

Activity Based Funding

The need for

clinical

engagement

Experience in Trauma and Orthopaedics



TRAUMA & ORTHOPAEDIC SURGERY CLINICAL PROGRAMME

David Moore Paddy Kenny
Joint Clinical Leads

Catherine Farrell Programme Manager
Niamh Keane Project Manager



IITOS
THE IRISH
INSTITUTE OF
TRAUMA AND
ORTHOPAEDIC
SURGERY

TRAINING

Peter O Rourke UCG

Eoin Sheehan TCD

Hannan Mullett RCSI

Paula Kelly NPH

ADVOCACY

Seamus Morris UCD


Brian Lenehan UoL

Pat Fleming UCC



- 
- Funding system designed to improve care, manage resources and deliver quality outcomes

What is ABF?

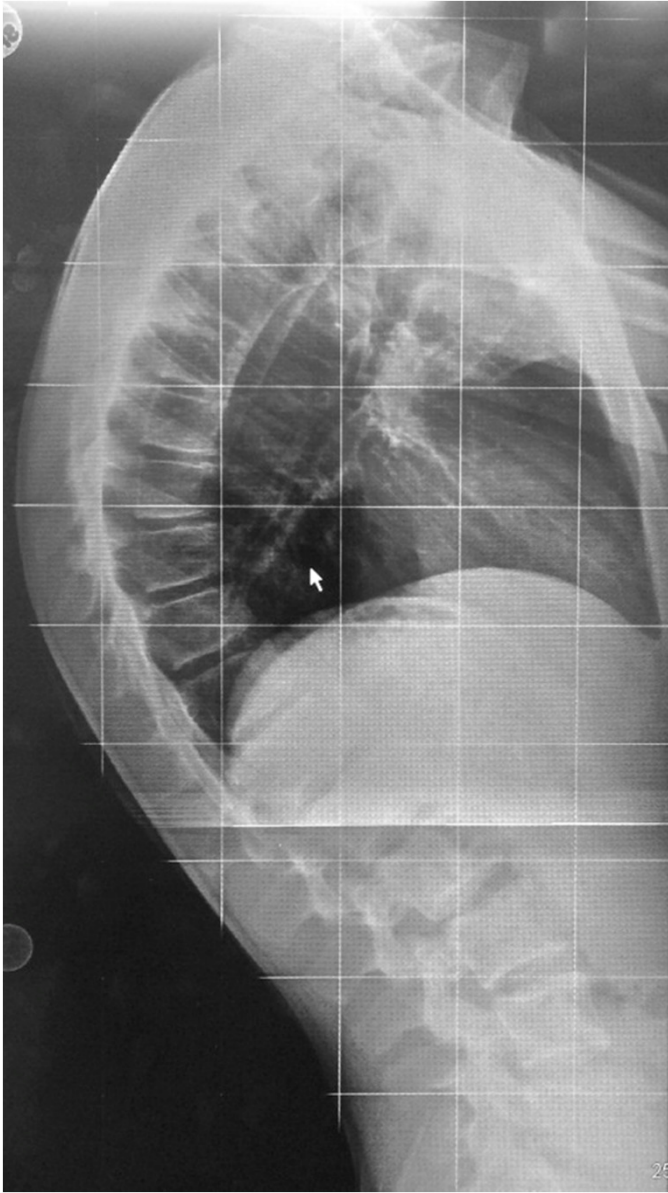
- 
- Hospitals paid fixed amount per patient episode of care
 - Activity bundles account for
 - Patient diagnosis
 - Complexity of care
 - Funding should be transparently linked to services and outcomes

What is ABF?



Provide
service to
patient

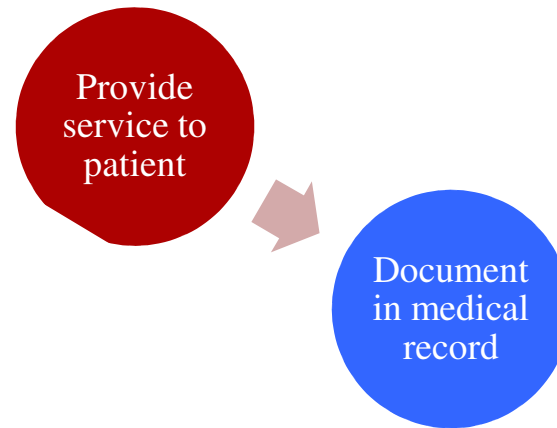
How does ABF work?



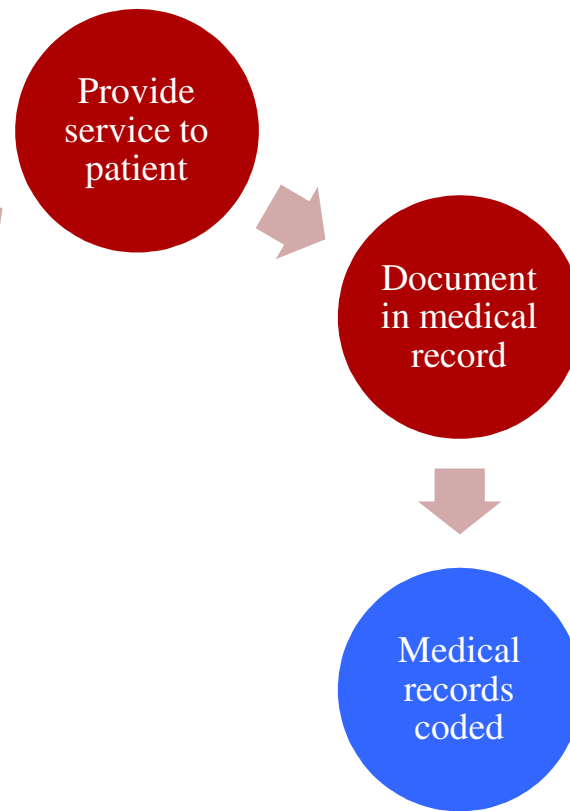


Provide
service to
patient

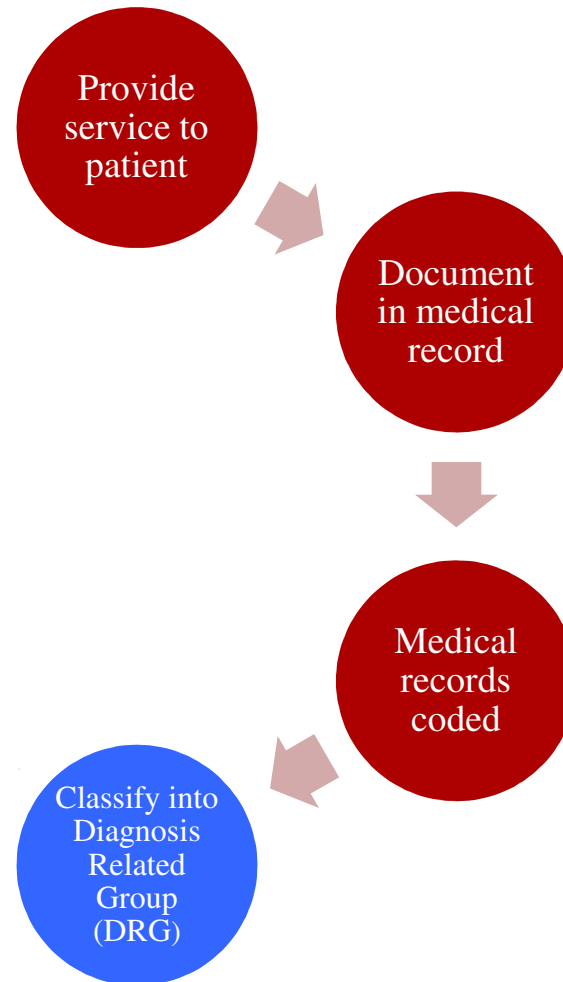
How does ABF work?



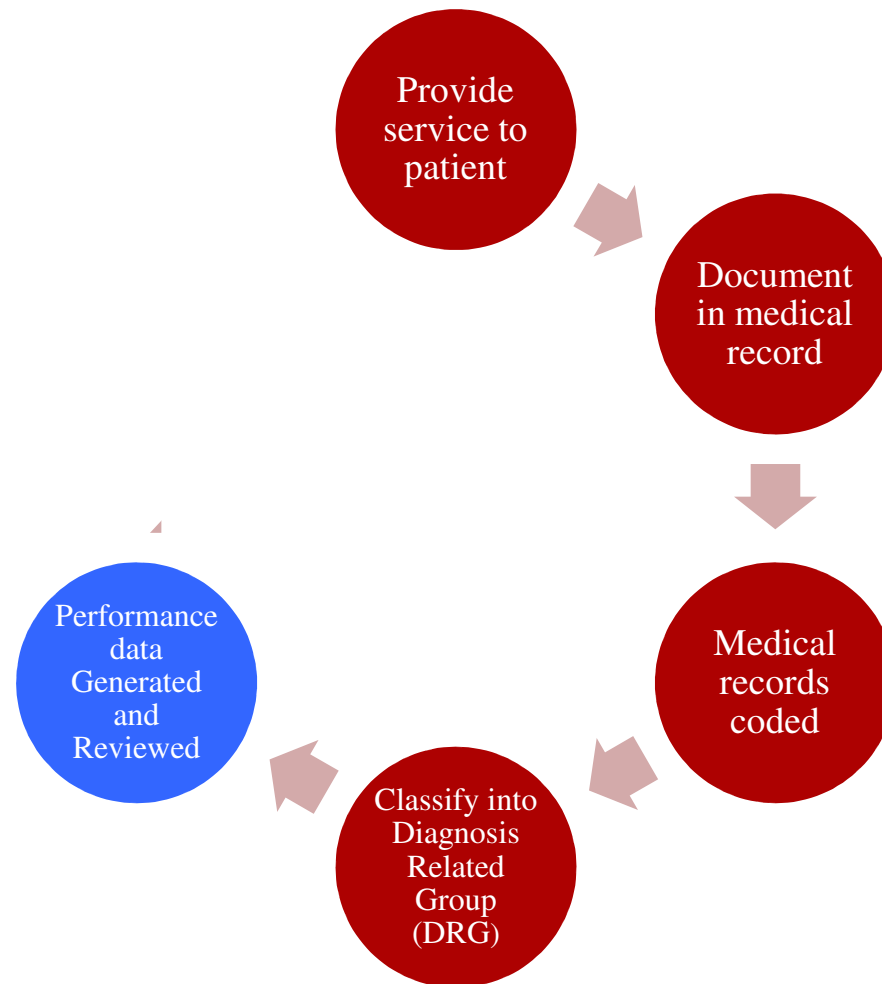
How does ABF work?



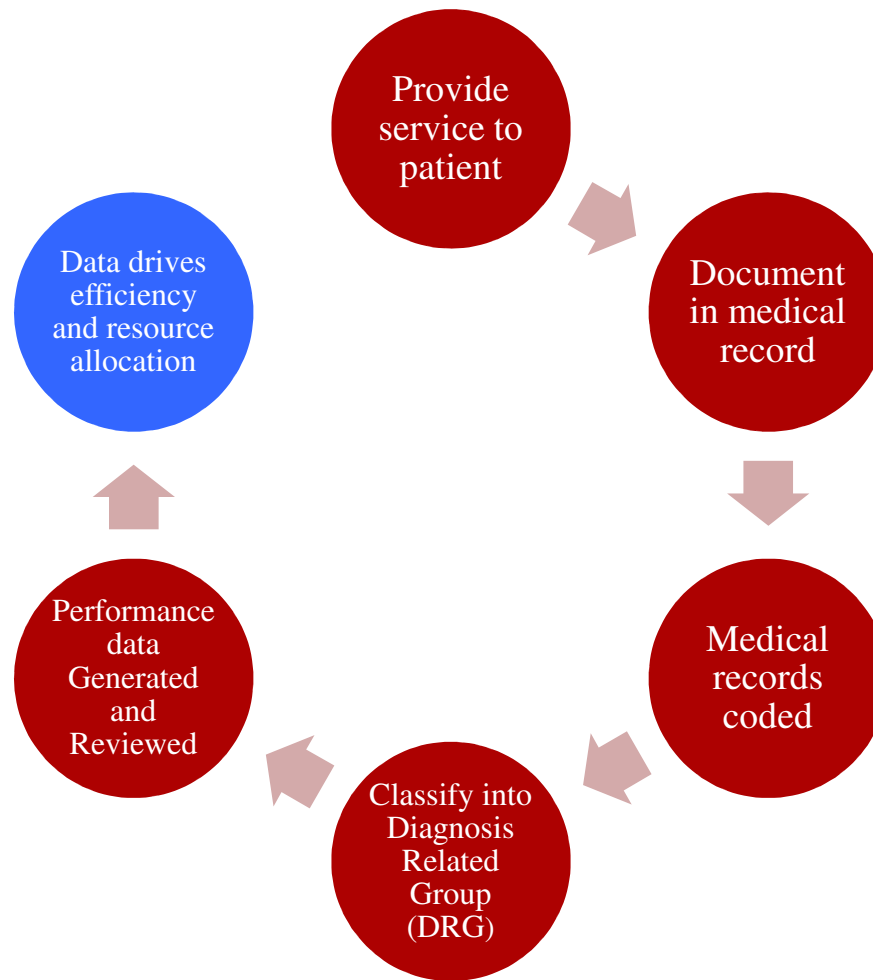
How does ABF work?



