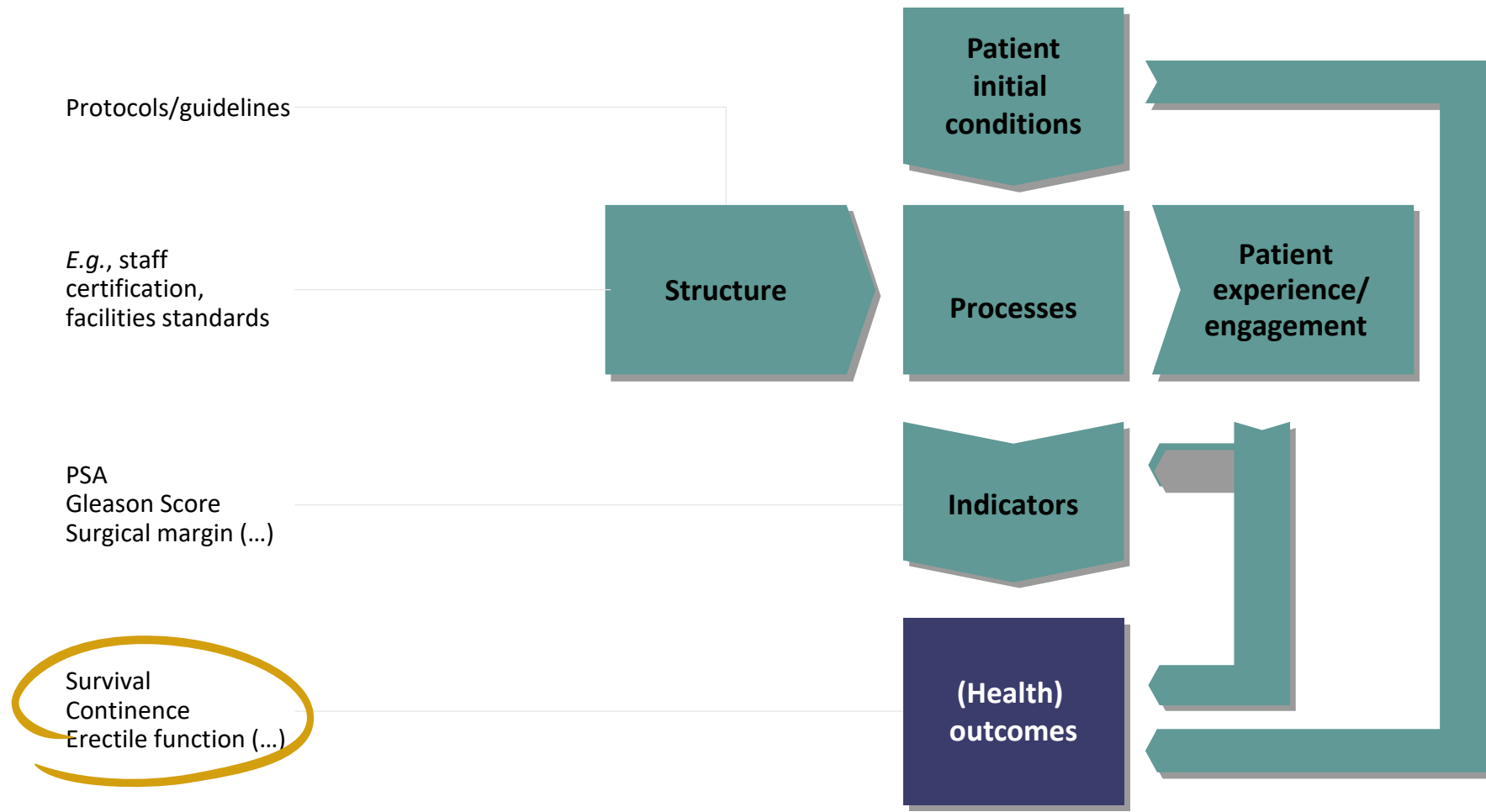What is an outcome set

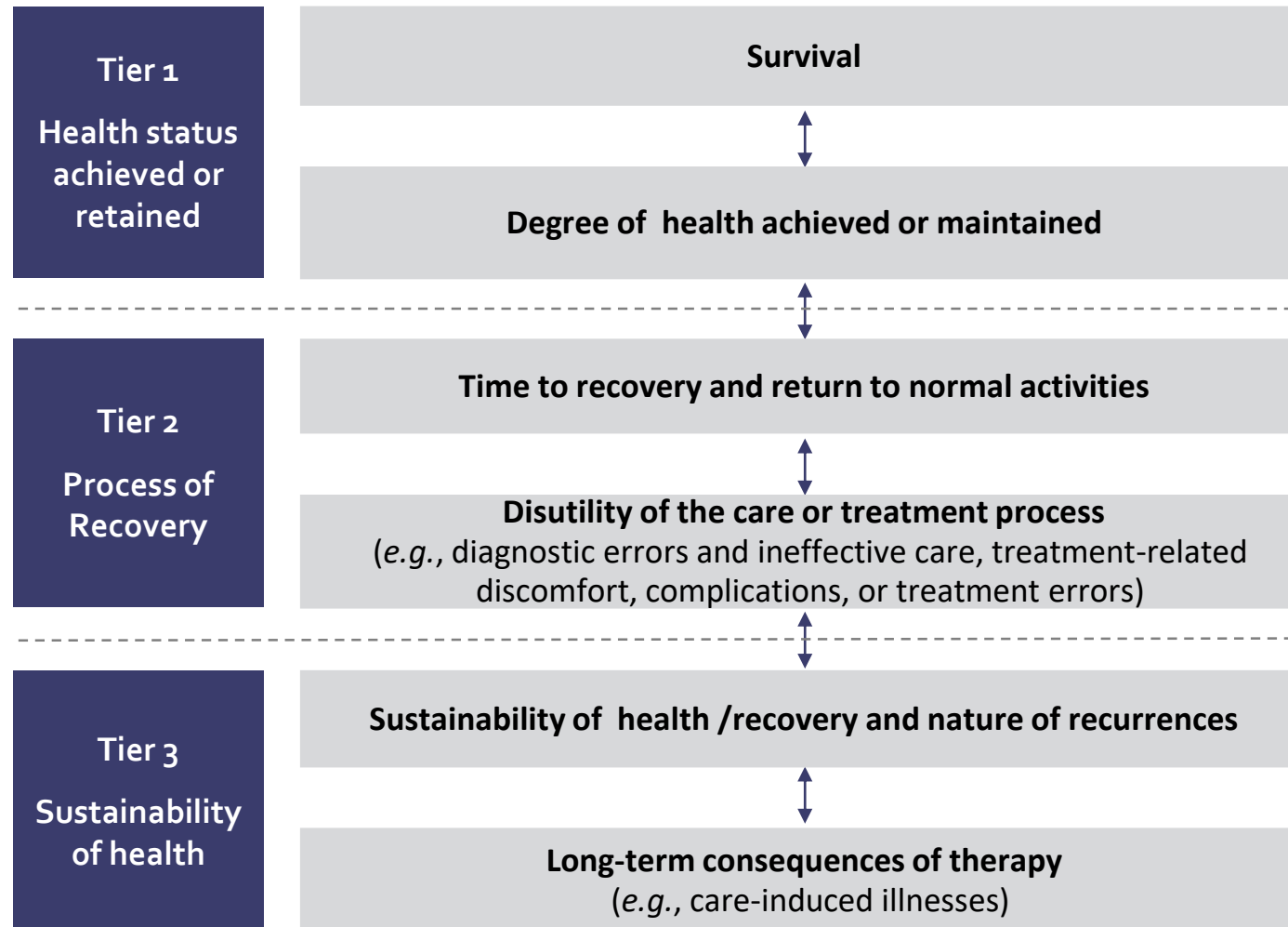How will outcomes collection impact you

There are lots of things to measure in healthcare

Protocols/guidelines

E.g., staff
certification,
facilities standards

PSA
Gleason Score
Surgical margin (…)

Survival
Continence
Erectile function (…)

Structure

Patient initial conditions

Processes

Patient experience/ engagement

Indicators

(Health) outcomes

The outcomes hierarchy

Tier 1	Survival
Health status achieved or retained	Degree of health achieved or maintained

Tier 2	Time to recovery and return to normal activities
Process of Recovery	Disutility of the care or treatment process (*e.g.*, diagnostic errors and ineffective care, treatment-related discomfort, complications, or treatment errors)

| Tier 3	Sustainability of health /recovery and nature of recurrences
Sustainability of health	Long-term consequences of therapy (*e.g.*, care-induced illnesses)

"Outcomes are the results people care about most when seeking treatment, including functional improvement and the ability to live normal, productive lives." – ICHOM

