Day Surgery, Short Stay Surgery, Fast Track – What have we Accomplished ?

Effective and Safe Pathways

Doug McWhinnie
Past President 2008-10
British Association of Day Surgery
Helsinki November 2012

Excellence in short stay surgery

Unintended Consequences

Unintended Consequences

How Do We Measure Success in Ambulatory Surgery?

Key Performance Indicators

- Unplanned overnight admissions
- Re-admission rates
- Post-operative GP visits
- Length of stay
- Satisfaction questionnaires
- Index Procedures

Mattila K et al. Day Surgery in Finland: a prospective cohort study of 14 day-surgery units
Acta Anaesthesiol Scand 2009 53(4):455-63
Lemos P, Barros F. Outcome Measures
In: Day Case Surgery (Eds Smith I, McWhinnie D, Jackson)
pp335-43 OUP Oxford 2012

Audit Commission Basket of Procedures 1990

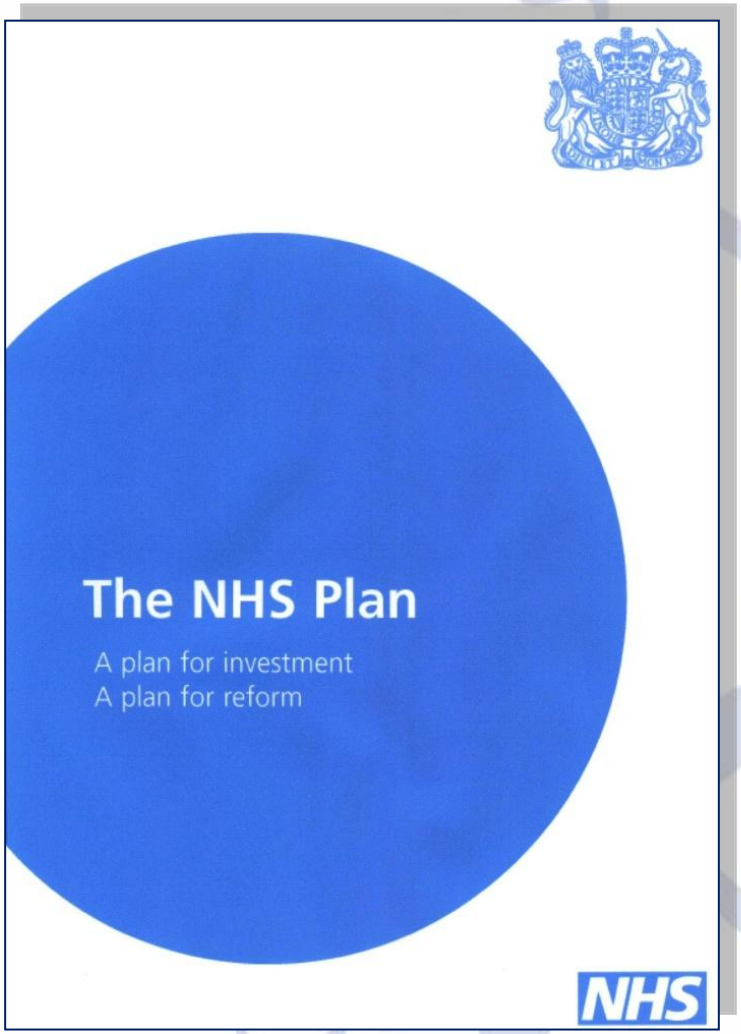
Inguinal Hernia Repair
Excision Breast Lump
Anal Fissure Excision
Varicose Vein Surgery
Cystoscopy
Circumcision
Excision of Dupuytren's Contracture
Carpal Tunnel Decompression
Arthroscopy
Excision of Ganglion

Cataract Extraction
Squint Correction
Myringotomy
Sub Mucus Resection
Reduction of Nasal Fractures
Bat Ear Correction
D&C
Laparoscopy+/- Sterilisation
Termination of Pregnancy
Orchidopexy

Audit Commission's Basket of Procedures 2000

- Cataract Extraction
- Excision Breast Lump
- Carpal Tunnel Decompression
- Bat Ears
- R/O Metalwork
- Bunion Operations
- Laparoscopy
- Tonsillectomy
- TURBT
- Squint Correction
- Orchidopexy
- Anal Fissure
- D&C / Hysteroscopy
- Nasal Fractures
- Myringotomy
- Laparoscopic Cholecystectomy
- Excision of Ganglion
- Hernia Repair
- Varicose Veins
- Dupuytren's Contracture
- Haemorrhoidectomy
- Circumcision
- Arthroscopy
- SMR
- Termination of pregnancy