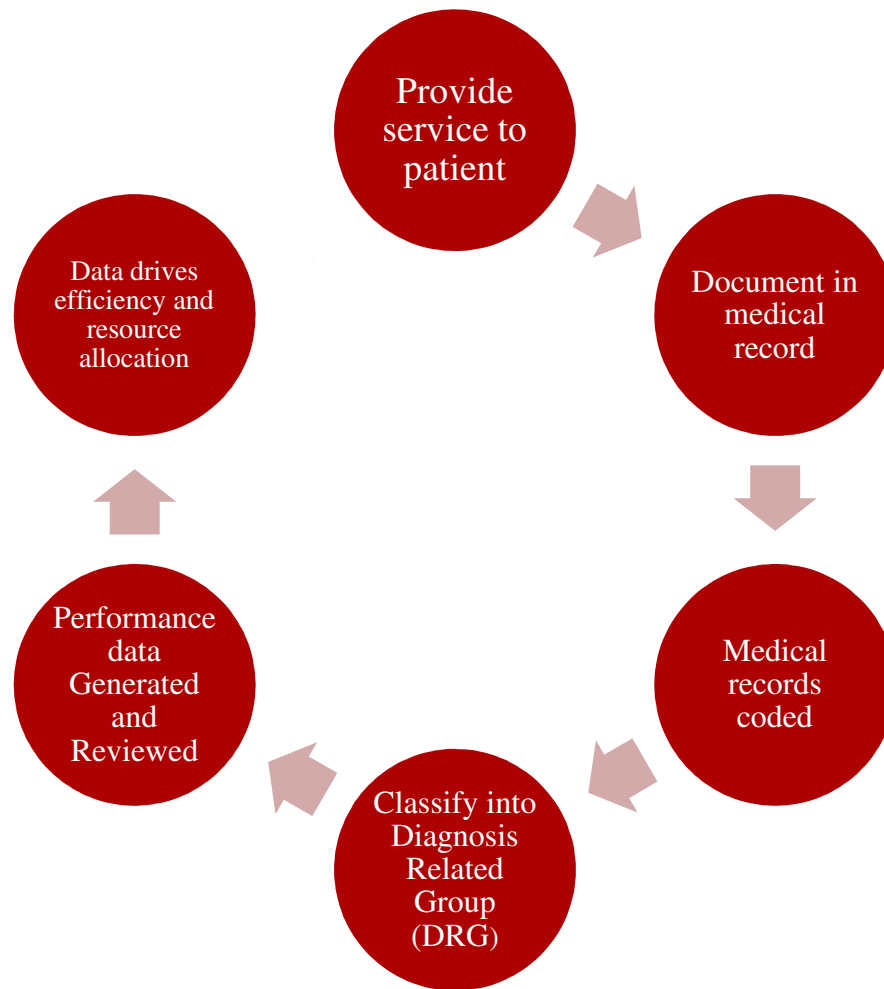
How does ABF work?



How does ABF work?

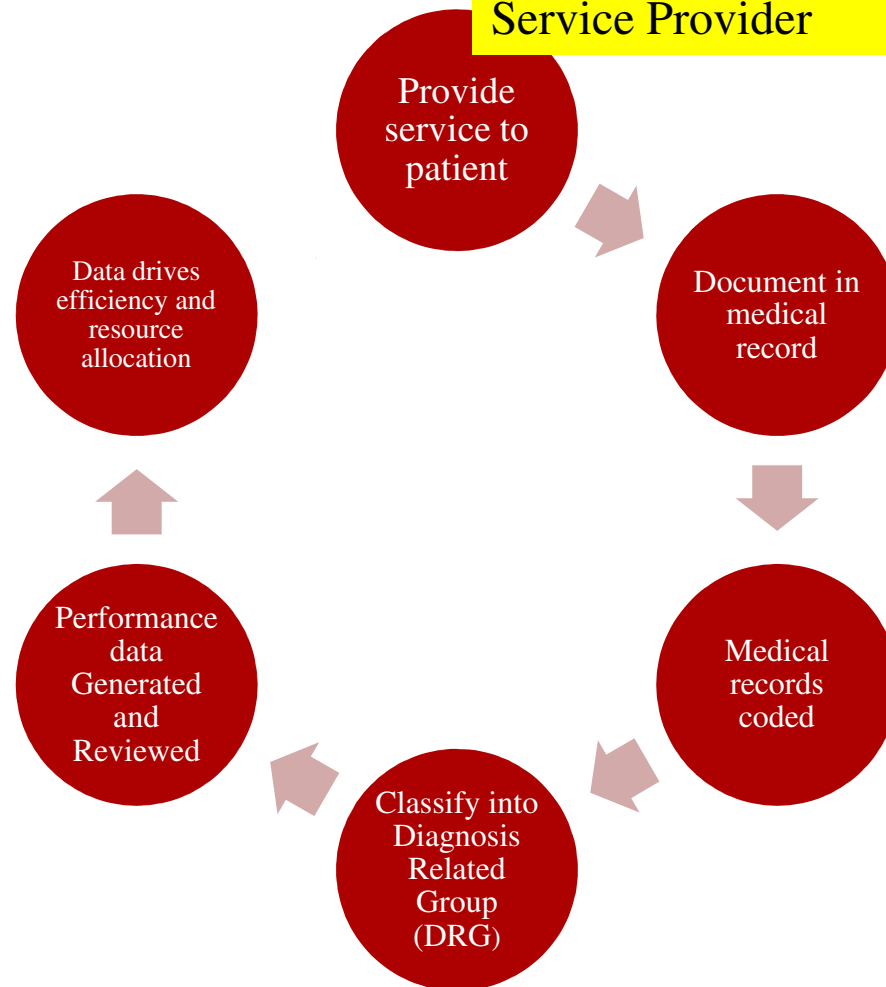


How does ABF work?



Roles of the clinician

Service Provider



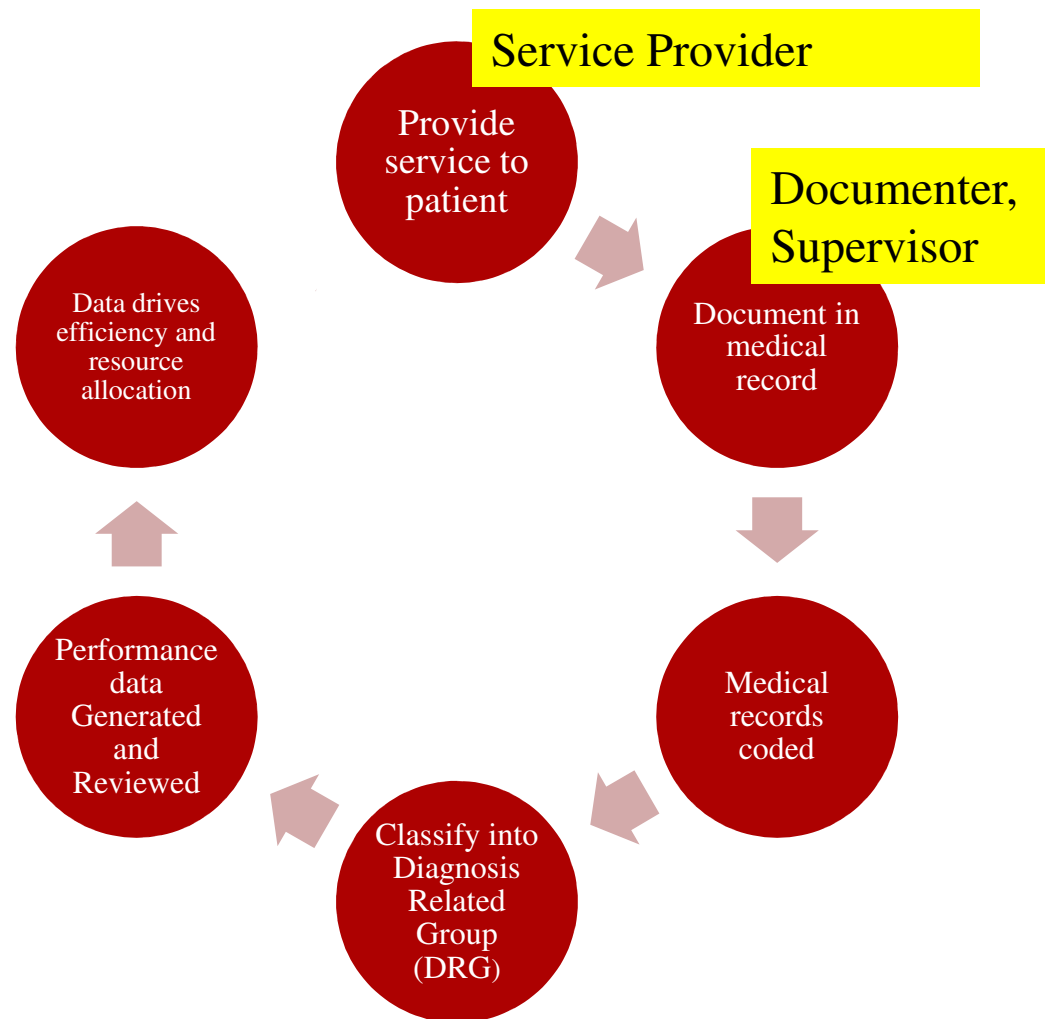
Roles of the clinician

Complexity
varies

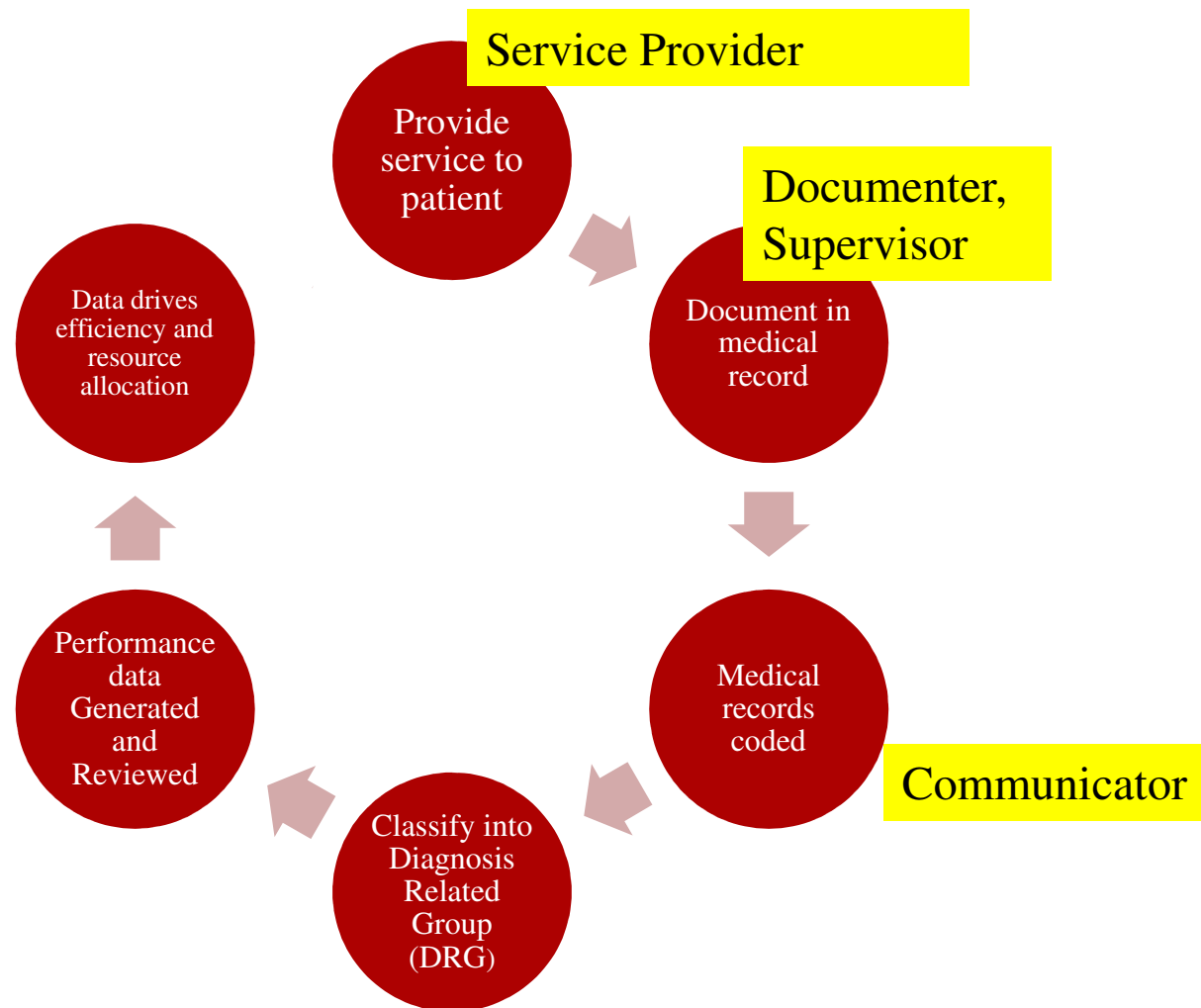


	No. of codes		Volume
Lower limb	103		20,466
Upper limb	84		12,397
Spine	19		1,048
T&O other	26		5,056
Non surgical	17		13,184
	249		52,151