Deep dive on a outcomes standard set

What kind of outcomes are in the set

MYIA   Source: ICHOM
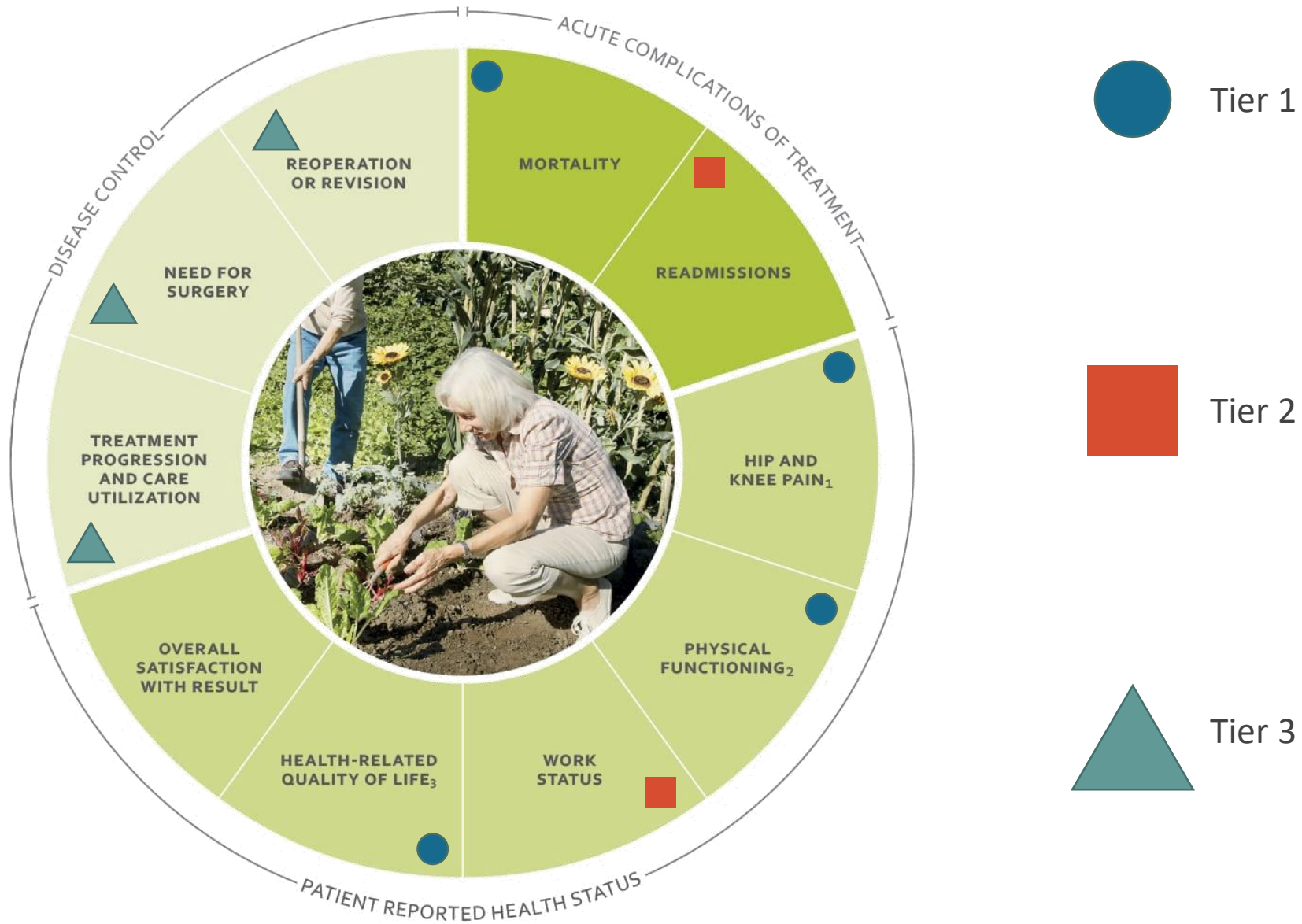
But how do you measure these outcomes objectively?

Outcomes

Patient Population	Measure	Supporting Information	Timing	Data Source
Patient-Reported Health Status				
All patients	Hip or knee functional status	Tracked via either the HOOS-PS or KOOS-PS	Baseline; Annually	Patient-reported
	Pain in the hips, knees, or lower back	Tracked via numeric or visual analog rating scales		
	Quality of life	Tracked via either the EQ-5D-3L, VR-12, or SF-12		
	Work status	Indication of patient's ability to work		
	Satisfaction with results	Patient's overall satisfaction with the results of their care		
Acute Complications of Treatment				
Surgical patients	Death	All cause 30-day mortality	Post-surgery	Administrative data
	Admissions	All cause 30-day readmissions		
	Reoperation	All reoperations	Continuous	Clinical or administrative data

HOOS-PS: Hip Disability and Osteoarthritis Outcome Score – Physical Function; KOOS-PS: Knee Injury and Osteoarthritis Outcome Score - Physical Function; EQ-5D-3L: EuroQol 5 Dimension 3 Levels; VR-12: Veterans RAND 12; SF-12: Short Form 12 Health Survey

The HOOS - PS

The following questions concern your level of function in performing usual daily activities and higher level activities. For each of the following activities, please indicate the degree of difficulty you have experienced in the **last week** due to your hip problem.