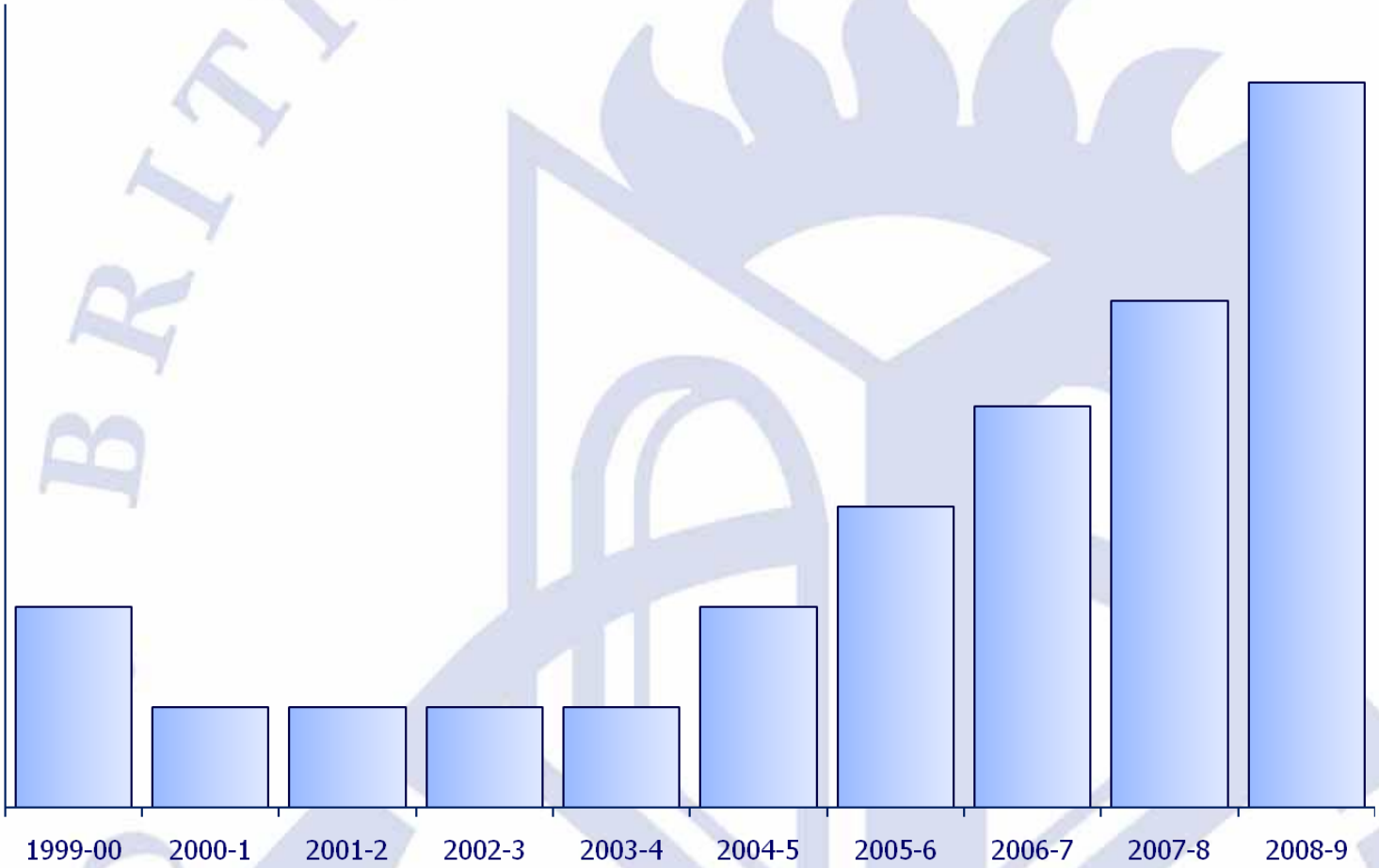
75% of elective procedures to be performed on a day case basis by 2005/6



Tony Blair

White Paper, 2000

"The NHS Plan envisages that 75% of all Elective Surgery will be carried out as a day case in the near future"



But……

These data include 'diagnostics' and non-surgical interventions

Endoscopy

- Bronchoscopy
- Colonoscopy
- Cystoscopy
- OGD
- Sigmoidoscopy

Out-Patients

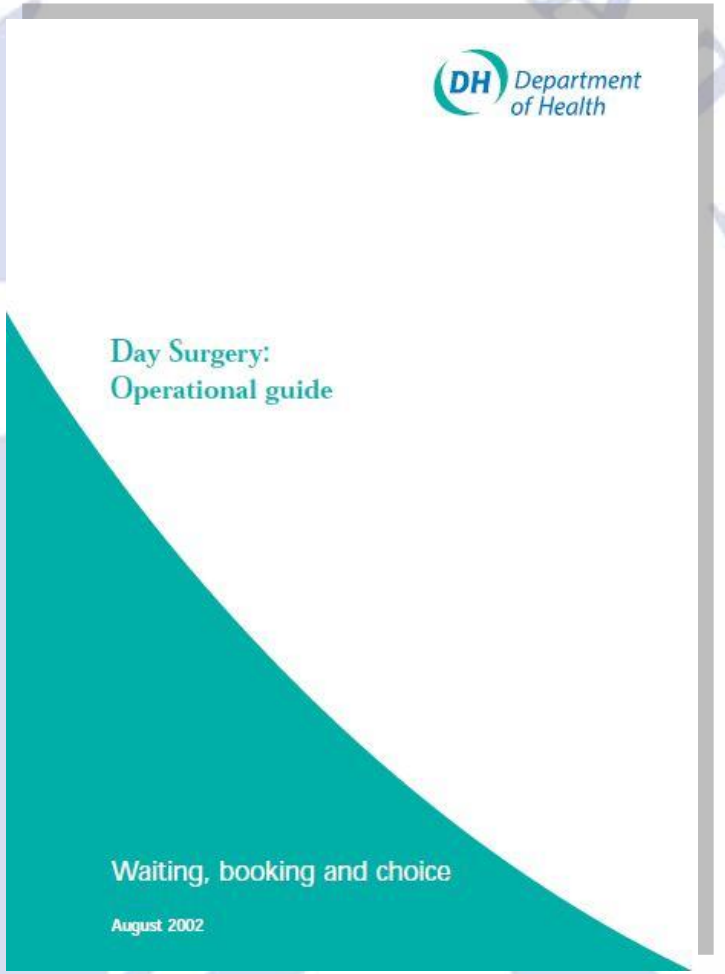
- Blood Transfusion
- Chemotherapy
- Colposcopy
- Hysteroscopy
- Pain Management
- Urodynamic Tests

"The NHS Plan envisages that 75% of all Elective Surgery will be carried out as a day case in the near future"

Definition: "near future" = 2032

Day Surgery Pathway

"Day surgery is the admission of *selected* patients to hospital for a *planned* surgical procedure, returning home on the same day.