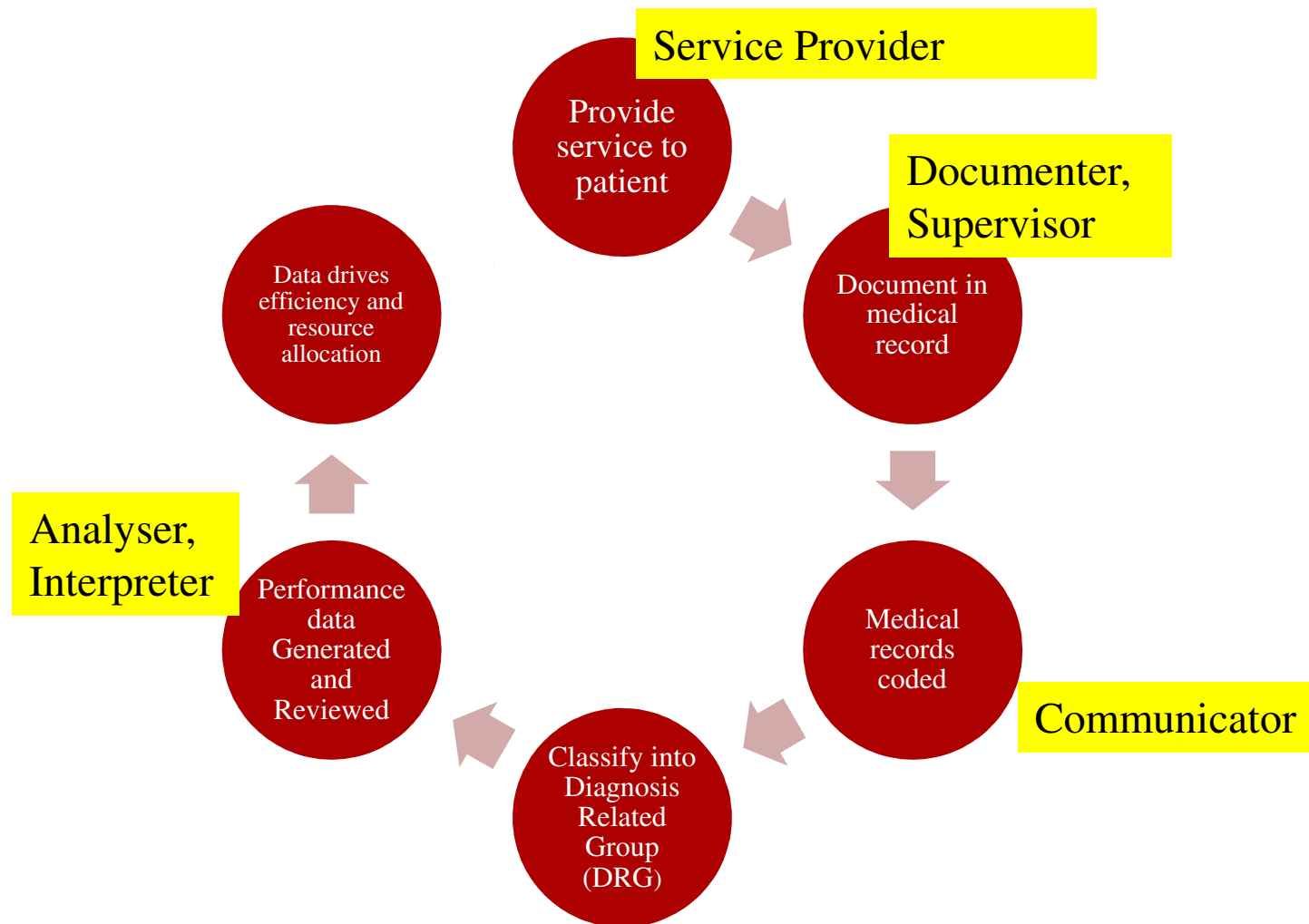
**Procedure codes done
>20 times per year = 249**



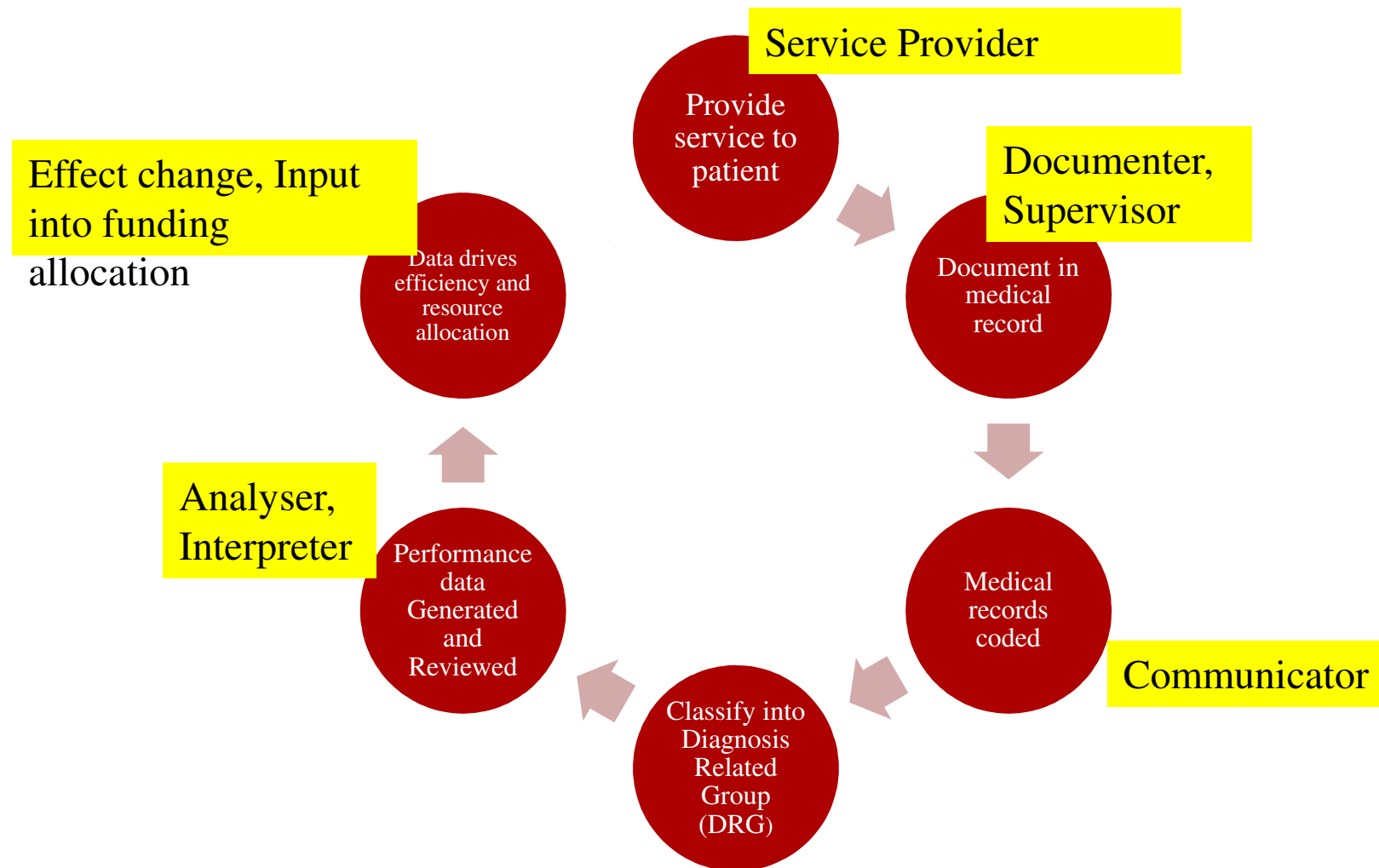
Roles of the clinician




Roles of the clinician



Roles of the clinician



Roles of the clinician

- 
- Prospective funding – hip & knee replacements
 - National Procurement
 - Irish Hip Fracture Database
 - Musculoskeletal Physiotherapy Programme
 - Virtual Fracture Clinics
 - Point of care coding