	None	Mild	Moderate	Severe	Extreme
1. Descending stairs	O	O	O	O	O
2. Getting in/out of bath or shower	O	O	O	O	O
3. Sitting	O	O	O	O	O
4. Running	O	O	O	O	O
5. Twisting/pivoting on your loaded leg	O	O	O	O	O

Pain

On a scale of 0 to 10, with 0 being no pain at all and 10 being the worst pain imaginable, please indicate your average pain in each of the following locations on your body over the last 7 days.

	No pain										Worst pain imaginable
	0	1	2	3	4	5	6	7	8	9	10
right hip [PAINRH]	O	O	O	O	O	O	O	O	O	O	O
left hip [PAINLH]	O	O	O	O	O	O	O	O	O	O	O
right knee [PAINRK]	O	O	O	O	O	O	O	O	O	O	O
left knee [PAINLK]	O	O	O	O	O	O	O	O	O	O	O
lower back [PAINLB]	O	O	O	O	O	O	O	O	O	O	O

Quality of life – EQ5D

Please indicate which statements best describe your own health state today.

Mobility
[MOBILITY]

- ○ I have no problems in walking about
- ○ I have some problems in walking about
- ○ I am confined to bed

Self-Care
[SELFCARE]

- ○ 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 (e.g. work, study, housework, family or leisure activities)
[ACTIVITY]

- ○ I have no problems with performing my usual activities
- ○ I have some problems with performing my usual activities
- ○ I am unable to perform my usual activities

Pain/Discomfort
[PAIN]

- ○ I have no pain or discomfort
- ○ I have moderate pain or discomfort
- ○ I have extreme pain or discomfort

Anxiety/Depression
[ANXIETY]

- ○ I am not anxious or depressed
- ○ I am moderately anxious or depressed
- ○ I am extremely anxious or depressed

To help people say how good or bad a health state is, we have drawn a scale (rather like a thermometer) on which the best state you can imagine is marked 100 and the worst state you can imagine is marked 0.

We would like you to indicate on this scale how good or bad your own health is today, in your opinion. Please do this by drawing a line from the box below to whichever point on the scale indicates how good or bad your health state is today.
[EQ_VAS]

Best
imaginable
health state
100

90

80

70

60

50

40

30

20

10

0
Worst
imaginable
health state
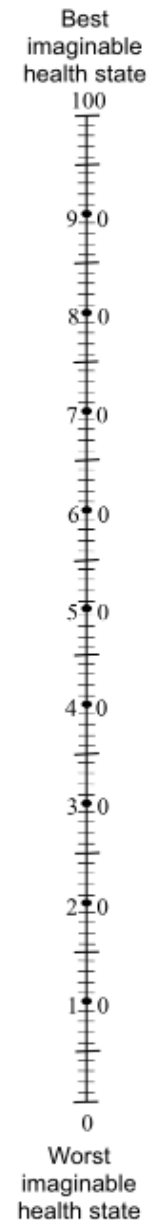
Satisfaction and employment

How satisfied are you with the results of your treatment?
[TREATSAT]

- ○ Very satisfied
- ○ Satisfied
- ○ Neither satisfied nor dissatisfied
- ○ Unsatisfied
- ○ Very unsatisfied

What is your work status?
[EMPLOYMENT]

- ○ Unable to work due to a condition other than osteoarthritis
- ○ Unable to work due to osteoarthritis
- ○ Not working by chose (student, retired, homemaker)
- ○ Seeking employment (I consider myself able to work but cannot find a job)
- ○ Working part-time
- ○ Working full-time

When to measure

○ Patient
□ Clinical

Example 1:

Begin data collection · Change in treatment · 1 year · 2 years · 3 years

Example 2:

Begin data collection · 1 year · Surgery · 30 days · 1 year · 2 years
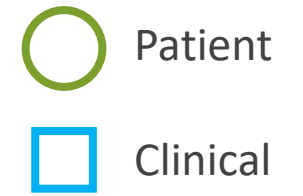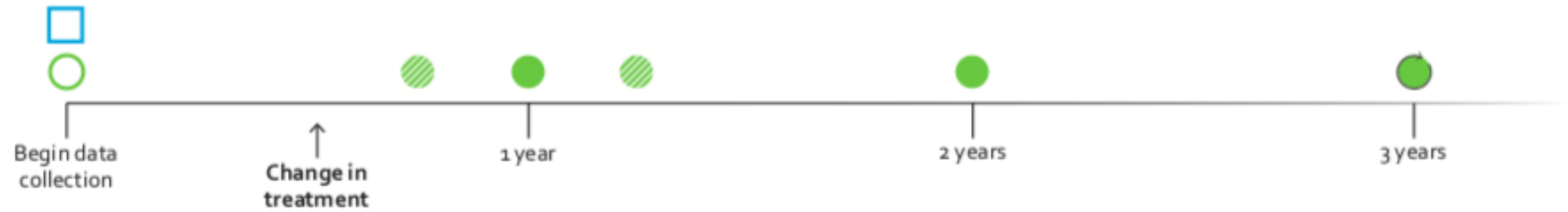
Who is the data applicable to?