Day Surgery:Operational Guide. DoH, London,2002

23 Hour Surgery

Ambulatory Surgery:

" any patient treated in a designated facility by designated staff, and discharged, within 24 hours of admission"

Jackson, I. & McWhinnie, D.
J. One-Day Surgery 2002; 12:5

23 Hour and Short Stay Case Mix

- Co-factor exclusion from day surgery
- New day surgery procedures
- Emerging surgical procedures
- Inpatient conversion to 23 hr stay

Varicose Vein Surgery

	1998	1999
	Pre - 23 hr	Post - 23 hr
Day Surgery	56%	31%
23hr	-	59%
In-patient	44%	10%

Problems with index procedures "Basket Problems"

- Only 12% of Hospitals perform >75% of the basket
- Tonsils vs Cataracts
- The Basket represents only 30% of all Day Surgery activity
- No recognition of the Short Stay Pathway
- No recognition for innovation

Short Stay Equation

Scenario I

- 100 Laparoscopic Cholecystectomies
  - 50 Day Cases
  - 30 Overnight Admission
  - 20 Two Night Admission
- Total **70** Inpatient Bed Days

Scenario II

- 100 Laparoscopic Cholecystectomies
  - 40 Day Cases
  - 50 Overnight Admission
  - 10 Two Night Admission

* Total **60** Inpatient Bed Days

Day Case Nephrectomy

Day Case Surgery is World First

Without realising it until after the event, one of our surgeons recently performed the world's first laparoscopic nephrectomy (the removal of a kidney by keyhole surgery) as a day case operation.

Photograph courtesy of The Sentinel

The keyhole operation was first performed in 1991 and has since become common practice, but has normally involved a two or three day stay in hospital. On this occasion, however, the operation went very well as normal, but the patient recovered so quickly and was so keen to go home the same day that the surgeon, Anurag Golash, agreed.

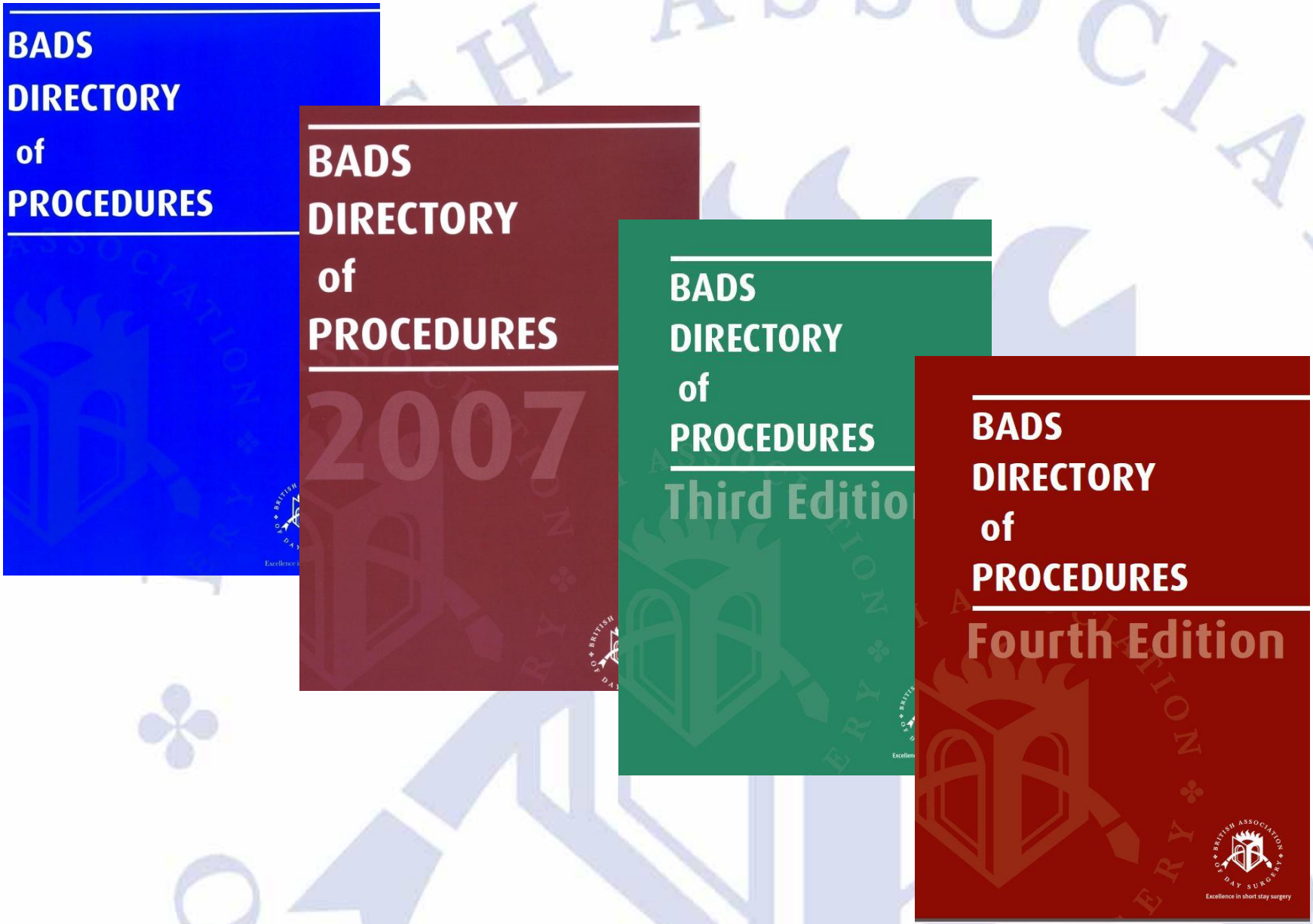
DAY CASE AUDLT TONSILLECTOMY _ IS IT SAFE ?