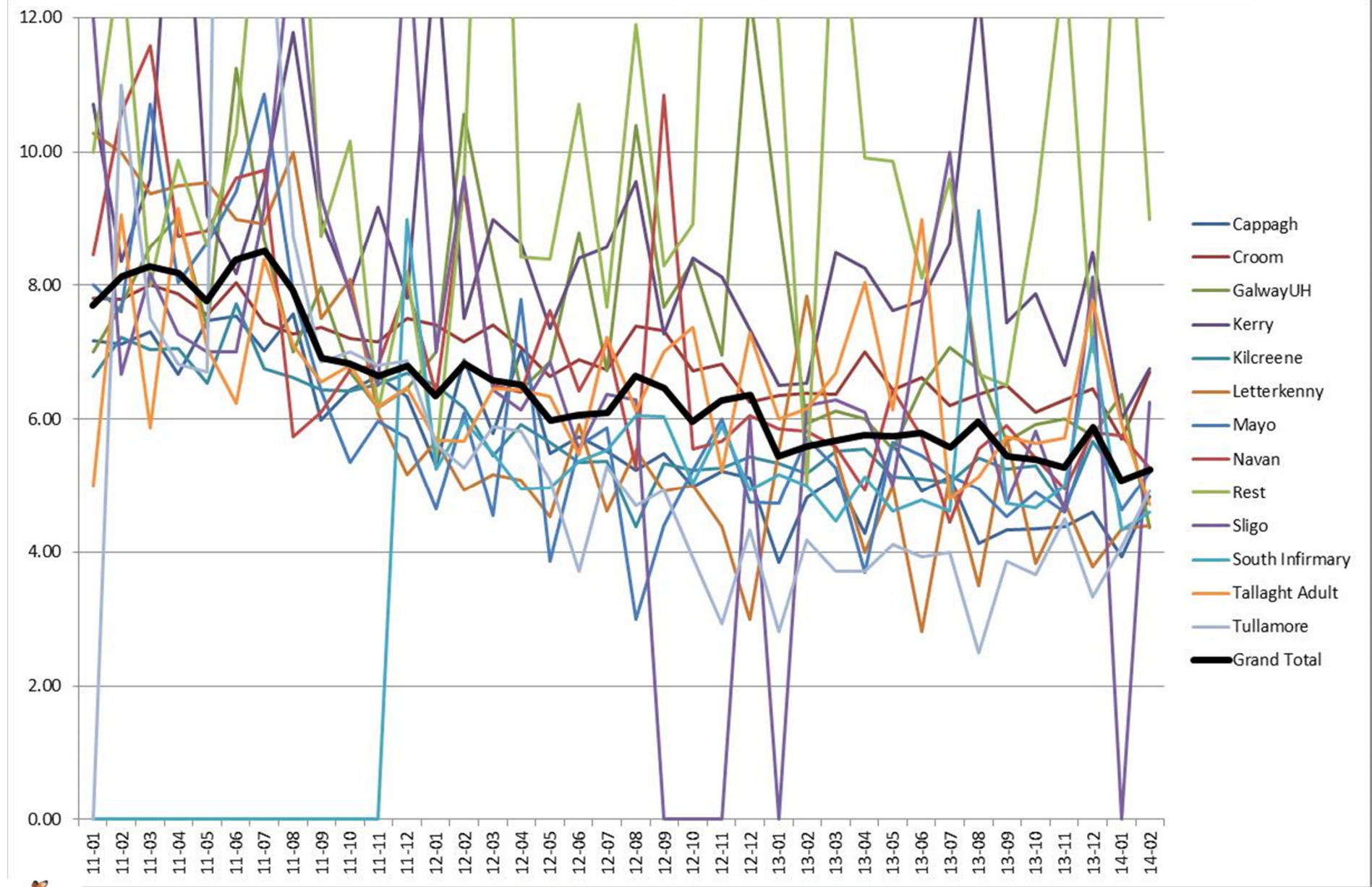
Experience in TOP



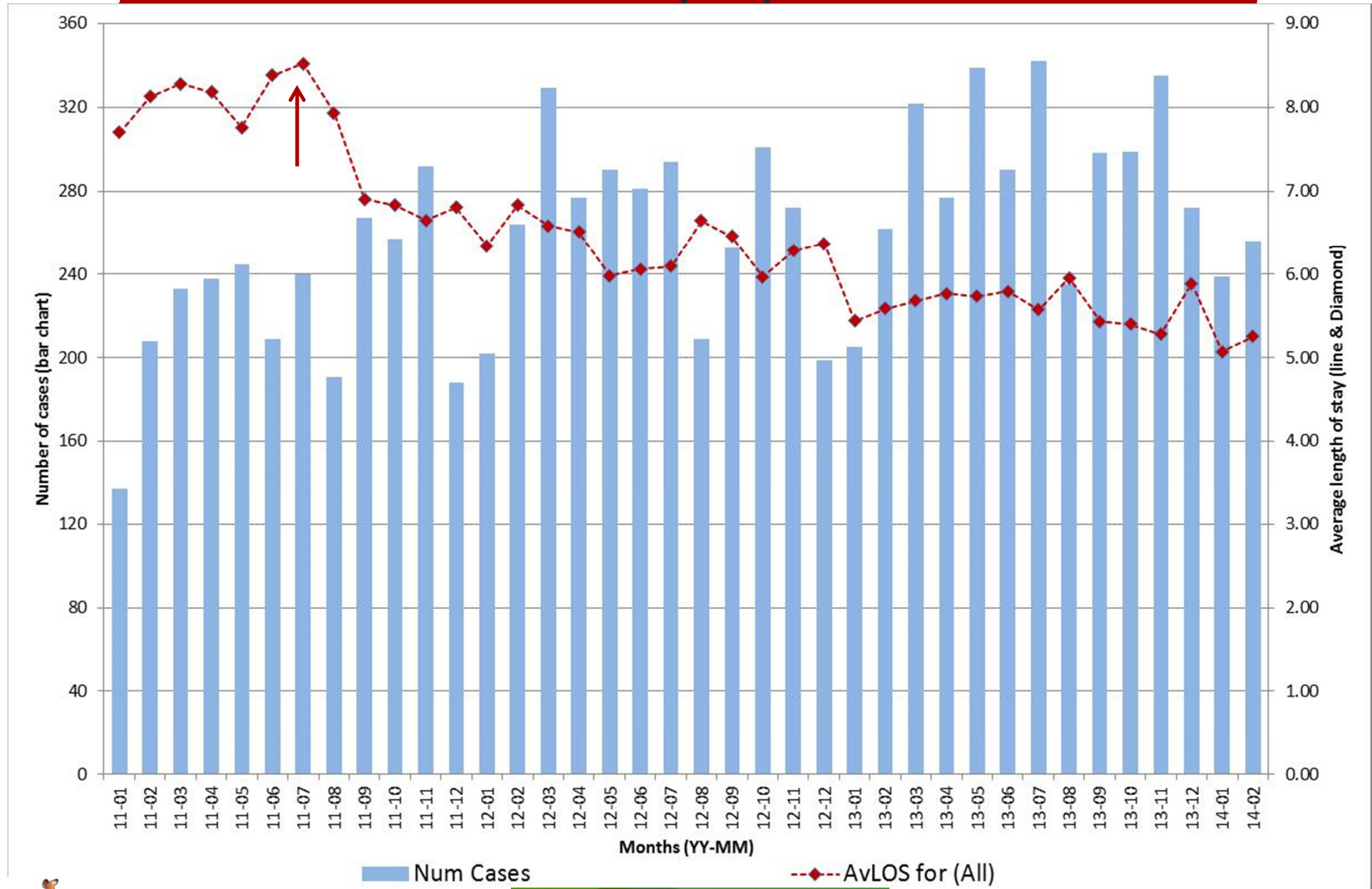
Prospective funding pilot July 2011

- Primary hip and knee replacements
 - Four DRGs
 - Average length of stay
 - Day of surgery admission rates
-

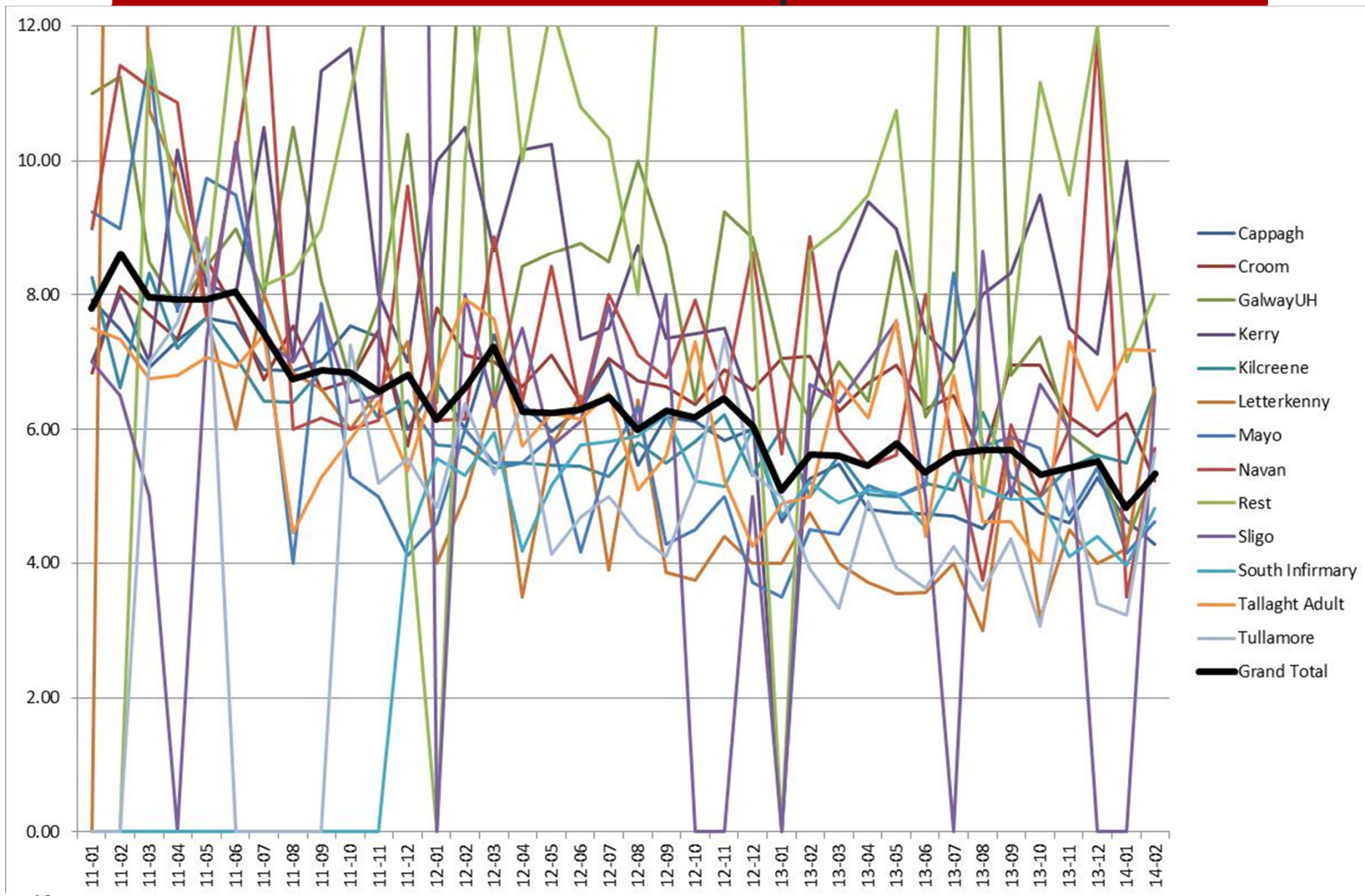
AvLOS for Hip Replacement



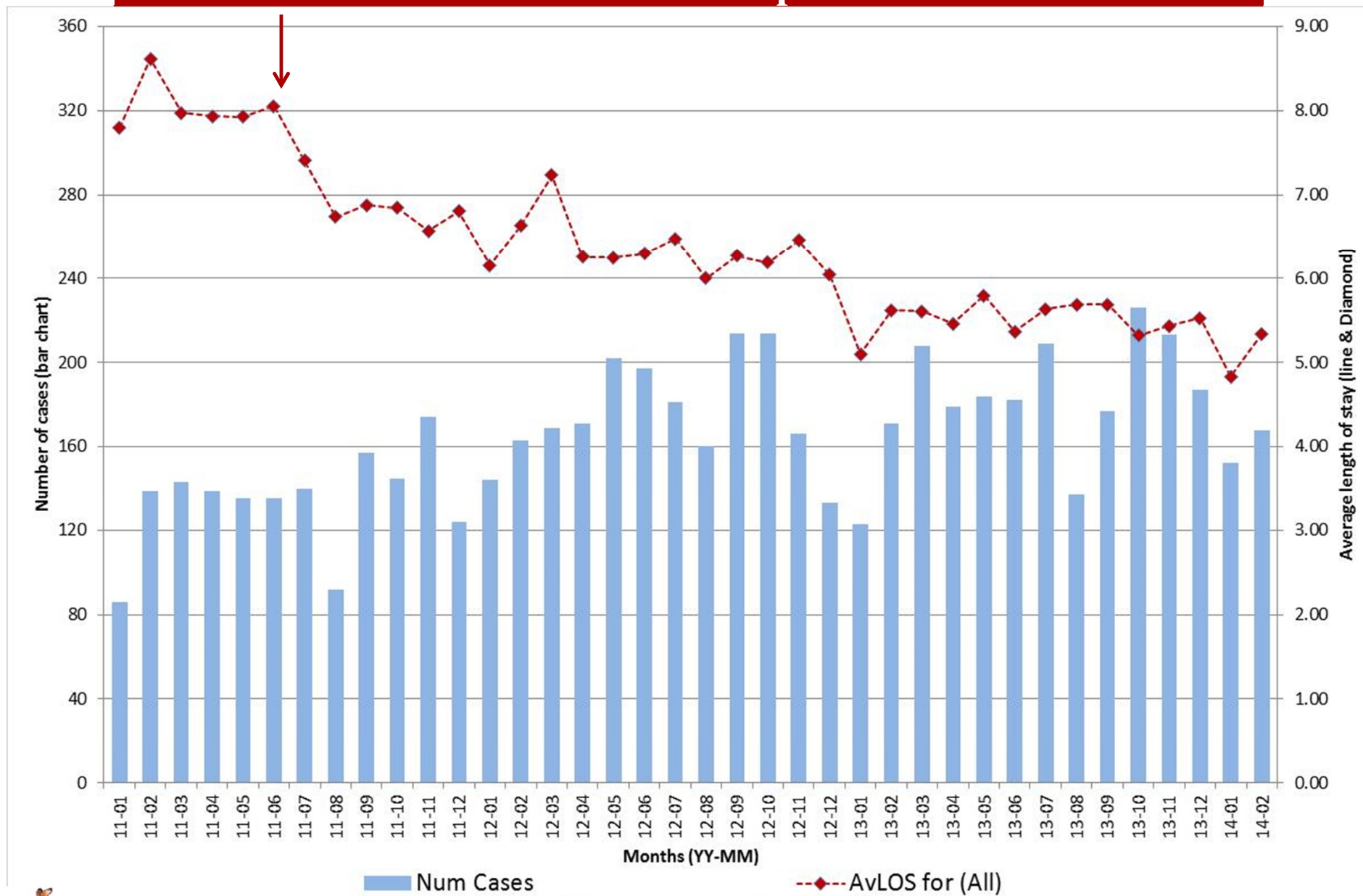
AvLOS for Hip Replacement



AvLOS for Knee Replacement



AvLOS for Knee Replacement



- AvLos decreased
 - THR 8.5 – 5.3
 - TKR 8.0 – 5.2
- DoSA rate improved dramatically (22 – 90%)
- 18,860 more bed days would have been required to deliver the T&O service without the AVLoS reduction and DoSA increase started by the Prospective Funding Pilot
- Reduced AvLos and increased DoSA maintained
- Clinical engagement critical

Bed days saved



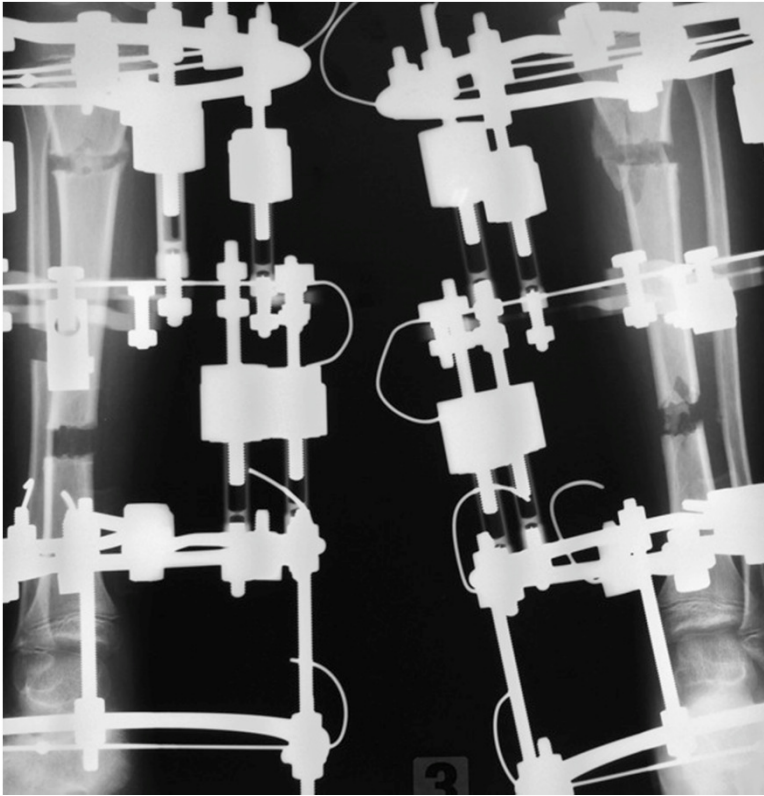
National Procurement

- HSE spends c.€40m p.a. on Trauma and Orthopaedics
- Hips €14.6m
- Knees €9.1m
- Most contracts / supply agreements rolled over beyond original expiry