Treatment Variables

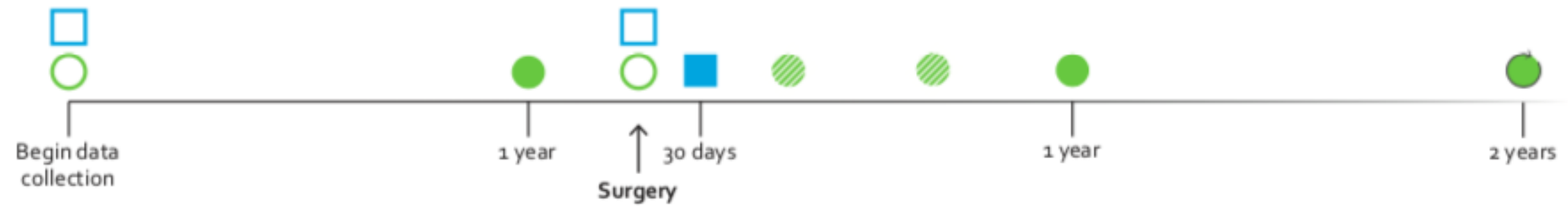| Patient Population	Measure	Supporting Information	Timing	Data Source
All patients	Treatment progression	Indication of the treatments undergone for osteoarthritis in the past year	Baseline; Annually	Patient-reported
	Care utilization	Indication of the health care providers consulted for treatment of osteoarthritis in the past year		
Surgical patients	Date of procedure	N/A	Post-surgery	Clinical or administrative data
	Operative joint	Joint on which procedure was performed		
	Orthopedic procedure	Type of procedure		

Case-Mix Variables

Patient Population	Measure	Supporting Information	Timing	Data Source
Demographic Factors				
All patients	Date of birth	N/A	Baseline	Patient-reported
	Patient sex	Sex at birth		
	Education level	Level of education completed		
Baseline Clinical Status				
All patients	Joint specific history	History or finding of trauma or injury, congenital or developmental disorders, or other joint disorders in the hips or knees	Baseline	Clinical or administrative data
	Joint specific surgical history	History of previous surgery on hips or knees		
Case-Mix Factors				
All patients	Body mass index	Height and weight	Baseline; Annually	Patient-reported or clinical data
	Living condition	Living alone, with family, or in a nursing home or other facility		Patient-reported
	Laterality of affected joint(s)	Indication of which joint(s) is(are) affected at baseline		
	History of surgery on the hip or knee	Patient reported history of previous surgery on hips or knees		
	Physical activity*	Physical activity		
	Tobacco smoking status	Use of cigarettes, cigars, or other tobacco products		
	Co-morbid conditions	Presence of: Cancer, depression, diabetes, disease of the nervous system, heart disease, hypertension, kidney disease, liver disease, lung disease, peripheral vascular disease, rheumatoid arthritis or other arthritis, spinal disease		

Done!!!

So what do you get out of this data?

Recall yesterday – Daily Activities

Total Knee Replacement: Performance of Daily Activities

Number of Surveys: 647

Score (Higher is Better)

Patients have considerable limitations to their daily activities before surgery.

These limitations improve rapidly in the first few months after surgery.

Our patients' physical limitations are nearly completely resolved over the course of the year.

0 = Day of Surgery

Days From Procedure

Source: caredecisions.partners.org

Pain

Total Knee Replacement: Relief from Knee Pain

Number of Surveys: 647

Score (Higher is Better)

Patients have considerable knee pain before surgery.

Although our patients see an improvement in knee pain, some pain is still present during the healing process.

Knee pain continues to improve and after one year many of our patients are nearly pain free.