NHS

King's College Hospital NHS
NHS Foundation Trust

Laparoscopic Gastric Banding for Morbid Obesity in The Day Surgical Setting

MF Dunsire, AG Patel, N Awad, T Whitfield, G Allan, T Livingstone


BADS
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PROCEDURES
Fourth Edition
Excellence in short stay surgery

Surgical Sub-specialties

Breast Surgery
ENT
General Surgery
Gynaecology
Head and Neck Surgery
Ophthalmology
Orthopaedics
Paediatric Surgery
Urology
Vascular
Emergency Surgery
Medical Procedures

10 sub-specialties
> 180 procedures

BADS Directory 4th Edition (2012)

Table 1 **Definition of lengths of stay in Directory**	
Procedure Room	An operation that can be performed in a suitably clean area outside an operating theatre. The varying complexity of such procedures may require the commissioning of a specific environment and equipment beyond the expectation of a standard outpatient room (eg endoscopy or outpatient hysteroscopy suites).
Zero night stay	Patient admission, treatment and discharge occurring on the same calendar day. National definitions of Day Surgery also include the mandate that such care should be intentionally pre-planned.
One night stay	Patient admission, treatment and discharge occurring over two consecutive days.
Two night stay	Patient admission, treatment and discharge occurring over three consecutive days.

General Surgery

Description	Procedure Room	Zero night stay	One night stay	Two night stay	Include						Exclude	
Adrenalectomy – unilateral (laparoscopic)		10	70	20	B22.3 +Y75.2							
Diagnostic laparoscopy		85	15		J09	T43	J73.8	J73.9	J51.8	J51.9	J73.1	J53.1
Laparoscopic cholecystectomy		60	30	10	J18.1 +Y75.2	J18.3 +Y75.2					J18.2	
Laparoscopic splenectomy		5	35	60	J69.2 +Y75.2	J69.3 +Y75.2	J69.8 +Y75.2	J69.9 +Y75.2			J69.1	
Primary repair of inguinal hernia		95	5		T20							
Repair of recurrent inguinal hernia		70	30		T21							
Primary repair of femoral hernia		90	10		T22							
Repair of umbilical hernia		85	15		T24						T24.4	
Laparoscopic repair of incisional hernia		40	50	10	T25 +Y75.2							
Open repair of incisional hernia		30	50	20	T25							
Repair of other abdominal hernia		85	10	5	T27							
Repair of rectal mucosal prolapse		10	50	40	H42.1	H42.5	H42.6	H42.8	H42.9			
Laparoscopic gastric banding		20	45	35	G30.3 +Y75.2							

NHS Reimbursement

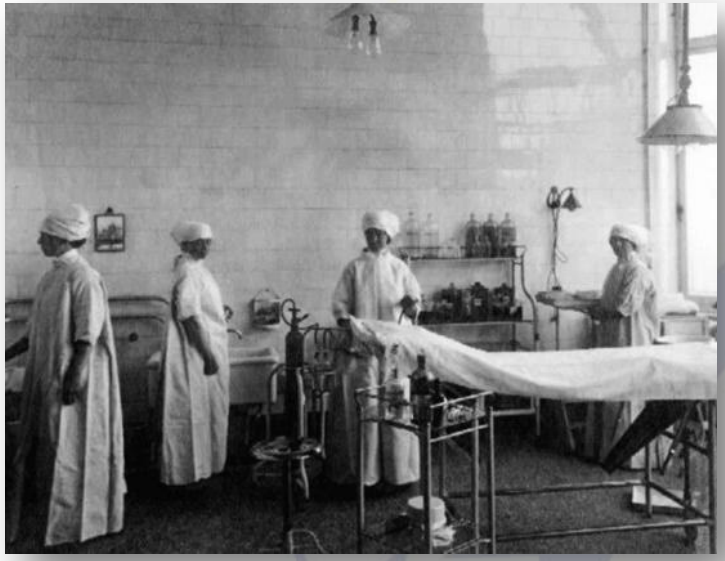
Payment by Results

" Link the allocation of funds to hospitals to the activity they undertake "

"Tariff" introduced 2005/6

What is Tariff?

One payment for an operation funds everything.



How it works – Procedural Codes

Operation

- **OPCS classification (>8900)**
- Cholecystectomy: J18.3
- Laparoscopic: J18.3 + Y75.2

HRG Code

- **GA10C** Open Cholecystectomy without CC
- **GA10D** Laparoscopic Cholecystectomy with length of stay 1 day or more without CC
- **GA10E** Laparoscopic Cholecystectomy with length of stay 0 days without CC
- **GA10F** Open or Laparoscopic Cholecystectomy with CC

How it works – Co-morbidities

CC

- Co-morbidities
- Old myocardial infarction
- Chronic ischaemic heart disease, unspecified
- Atrial fibrillation and flutter
- Chronic obstructive pulmonary disease, unspecified
- Insulin-dependent diabetes mellitus without complications
- Rheumatoid arthritis, unspecified

How it works - Complications

CC

- **Complications**
- Acute laryngopharyngitis
- Hypotension due to drugs
- Cardiac arrhythmia, unspecified
- Volume depletion
- Fluid overload
- Disorientation, unspecified

Tariff – Hernia Repair

2008/9		Elective spell tariff (£)
F73	Inguinal Umbilical or Femoral Hernia Repairs >69 with CC	1,375
F74	Inguinal Umbilical or Femoral Hernia Repairs <69 without CC	1,080

Tariff – Hernia Repair

2008/9

		Elective spell tariff (£)
F73	Inguinal Umbilical or Femoral Hernia Repairs >69 with CC	1,375
F74	Inguinal Umbilical or Femoral Hernia Repairs <69 without CC	1,080

2009/10

		Daycase tariff (£)	Elective spell tariff (£)
FZ18A	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years with Major CC	1,015	1,570
FZ18B	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years with Intermediate CC	1,015	1,539
FZ18C	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years without CC	1,015	1,412

Financial Incentivisation

Four years ago;

Approach to BADS by the NHS PbR Team

"How do we provide appropriate payment for Day Surgery activity?"