National Procurement

- Current approach leads to
 - Duplication of effort
 - Lack of standardisation of quality and service support for hospitals
- Differential in commercial arrangements between hospitals
- Issues re compliance with procurement regulations for hospitals
- May 2015– Framework for Primary Hips and Knees published

National Procurement



National Procurement

- Geriatric Medicine
- ESRI
- HIPE
- Measures quality – improved patient care
- All 16 hospitals contributing
- Clinician driven
- Best practice tariff

Irish Hip Fracture Database



Best Practice Tariff Criteria

- **Time to surgery** within 36 hours from arrival in an emergency department, or time of diagnosis if an inpatient, to the start of anaesthesia
 - Involvement of an **(ortho) geriatrician**:
 - Admitted under the **joint care** of a consultant geriatrician and a consultant orthopaedic surgeon
 - **Falls assessment** protocol
-

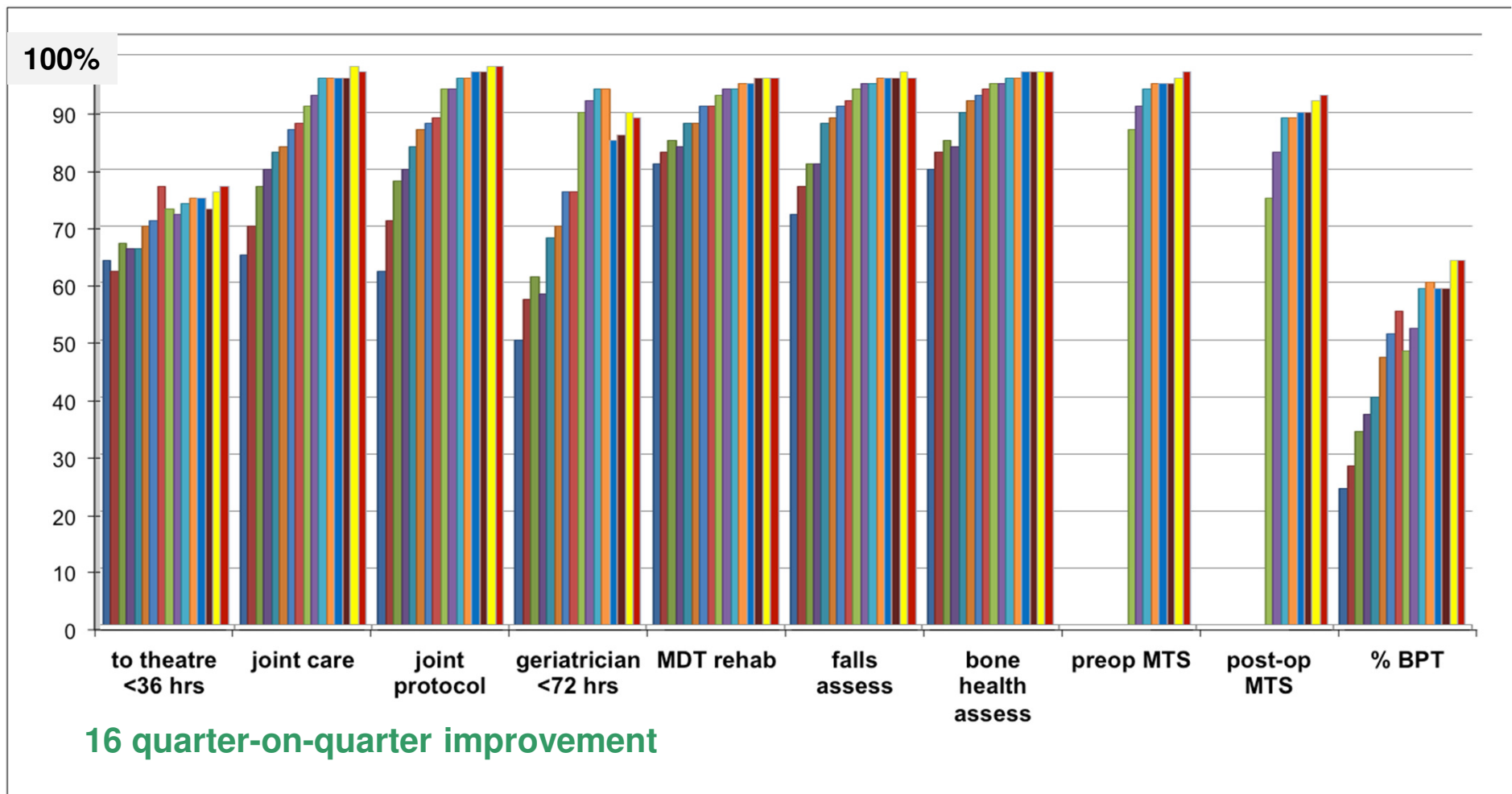


Best Practice Tariff Criteria

- Assessed by a geriatrician in the **perioperative** period (defined as within 72 hours of admission)
 - Postoperative geriatrician-directed
 - **Multi-professional** rehabilitation team
 - **Fracture prevention** assessments (falls and bone health).
-

Improvement in Hip Fracture Care 2010 - 2014

Best Practice Tariff: percentage attained for each criteria; all criteria 24 to 64%



16 quarter-on-quarter improvement

**Admitted under joint geriatric/anaesthetic protocol increased from 64 to 97%;
Surgery within 48 hours rising from 65 to 77% in 36 hours, to 87% in 48hrs;
Seen acutely by a Geriatrician up from 48 to 90%; bone health assessment up 72 to 97%**

To qualify for the best practice tariff, all the criteria must be achieved.

Incentivise quality

Better care is cheaper

Pilot scheme being planned




Best Practice Tariff neck of Femur Fracture

Out-patient clinics Fracture clinic New & review

Adult & paediatric Spinal clinic Urgent & routine



Non admitted patients

- 
- 405,000 patients waiting for out patients
 - 58,000 orthopaedic appointments

Non admitted patients

- T&O and Rheumatology
- Consultant led
- 24 physiotherapists
- 46,000 pts removed from waiting list
 - 80% orthopaedic
- Effective and efficient - 85% discharge rate
 -but
- Increased surgical waiting lists

Musculoskeletal Physiotherapy Programme




MSK Programme Opportunities


- Embed and expand the model
 - Pathway development
 - Advances in Physiotherapist practice
 - Image prescribing
 - Injection Therapy
 - Move towards interface clinics - GP engagement
 - Hospital Groups – governance
-



Virtual Fracture Clinics


- 
- Patient seen in Emergency department
 - Treatment protocols in place
 - Referred to VFC
 - Consultant review of notes and xrays
 - Nurse contact with patient
 - Reduces unnecessary hospital attendances
 - Liberates resources

Virtual Fracture Clinics

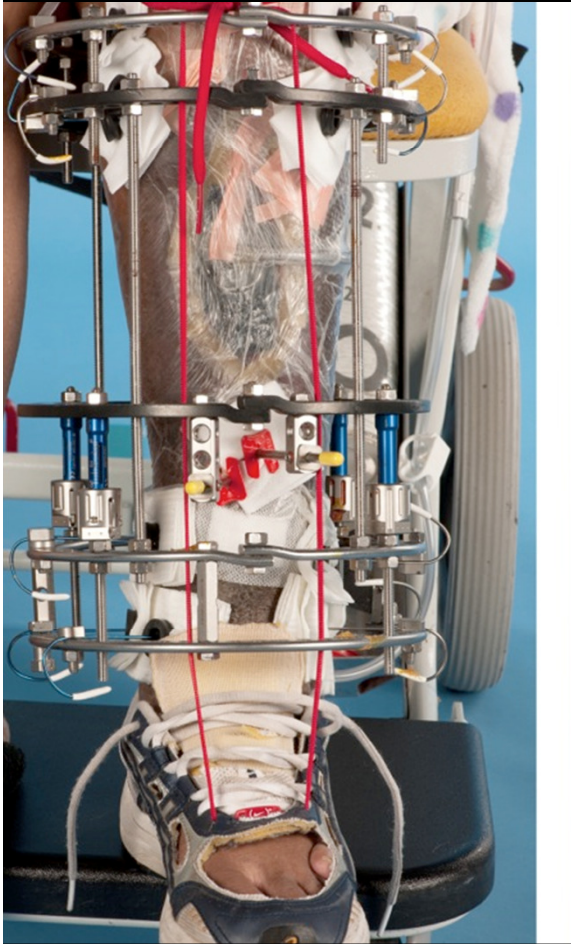
- 
- 4270 patients
 - 2517 patients required face-to-face review
 - Overall rate of ED and VFC discharge was 3802/6385 (60%)
 - Only 34 (0.8%) patients were identified at the VFC as requiring semi-urgent admission for surgery


Virtual Fracture Clinic

Glasgow Royal Infirmary

- 
- Safer clinics
 - New v review appointments
 - Reimbursement / funding metrics
 - Opportunities created
 - Additional operating lists
 - Reduce outpatient waiting lists

Virtual Fracture Clinics



- 
- Day case v Out patient treatment
 - Injection therapy
 - Removal of percutaneous metal
 - Clinician involvement essential to select appropriate procedures in various specialties

Activity Based Funding

Historically in Ireland, some planned procedures that can be done in outpatient settings have been carried out as a day case and captured on HIPE for statistical, reimbursement and other purposes.

As ABF progresses, it should be possible to carry out these procedures in outpatients without incurring any financial penalties or loss of data – regardless of where these procedures are done [they will be reimbursed at the same rate](#).

This process will be facilitated by the new Irish Outpatient Classification System (IOCS) developed by the Healthcare Pricing Office (HPO) in 2014. The classification is based on the Tier 2 clinic used in Australia for classifying and reimbursing outpatient work.

IOCS Clinic Description	IOCS Code
Interventional Imaging	10020
Minor Surgical	10030
Endoscopy – Gastrointestinal	10060
Endoscopy- Orthopaedic	10080
Pain Management Interventions	10140



Point of care coding

	No. of codes		Volume
Lower limb	103		20,466
Upper limb	84		12,397
Spine	19		1,048
T&O other	26		5,056
Non surgical	17		13,184
	249		52,151

**Procedure codes done
>20 times per year = 249**

- ICD-10
 - 19,000 diagnoses, complications & co-morbidities
 - 6,300 procedures
- 1350 orthopaedic and related (plastics / miscellaneous)
- Master T&O manual
 - Region specific
 - Common procedures with associated ICD-10 code
- Circulation to all surgeons and units

Point of care coding


Incentives to treat
high-volume, low-risk
patients over higher-
needs, less predictable
patients

Inappropriate care

Quality of care
implications



Concerns

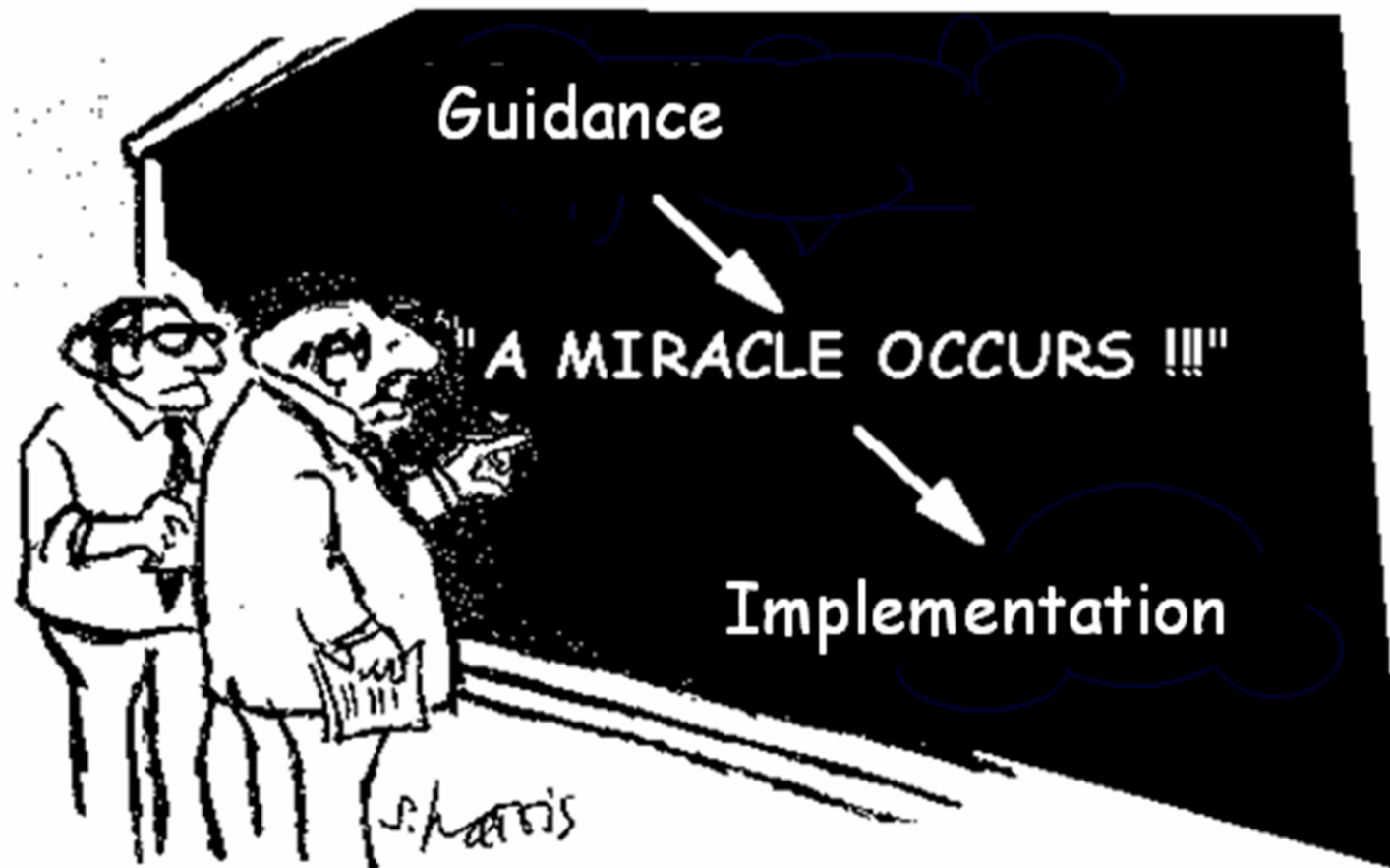
- 
- Lowest ratio of Orthopaedic consultants to population in the Western world
 - Over Activity Based Funding
 - Historically stagnant waiting lists persist
 - Recognize urgent requirement to invest in more consultants, nurses and HSCPs