0 = Day of Surgery

Days From Procedure

Source: caredecisions.partners.org
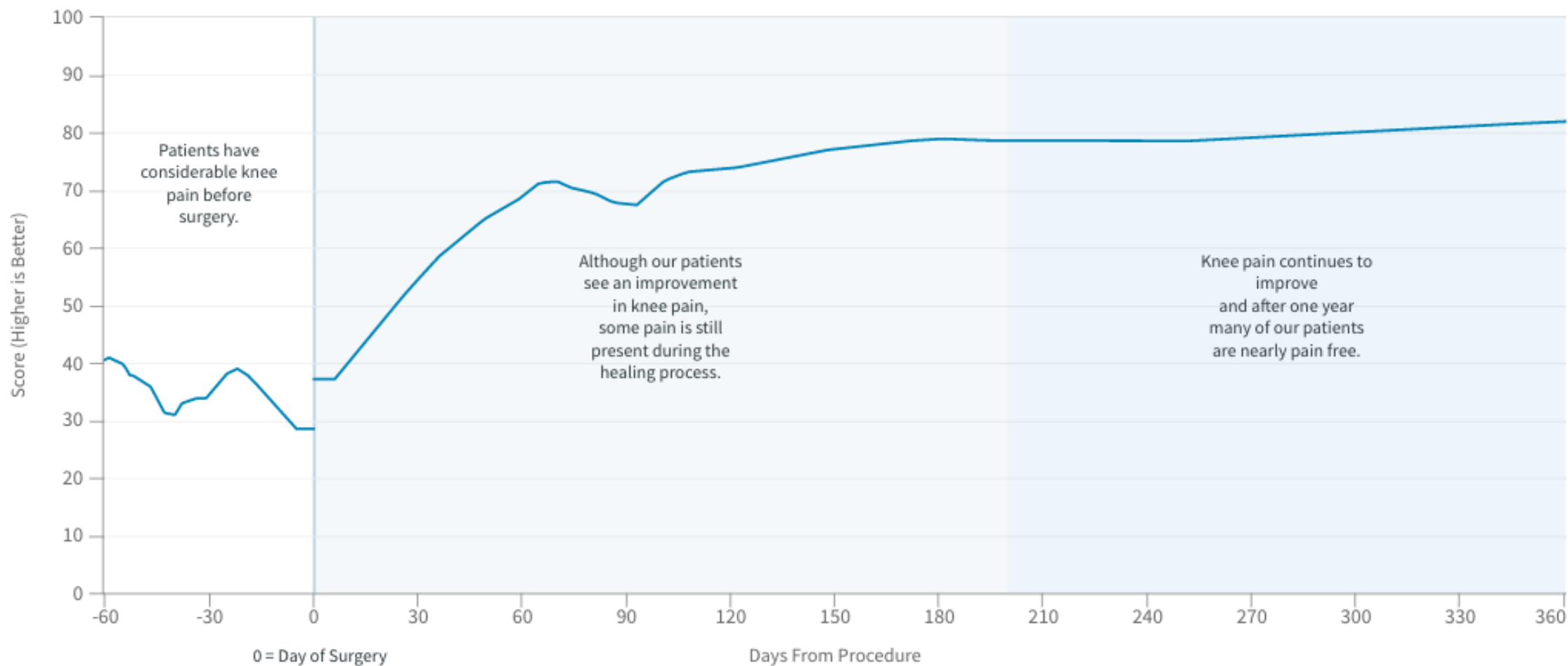
Symptom Severity

Total Knee Replacement: Severity of Symptoms

Number of Surveys: 650
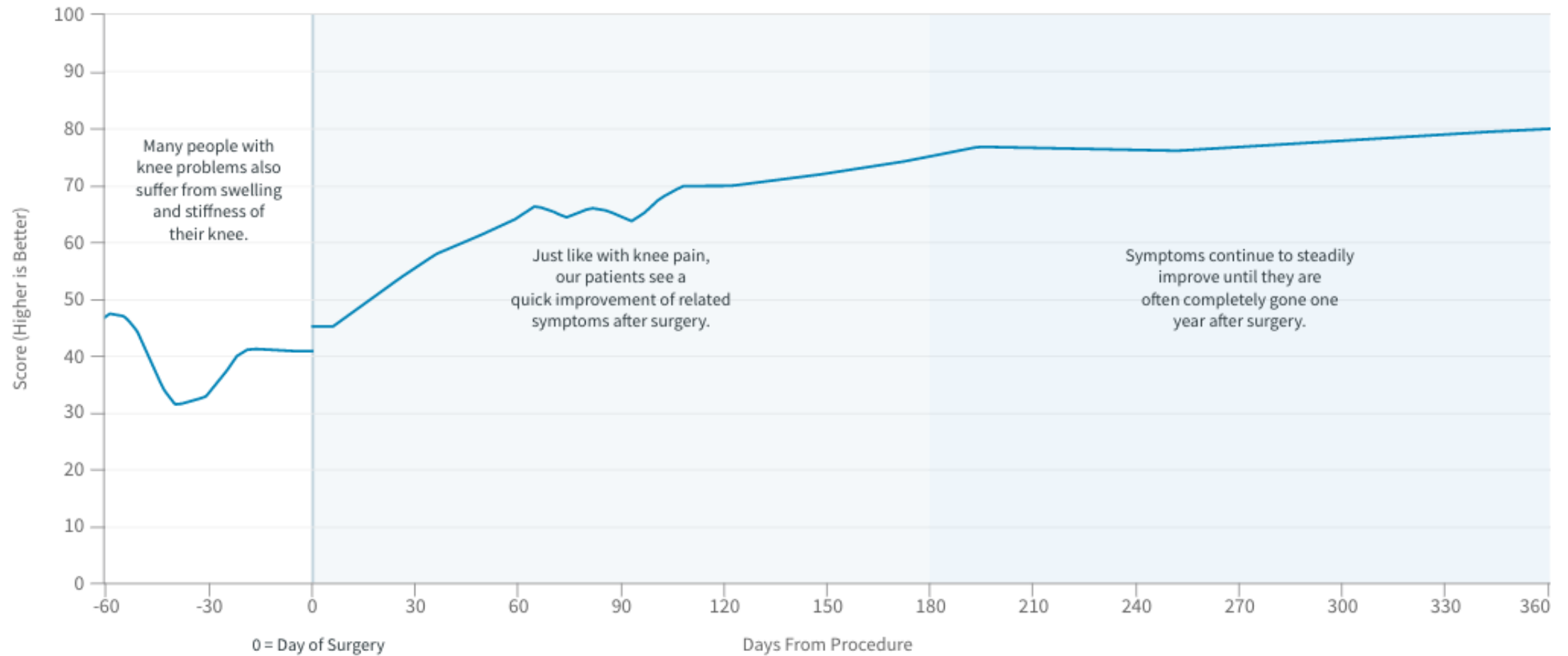
Score (Higher is Better)