- Reduce tariff based on reduced cost?
- No… *Enhance* tariff as a financial incentive

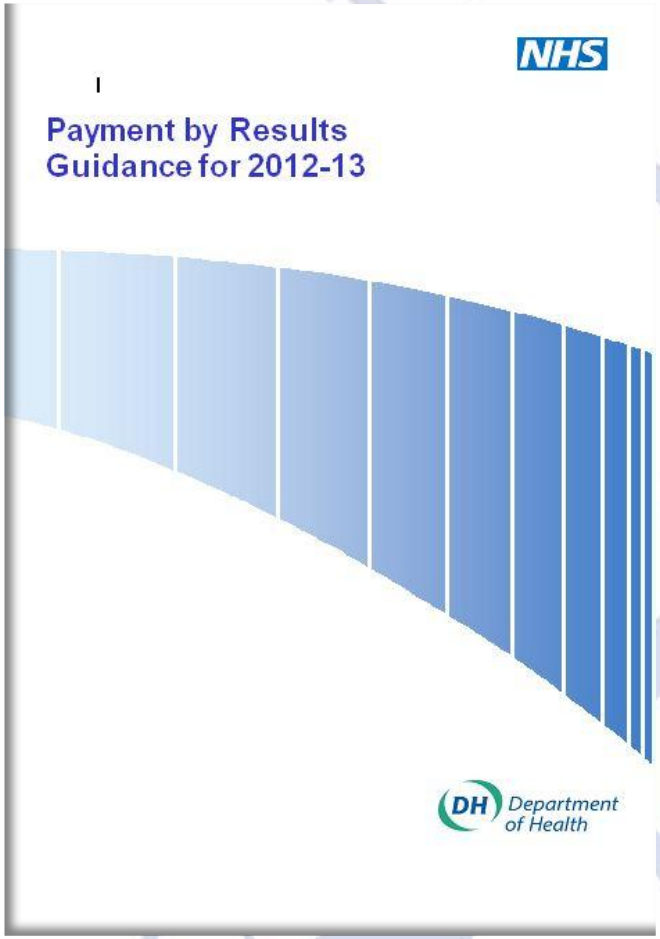
Best Practice Tariff – Hernia Repair

2008/9		Elective spell tariff (£)
F73	Inguinal Umbilical or Femoral Hernia Repairs >69 with CC	1,375
F74	Inguinal Umbilical or Femoral Hernia Repairs <69 without CC	1,080

2009/10		Daycase tariff (£)	Elective spell tariff (£)
FZ18A	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years with Major CC	1,015	1,570
FZ18B	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years with Intermediate CC	1,015	1,539
FZ18C	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years without CC	1,015	1,412

2012/13		Daycase tariff (£)	Elective spell tariff (£)
FZ18A	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years with Major CC	1,638	1,338
FZ18B	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years with Intermediate CC	1,356	1,056
FZ18C	Inguinal Umbilical or Femoral Hernia Repairs ≥19 years without CC	1,136	836

The Development of 'Best Practice' Tariff



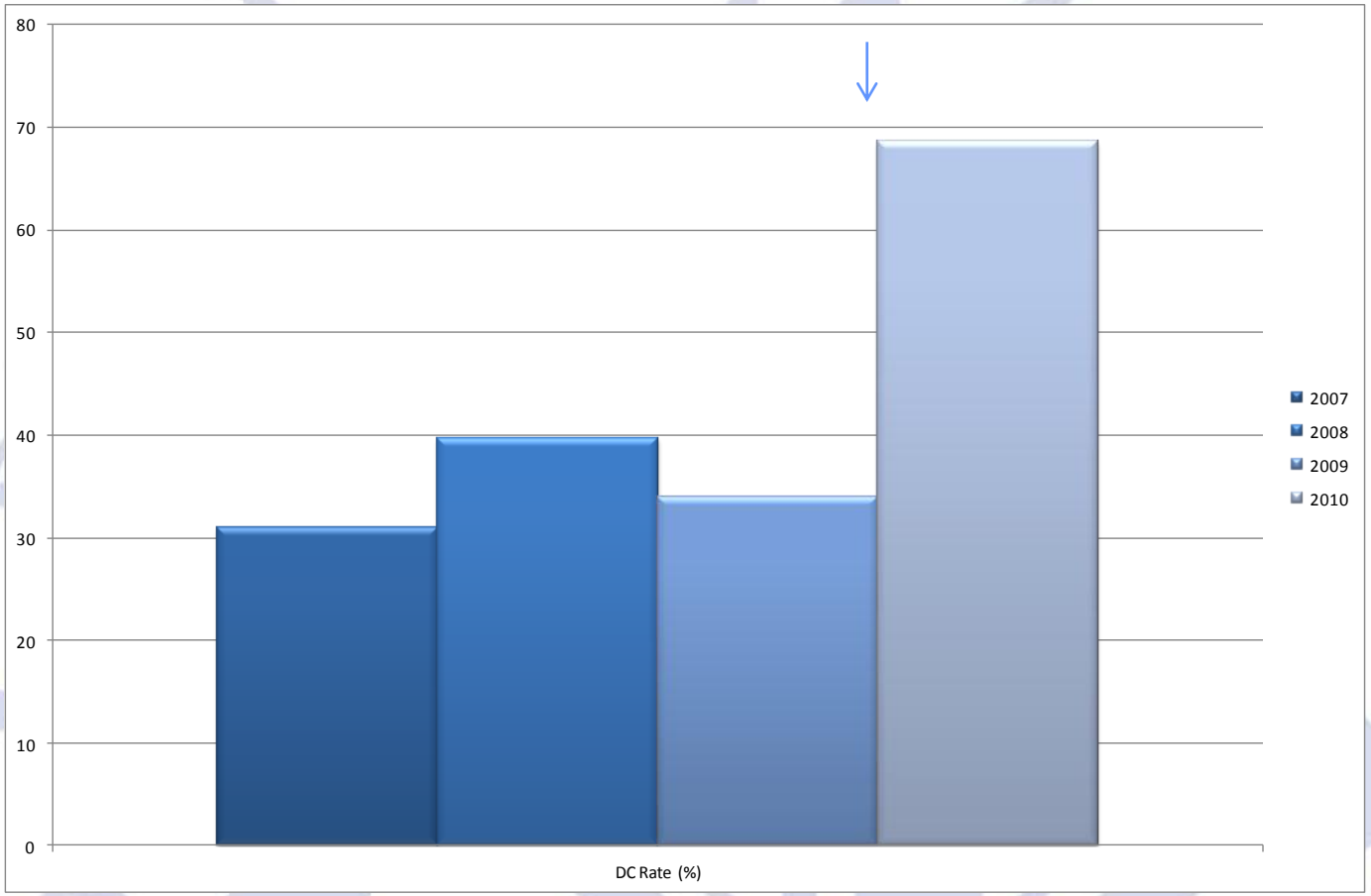
BPT	2010-11	2011-12	2012-13
Acute Stroke	Introduced	Increased price differential	Further increase in price differential
Cataracts	Introduced and maintained		
Fragility hip fracture	Introduced	Increased price differential	Further increase in price differential and expansion of best practice characteristics
Day case procedures	Gall bladder removal	12 further procedures added	2 further procedures added; breast surgery procedures amended and revision to some day case rates
Adult Renal Dialysis		Vascular access for haemodialysis	Home therapies incentivised
Paediatric Diabetes		Activity based structure (non-mandatory)	Year of outpatient care structure (mandatory)
Transient ischaemic attack		Introduced and maintained	
Primary total hip and knee replacements		Introduced and maintained	
Interventional radiology		2 procedures introduced	5 further procedures added
Procedures in Outpatients			3 procedures introduced
Same day emergency care			12 clinical scenarios introduced
Major trauma care			Introduced