Concerns





The future



I think you should be more explicit here in step two." —



Raise awareness

Clinician engagement
essential

Education initiatives

Budgetary involvement

Balance service delivery
with teaching and
research

Audit the process



The future

Best Clinical Practice

- Patient centred →
- Evidence based →
- Equitable →
- Easily accessible →
- Efficient, Benchmark →
- Evolving →

ABF

- Individual patient data
- Improved coding and data
- Transparent funding allocation
- Reduces waiting lists
- Investigation of cost variation
- Learn and improve from inefficiencies

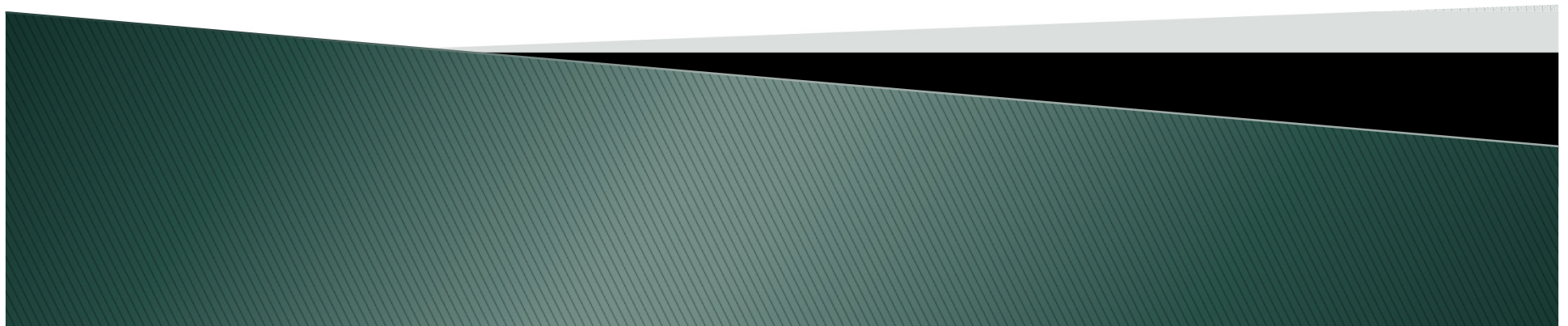
Best clinical practice and ABF in harmony





Chart Documentation & HIPE Coding

Jacqui Curley & Mark O'Connor
Healthcare Pricing Office



How a Chart gets Coded



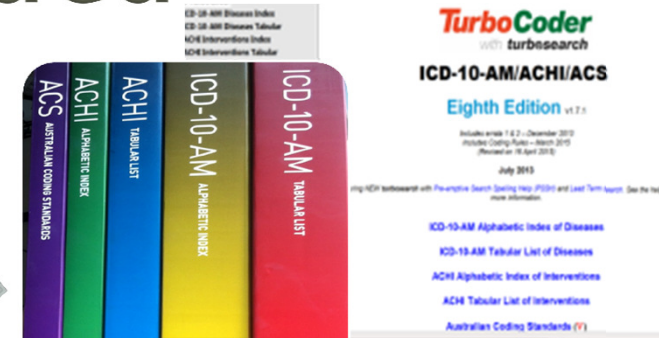
Chart

- Accuracy
- Complete
- Summary
- Chart Flow
- PAS data



Analysis of Entire Chart by Trained Clinical Coder

- Clinical Notes
- Discharge Summary
- OP Sheets
- Histology
- X ray report



ICD-10-AM/

ACHI/ACS 8th Edition

- 16,708 Dx Codes
- 6,362 Intervention Codes
- Guidelines
- HIPE Collects per Case up to
 - P Dx & 29 additional
 - P Proc & 19 additional
- PAS data

HEALTHCARE
PRICING
OFFICE

Partnership

Trained clinical coder and clinical staff

- HIPE data is the recording of patient care
- Recognition of clinical practice/complexity
- Accurate and timely information required.



Best Practice

- ▶ Review of entire chart – resource intensive ☑
- ▶ Assign codes in line with National Guidelines ☑
- ▶ Real examples of best practice:
 - Work with clinicians and teams
 - Encourage completion of information
 - Correct use of classification & guidelines
 - Review entire chart
 - Appropriate use of feeds from systems – e.g. theatre/lab
 - Access to information and systems- e.g. histology
 - Flow of information back to clinicians



Importance of clear charts

Soft. Not distended.
Suprapubic tenderness.
Vitals. 99/56 75 bpm
↑ skin turgor. Dry mucous membranes.
Pallor. Dehydrated. Anorexia.
Urine dip. neg.
~~VB PVR scan~~
Check Hb. Oral fluids.
500ml NaCl @ 2 pm if still hypotensive
Page 16 of 16

Why Focus on HIPE?

► Inputs

- Fully staffed HIPE
- Fully trained HIPE
- DIT certification
- Clinician Involvement
- Utilise rich data
- Complete documentation
- Local support
- Data quality review
- **Timely Accurate Data**

Outputs

- Quality data
- Accurate complexity
- Up-to-Date
- Expertise
- Understanding of role of HIPE/ABF

Patient care &
Planning and
provision of
healthcare

What is a DRG

- ▶ Diagnosis Related Group (DRG)
 - Clinically-similar diagnoses and procedures are grouped together
 - They consume similar amounts of resources
- ▶ 1.6 million patients – 698 DRGs for inpatients (and 350 for day-cases)
 - Makes analysis and comparison feasible and meaningful
- ▶ Use for clinical purposes – identify clinical variations
 - Average length of stay
 - Diagnoses and procedures
- ▶ Use for funding – identify cost variations
 - Medical, nursing, theatre, diagnostic costs

1.6 million episodes

698 DRGs



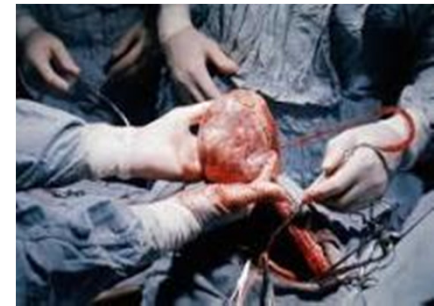
Dialysis
170,000
patients



Normal delivery
50,000
patients



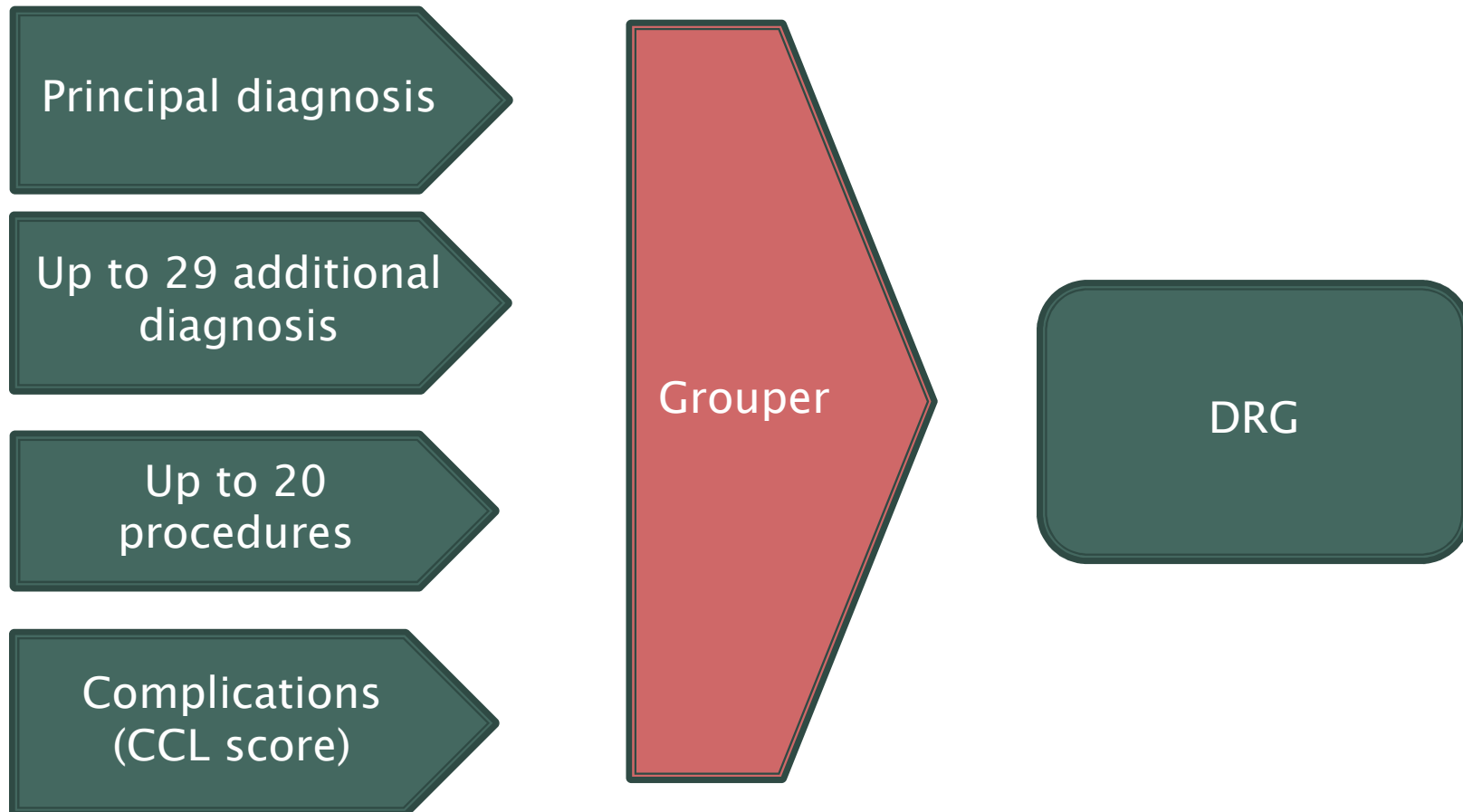
Knee
replacement
2,000
patients



Heart
transplant
10
patients

HEALTHCARE
PRICING
OFFICE

Taking HIPE coding to a DRG



Complexity counts

Age 82 years – length of stay 51 days		
Principal diagnosis Additional diagnosis	I639 Cerebral infarction unspecified (stroke) I48 Atrial fibrillation and flutter I10 Essential (primary) hypertension	Complexity increasing with additional diagnoses ↓
DRG	B70C Stroke without catastrophic/severe complications/comorbidities	
ABF Price	€5,159	
Principal diagnosis Additional diagnosis	I639 Cerebral infarction unspecified (stroke) I48 Atrial fibrillation and flutter I10 Essential (primary) hypertension G819 Hemiplegia unspecified	
DRG	B70B Stroke with severe complications/comorbidities	
ABF Price	€9,410	
Principal diagnosis Additional diagnosis	I639 Cerebral infarction unspecified (stroke) I48 Atrial fibrillation and flutter I10 Essential (primary) hypertension G819 Hemiplegia unspecified L891 Decubitus ulcer and pressure area	
DRG	B70A Stroke with catastrophic complications/comorbidities	
ABF Price	€23,261	

Complexity increasing with
additional diagnoses
↓

HEALTHCARE
PRICING
OFFICE

Be Specific – Avoid ‘Other’