Many people with knee problems also suffer from swelling and stiffness of their knee.

Just like with knee pain, our patients see a quick improvement of related symptoms after surgery.

Symptoms continue to steadily improve until they are often completely gone one year after surgery.

0 = Day of Surgery

Days From Procedure

What happens when you rank hospitals against one another

RIKS-HIA Quality index

All hospitals (n=69)   **Bottom half 2007 (n=34)**

What happens when you rank hospitals against one another

RIKS-HIA Quality index

- ● All hospitals (n=69)
- ● Bottom half 2007 (n=34)
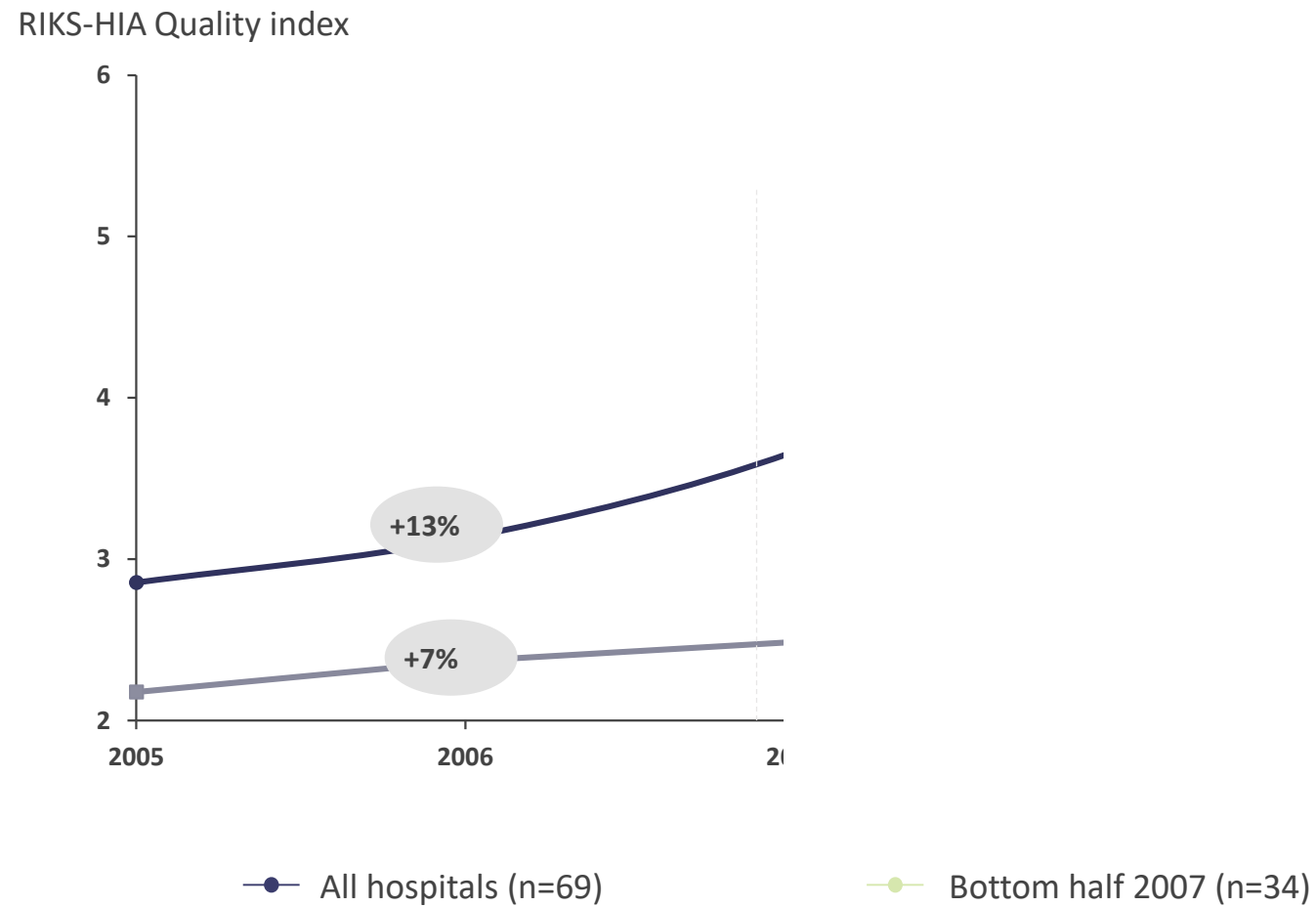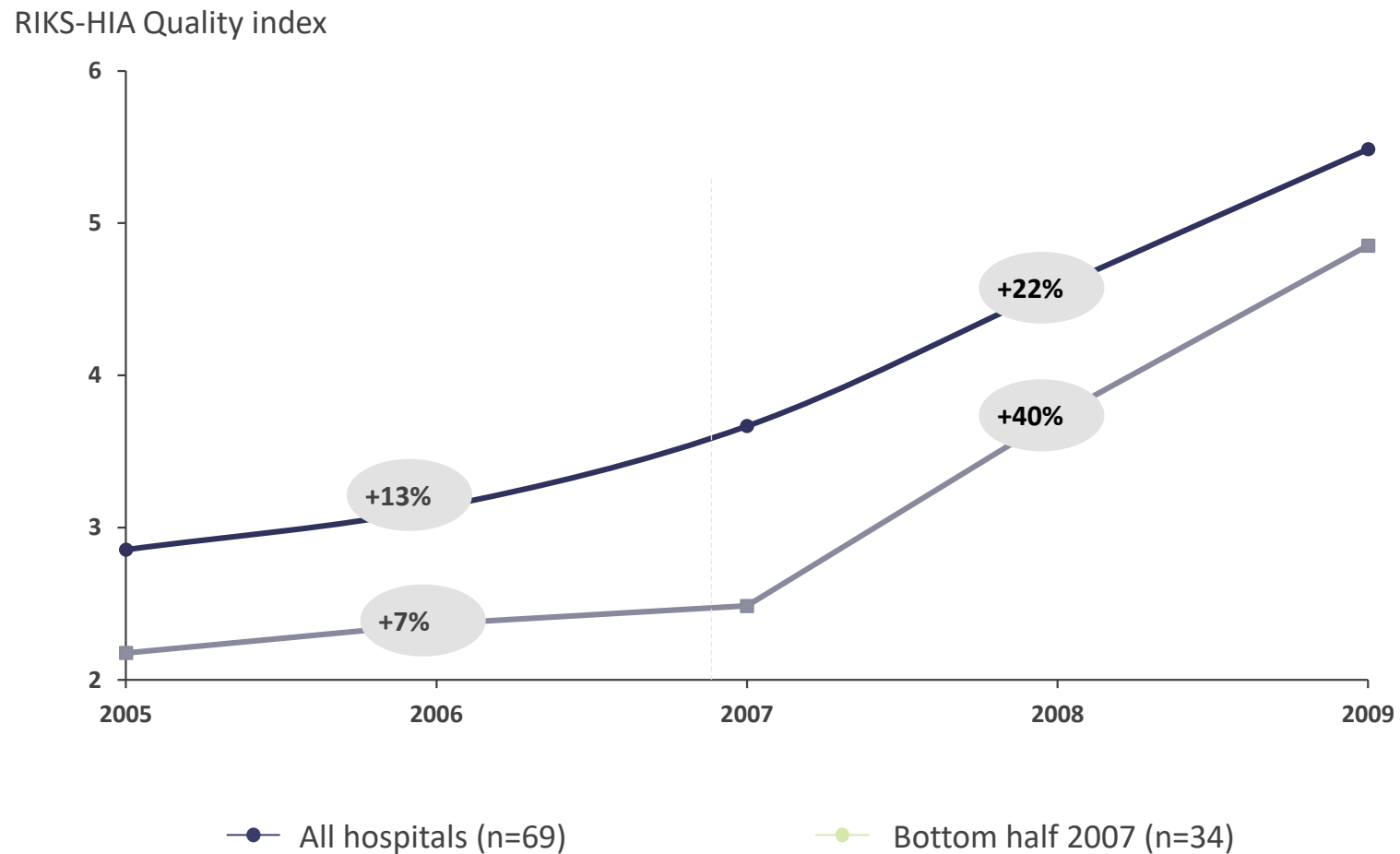
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Thank You!

Questions?