Incentivising Day Case Laparoscopic Cholecystectomy

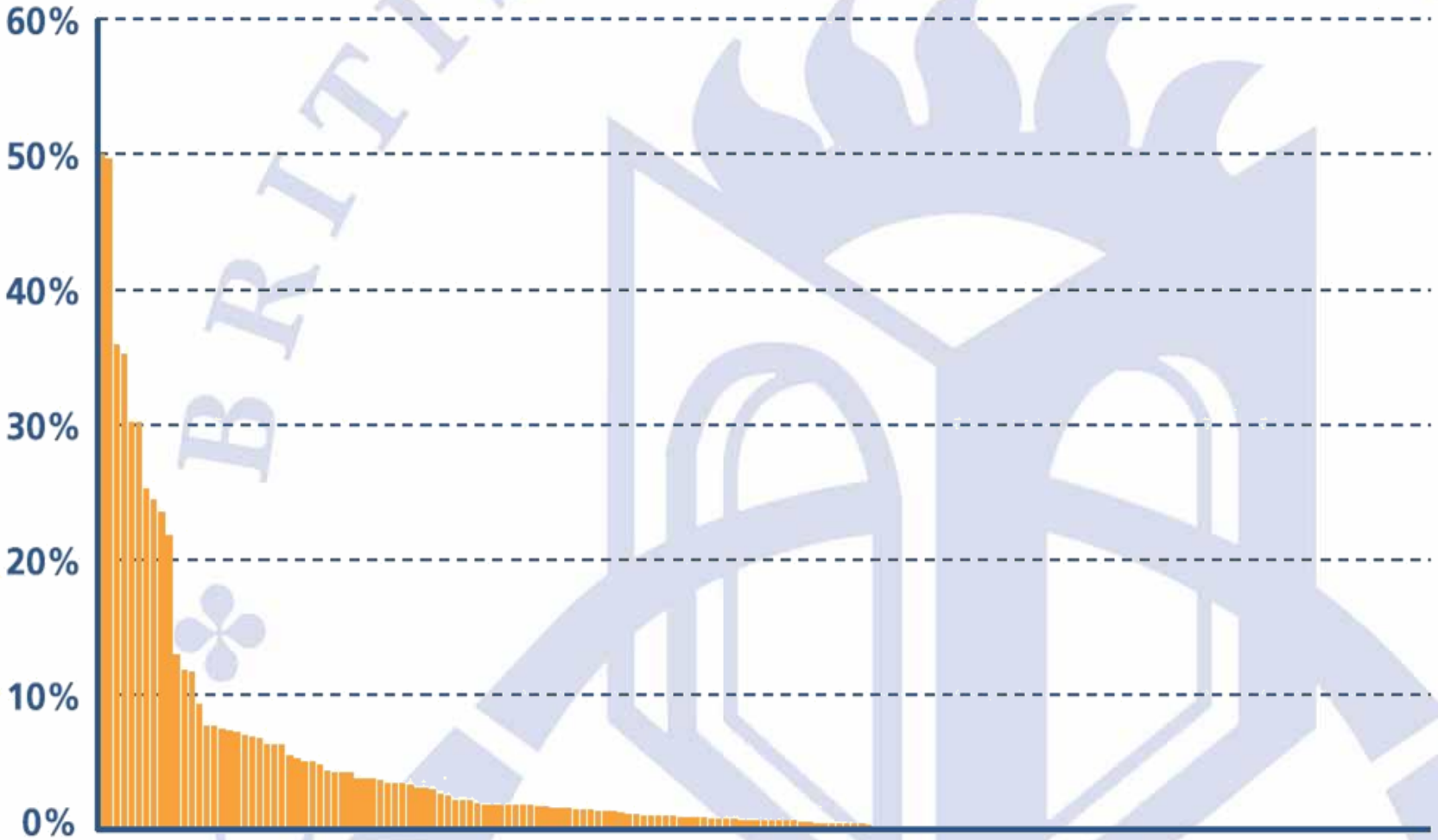
- Medium-sized Foundation Trust DGH
- 400 inpatient beds
- Serves 350,000 population
- 8 General Surgical consultants
- 250 Lap Cholecystectomy/year
- Background Day-case rate ~35%
- Extra £325 per DC Lap Chole