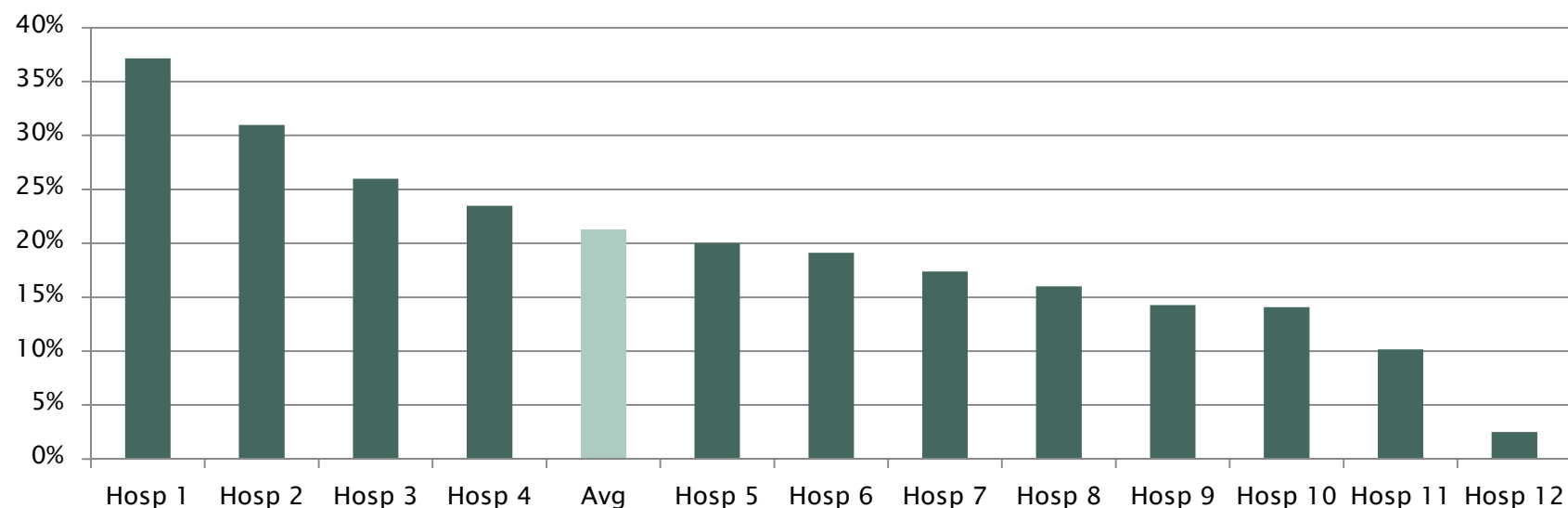
If Principal Diagnosis = J22 Unspecified acute lower respiratory infection			
	DRG E75 applies – “Other respiratory system diagnosis”	Price	2014 discharges
A	With catastrophic complications	€6,375	1,865
B	With serious or major complications	€3,605	5,646
C	Without complications	€2,170	7,687

If Principal Diagnosis = J13 Pneumonia due to Streptococcus pneumoniae			
	DRG E62 applies – “Respiratory infection/inflammation”	Price	2014 discharges
A	With catastrophic complications	€8,683	3,253
B	With serious or major complications	€4,932	4,434
C	Without complications	€2,658	3,812

Difference per case with pneumonia v acute lower respiratory infection		
A	With catastrophic complications	€2,308
B	With serious or major complications	€1,327
C	Without complications	€488

A06 – Artificial ventilation

where A06 cases > 50 in 2014



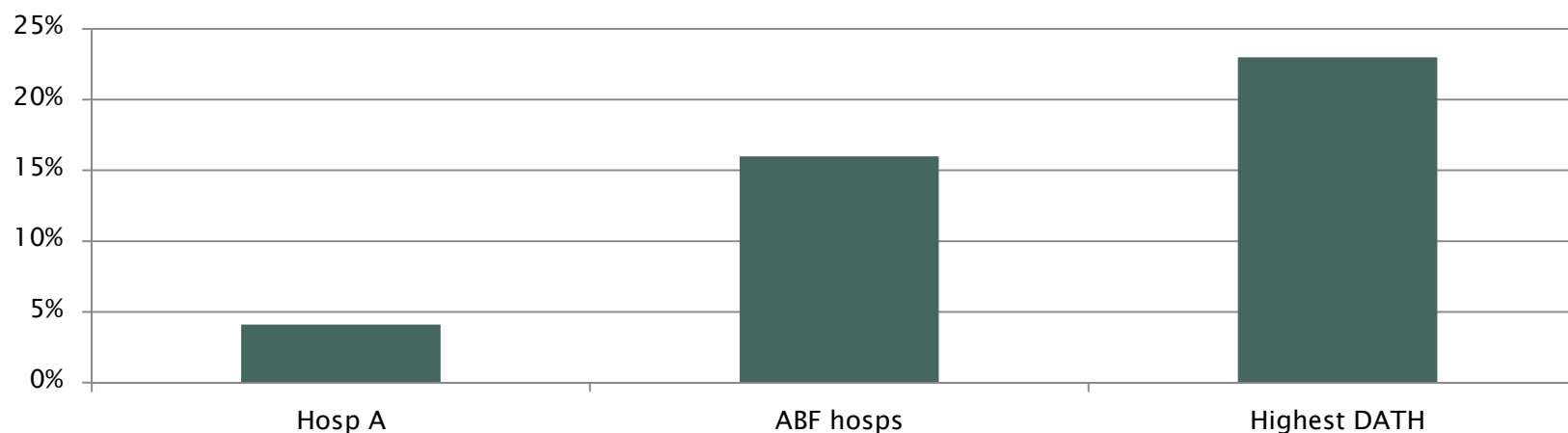
DRG	Description	Price
A06A	Tracheostomy with ventilation > 95 hours with catastrophic complications/comorbidities	€124,082
A06B	Tracheostomy with ventilation > 95 hours without catastrophic complications/comorbidities OR tracheostomy or ventilation > 95 hours with catastrophic complications/comorbidities	€54,440
A06C	Ventilation > 95 hours without catastrophic complications	€29,797
A06D	Tracheostomy without catastrophic complications/comorbidities	€38,166

Case Study

- ▶ Looked at a hospital where low complexity was identified at DRG level
- ▶ Hub hospital so complexity should be average
- ▶ 3 coders lost to long-term sick leave

Case Study: B70 Strokes

B70A – Stroke with catastrophic complication

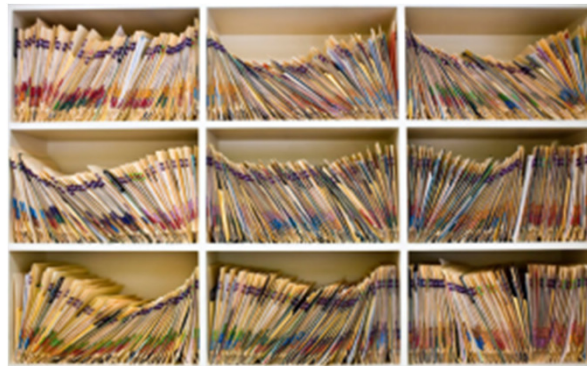


DRG	Description	Price	2014 cases	2014 %	ABF hosps
B70A	Stroke and other cerebral disorder with catastrophic complications/co-morbidities	€23,261	15	4%	16%
B70B	Stroke and other cerebral disorder with serious complications/co-morbidities	€9,410	79	22%	27%
B70C	Stroke and other cerebral disorder without catastrophic or severe complications/co-morbidities	€5,159	226	62%	47%
B70D	Stroke and other cerebral disorder died/transferred within 5 days	€1,707	46	13%	10%
			366	100%	

Case Study

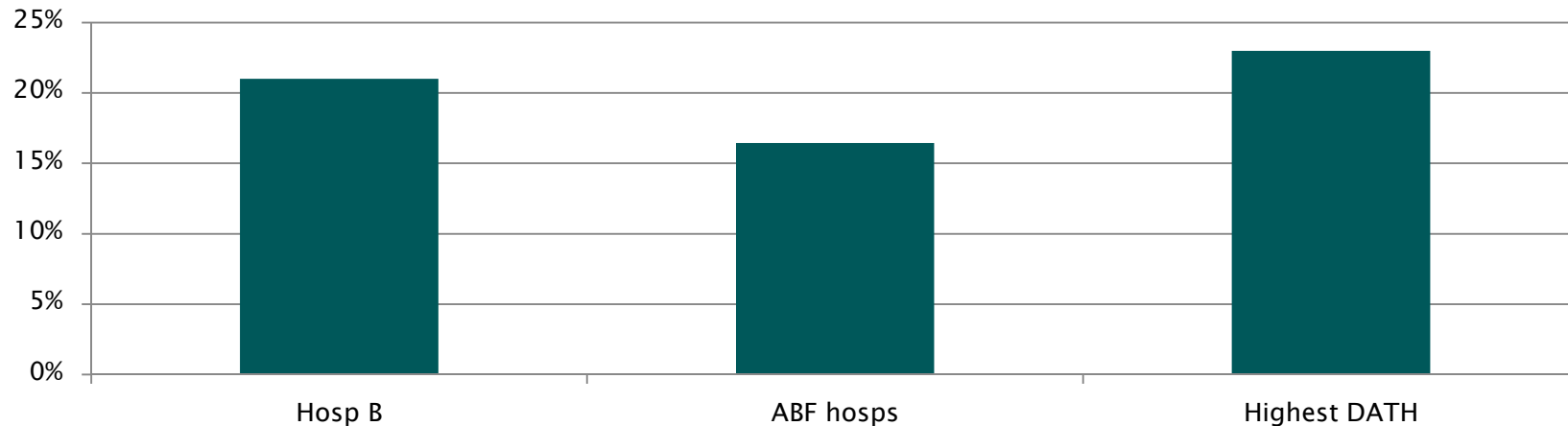
► Hospital Response & Action

- Appointed new HIPE staff – [lead time for training]
- Change in Chart flow
- Relocation of HIPE office
- Education of clinicians, Grand Rounds
- Increased awareness around importance of quality documentation, HIPE coding and ABF implications



Contrasting hospital

B70A – Stroke with catastrophic complication



- ▶ Coding staff experience ranging from 15 years to 22 years
- ▶ Strong relationships established with clinical colleagues
- ▶ Capacity to question and search for in-depth analysis of patient's care

Quality of care is evident in quality of coding

Working together

- ▶ **HIPE Department/Manager**
 - Break out of the office
 - Communication with clinicians
- ▶ **Clinical staff**
 - Understand the importance of clear and complete documentation
 - Partnership with clinical coders in continuous improvement of coded data



Thank You

- ▶ Questions
- ▶ Additional information
- ▶ Contact:

Mark.oconnor@HPO.ie

Jacqui.curley@HPO.ie

Activity-Based Funding Conference 2015

What has happened so far – next steps

28th May 2015

Royal College of Surgeons of Ireland

A decorative graphic at the bottom of the slide consists of a dark green area with a fine diagonal line pattern, a thin black horizontal band, and a light grey horizontal band above it.



Fair Deal

- Went live with client-level billing in 2012
- Explicit price and volume links
- Public Fair Deal beds more accessible





Fair Deal platform

- Platform for commitment of €74m by Government
- Making visible what the health system is delivering for the state's investment





ABF pilot in orthopaedics

- Carried out a pilot in elective orthopaedics during 2011 and 2012
- Small coverage but very significant results
- Length-of-stay reduced
- Day-of-surgery admission increased
- Clinical engagement critical



Orthopaedic Pilot

	From	To	Change	%
Hip Replacement				
ALOS (days)	7.8	6.1	-1.7	-22%
DOSA Rate (%)	22%	58%		+164%
Knee Replacement				
ALOS (days)	7.2	5.8	-1.4	-19%
DOSA Rate (%)	23%	62%		+170%



Moving into acute hospitals

- Vastly more complex than Fair Deal or Orthopaedic pilot
- Removing block grants and creating price/volume budgets
- Major requirement for clinical leadership and direction
- Creating incentives for best-practice and improved outcomes



Mobilisation during 2014

- Clinical engagement sessions held in Dublin, Cork and Galway
- Meetings with clinical leads, hospital groups, individual hospitals, Department of Health, Department of Public Expenditure & Reform
- Presentation at conferences such as NUI Galway, IMSTA, Millin Meeting, Orthopaedic Surgeons, Orthopaedic nurses







HIPE coding transformed

- HIPE coding was typically 90+ days in arrears [requirement to use BIU data for publication]
- Viewed as a 'back-room' activity
- Many complaints about the quality of the data
- Absence of partnership between clinical coders and clinicians
- Currently over 98% of cases are now coded within 30 days of the period end
- Plan to migrate from BIU data to HIPE data for published reporting



Next Steps

- Benchmarking each hospital against national average prices for their range of work
- Understanding why hospitals may be spending more than the average for a DRG
- Quality of HIPE coding
- Quality of costing for ABF work
- Impact of Agency Staff
- Structural issues



Collaborative Approach

- Working with hospital CFOs on the benchmarking
- Working with the Clinical Programmes to develop early examples of how we can incentivise best-care
- Implementing Patient-Level Costing Software in hospitals
- Retention of 'Pavillion Health' to run a national HIPE Audit