Howard D et al. J One-Day Surgery 2011:21:4-7

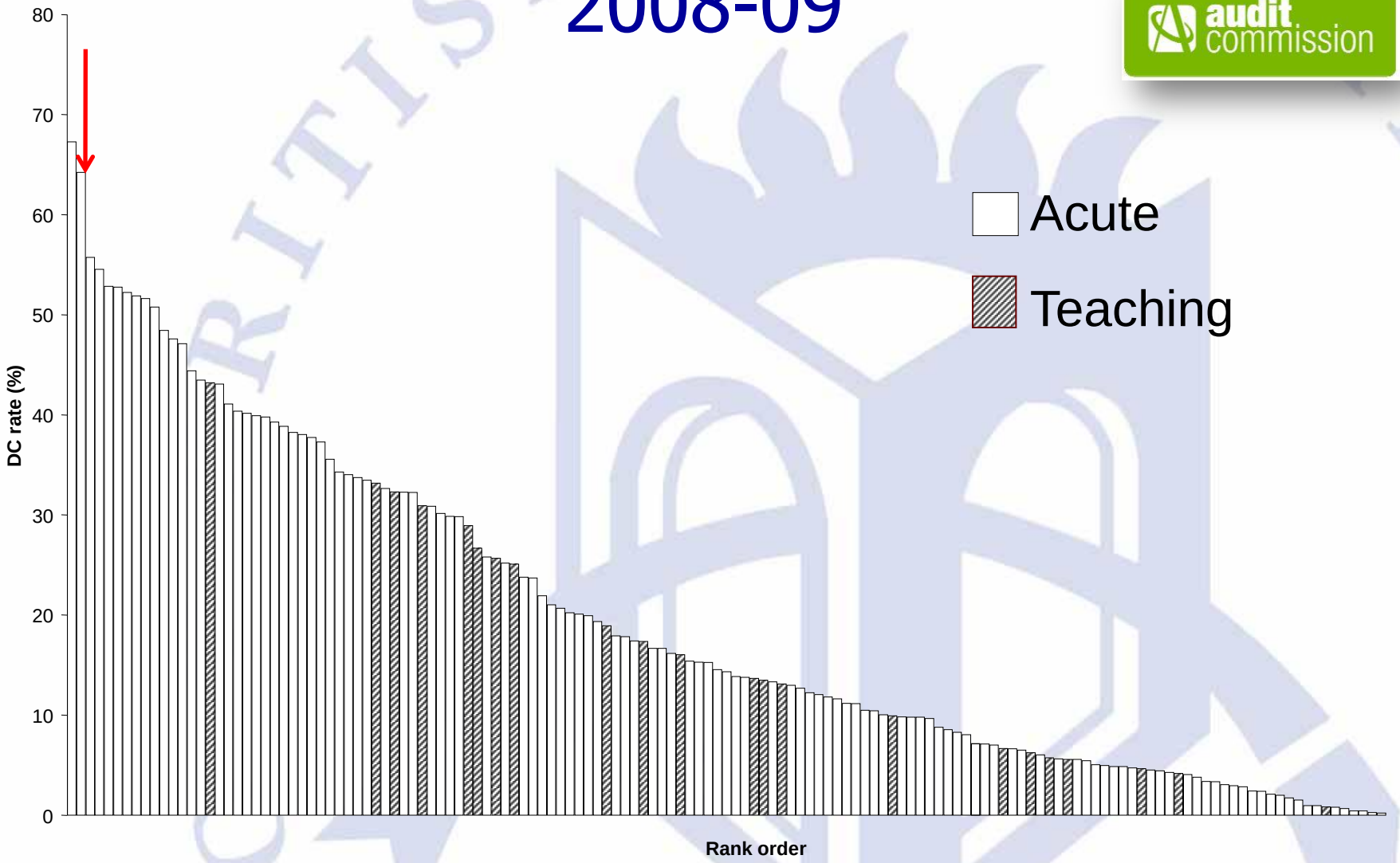
Day Case Rate



Day Case Laparoscopic Cholecystectomy 1999-2000



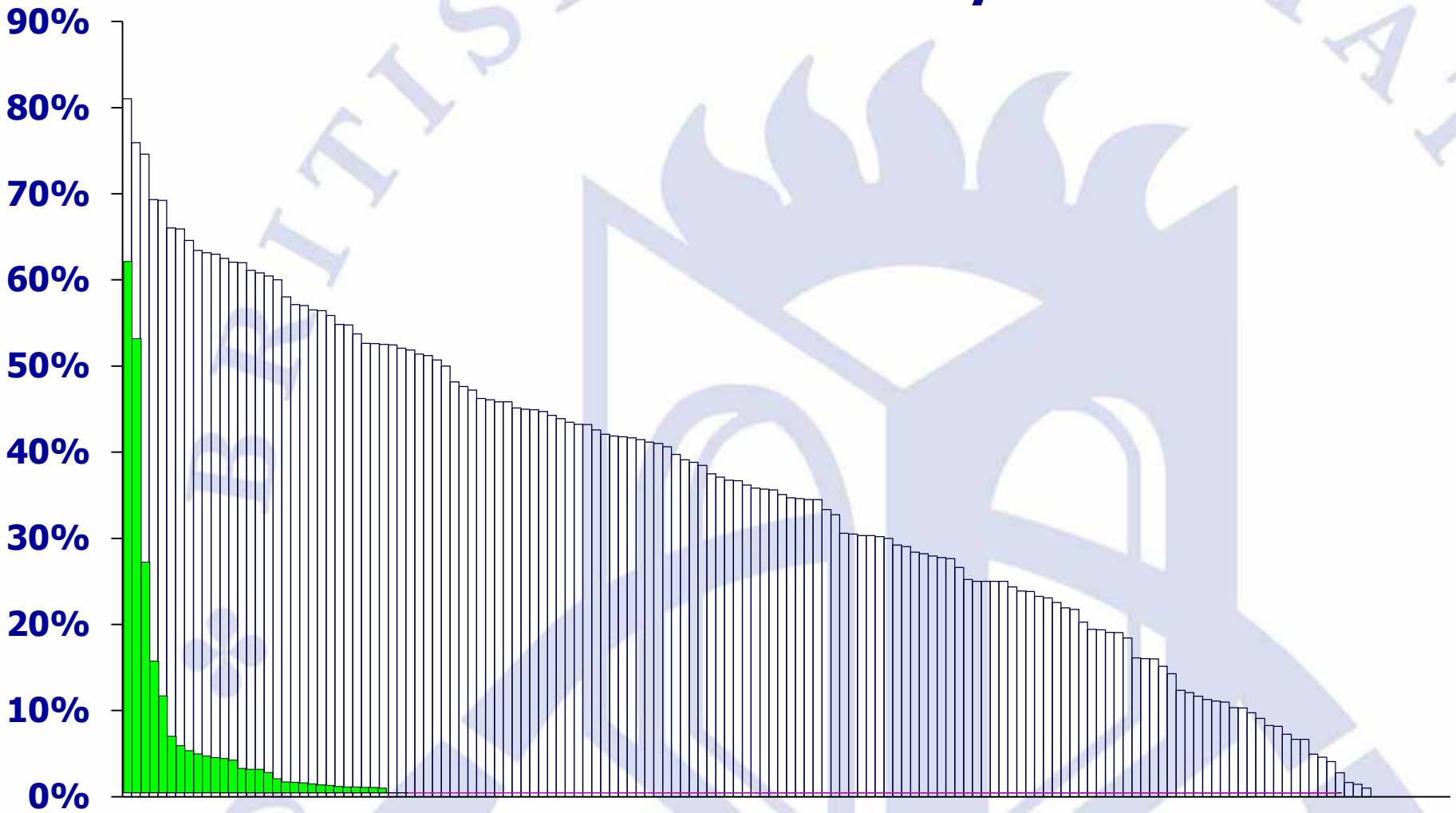
Day Case Laparoscopic Cholecystectomy 2008-09



Day Case Laparoscopic Cholecystectomy Q3 2010

NHS
Institute for Innovation and Improvement

Over the last 10 years



GENERAL SURGERY England 2011

DESCRIPTION	CURRENT NATIONAL PERFORMANCE		
	Top 5%	Top 25%	50% (Median)
Laparoscopic repair of hiatus hernia with anti-reflux procedure (eg fundoplication)	23%	0%	0%
Excision biopsy of lymph node for diagnosis (cervical, inguinal, axillary)	90%	79%	68%
Closure of colostomy	0%	0%	0%
Transanal excision of lesion of anus	71%	53%	37%
Excision/destruction of lesion of anus	96%	92%	87%
Haemorrhoidectomy	91%	79%	68%
Injection or banding of haemorrhoids	100%	98%	96%