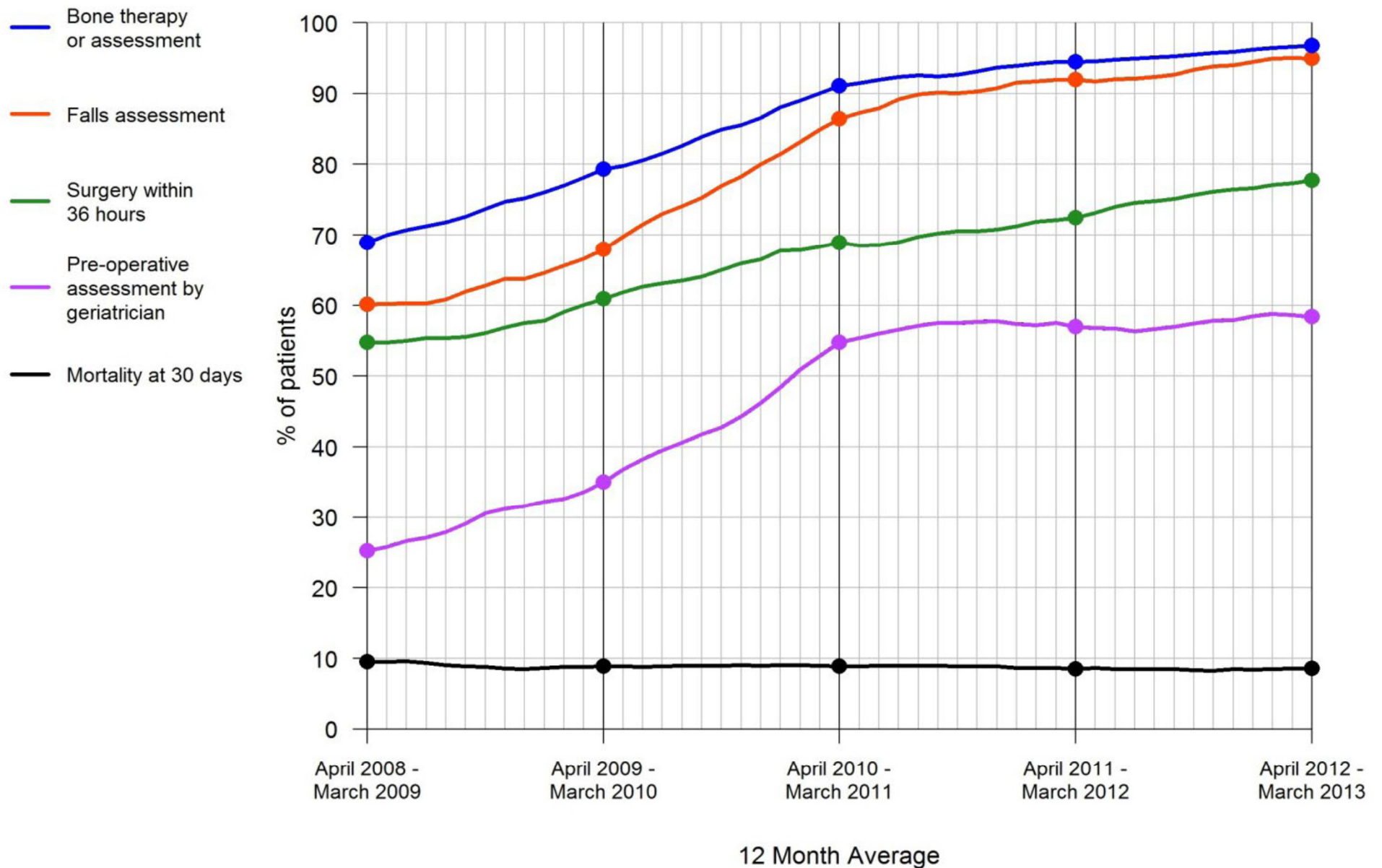
Driving clinical practice

- How do we use ABF to incentivise best-practice ?
- +30% of patients with hip fracture die within 12 months
- Many are over 90 years of age
- HIPE/Orthopaedics have developed a ‘portal’ with a detailed data-set on fractures
- Key criteria such as pre-op assessment by a geriatrician



Driving Clinical Practice

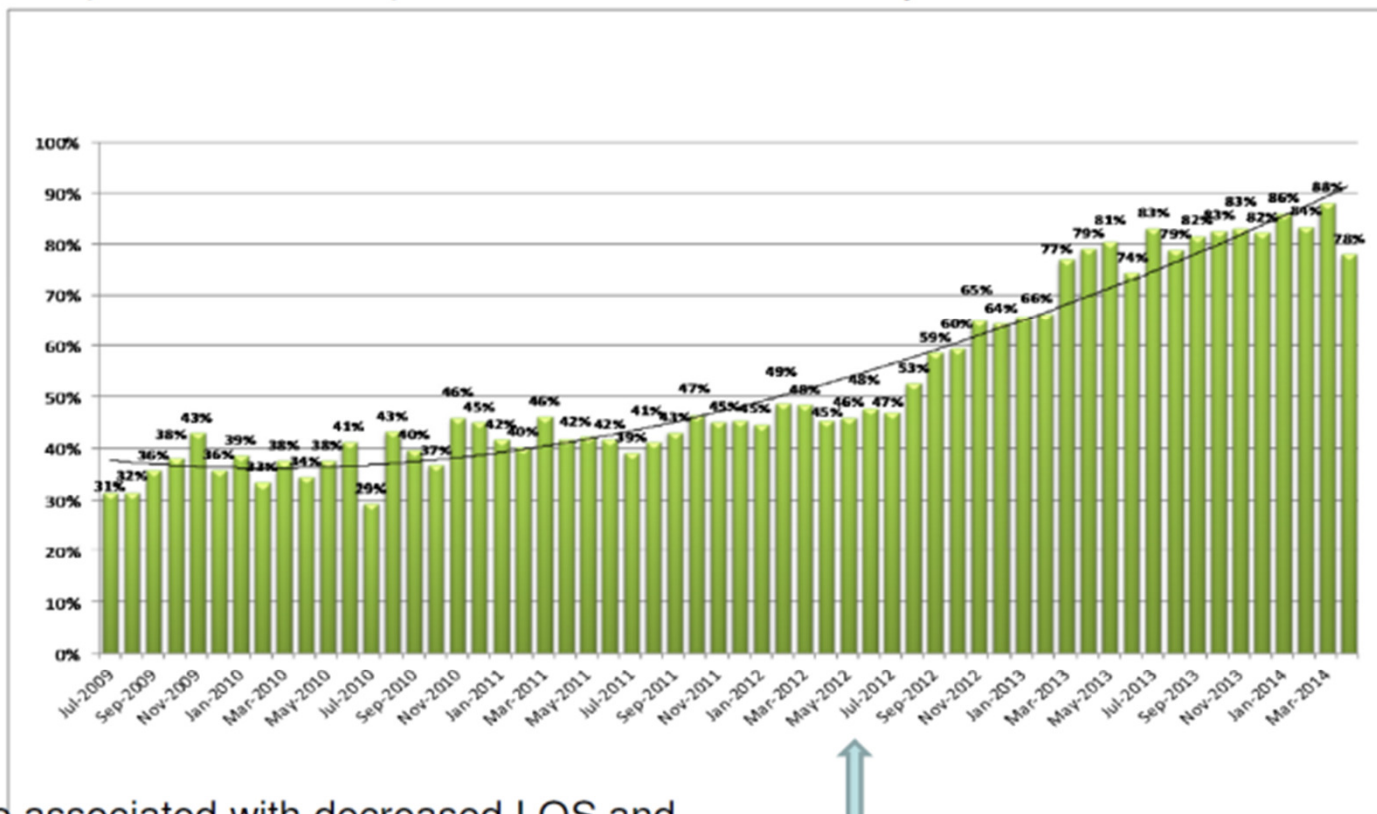
- Time-to-theatre critical
- There are almost the full 3,000 fractures now up and running in the dataset
- We can assess how many are meeting the criteria (or 75% for example of the criteria)
- We can pay a Quality Incentive Payment or a 'Tariff Uplift' for those cases



Data taken from 46794 patients from 27 hospitals with good data completion and case ascertainment over the period 1st April 2008 - 31st March 2013

Impact of incentives: example QIP Stroke Unit Care

Proportion of stroke patients in Stroke Unit bed by month



Also associated with decreased LOS and cost equating to around \$1m saving p.a.

Introduction of QIP



Hospital Avoidance

- Many initiatives in hospitals prevent admission to inpatient care
- Emergency physicians make a significant contribution to keeping hospital beds clear
- Medical Assessment Units with senior decision-makers send people home
- None of this activity is recorded on HIPE
- Hospital avoidance has to be addressed



2016 Service Plan using ABF

- Need assessment gives the health system a sense of the volume of work which can be anticipated
- Demographic trends, chronic conditions, acceptable wait times
- Negotiate with funders for resource
- Model how much work can fit within the 'envelope' of funding
- Weighted units linked with money



Paying the average price

- Not a ‘race to the bottom’
- Zero harm to patients
- Prices must reflect the appropriate staffing level to deliver safe care
- Surgical wound infections per 1,000
- 3rd and 4th degree tears



Group/Hospital Actions

- Hospital management and clinicians need to examine their own data and compare it to peers
- Improve the quality of your own data and use it
- Length-of-stay is a good place to start
- Qlikview allows easy access to HIPE-coded data



Money Follows The Patient Monthly Report

MFTP Target V Reported - Hospital Summary

hospital	Month	ptype	Target Cases	Reported Cases	nCases Variance	Baseline CMU	Reported CMU	CMU Variance	Baseline Value	Reported Value	Value Variance	35% Variance	%
Total			25,456			NA			55,142,687			-	
	Total		25,456			NA			55,142,687			-	
	Remainder of...		23,192			NA			50,555,088			-	
Hospital 997	Total		2,264	1,601	-663	NA	NA	-	4,587,599	3,618,577	-969,022	-339,156	
	January	Daycase	1,327	757	-570	2,107	1,066	-1,040	1,243,341	629,259	-614,082	-214,925	
		Overnight	762	683	-79	777	697	-80	3,287,273	2,947,861	-339,413	-118,794	
		Sameday	175	161	-14	13	10	-4	56,985	41,457	-15,528	-5,435	

Search and filter options

Search By Hospi...
Hospital 997

Discharge Status

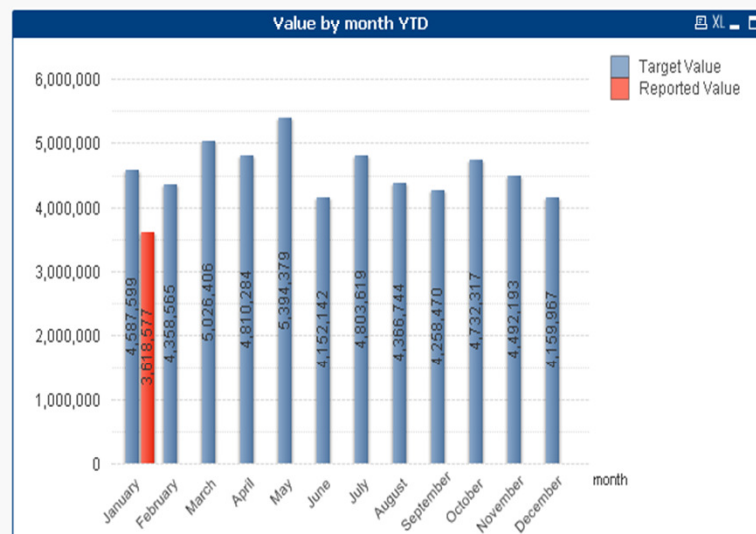
Private 5091
Public 23575

Filter options

Admtype
adrg
Casemix
Dayinp
drg
mdc
month

Search

Current Selections

hospital Hospital 997
Casemix 1
uncoded 0

Cumulative Value YTD

Variance

Value: Variance and 35% shortfall

Month	Variance	35% of shortfall	Estimated Value Uncoded
YTD	-969,022	-339,158	
January	-969,022	-339,158	-1,451



Money Follows The Patient Monthly Report

MFTP Baseline - Hospital Summary

hospital	ptype	Baseline Ncases	Baseline CMU	Baseline Value
Total		25,456		55,142,687
	Total	25,456		55,142,687
	Daycase	14,562	23,078.828	13,622,039
Hospital 997	Overnight	9,195	9,674.663	40,937,067
	Sameday	1,699	137.918	583,581

Search and filter options

Search By Hospi...

Hospital 997

Discharge Status

Private 5091
Public 23575

Filter options

Admtype
adrg
Casemix
Dayinp
drg
mdc
month

Search

Current Selections

hospital Hospital 997
Casemix 1
uncoded 0

MFTP Baseline - Inpatients

MFTP Baseline - Hospital Summary

hospital	mdc	Baseline Inpatie...	Baseline Inpatient CMU	Baseline Inpatient Value
Total		10,894	9,812.58	41,520,648
Hospital 997		10,894	9,812.58	41,520,648

MFTP Baseline - Hospital Summary

MFTP Baseline - Inpatients MDC

MFTP Baseline - Inpatients - DRG

MFTP Baseline - Hospital Summary - Daycases

hospital	Daycase Ncases	Daycase CMU	Daycase Value
Total	14,562	23,078.83	13,622,039
Hospital 997	14,562	23,078.83	13,622,039

Excluded Cases

hospital	YrType	mftp_ex_reason	Excluded Cases
			211
Hospital 997	BaselinePeriod	NTPF	211



Thank You