Circular stapling haemorrhoidectomy	91%	76%	64%
Anorectal stretch	97%	86%	78%
Excision/treatment of anal fissure	97%	89%	81%
Lateral sphincterotomy of anus	100%	93%	90%
Pilonidal sinus surgery -laying open or suture/ skin graft	91%	82%	70%
Adrenalectomy -unilateral (laparoscopic)	7%	0%	0%
Diagnostic laparoscopy	91%	84%	76%
Laparoscopic cholecystectomy	65%	54%	39%
Laparoscopic splenectomy	0%	0%	0%
Primary repair of inguinal hernia	82%	75%	68%
Repair of recurrent inguinal hernia	74%	63%	52%
Primary repair of femoral hernia	84%	73%	67%
Repair of umbilical hernia	85%	78%	71%
Laparoscopic repair of incisional hernia	27%	14%	8%
Open repair of incisional hernia	37%	24%	17%
Repair of other abdominal hernia	69%	57%	47%
Repair of rectal mucosal prolapse	78%	52%	30%
Laparoscopic gastric banding	54%	13%	3%

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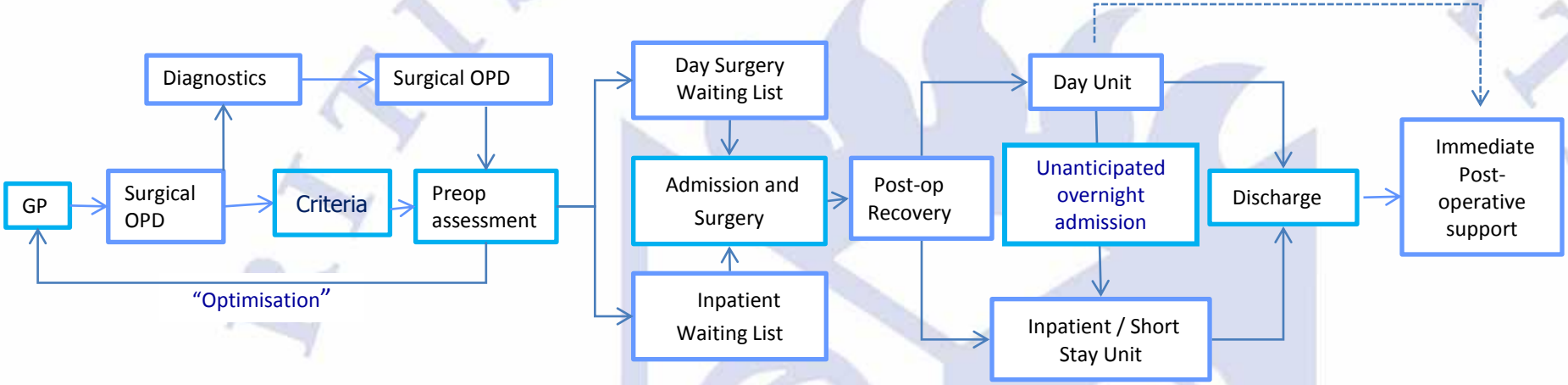
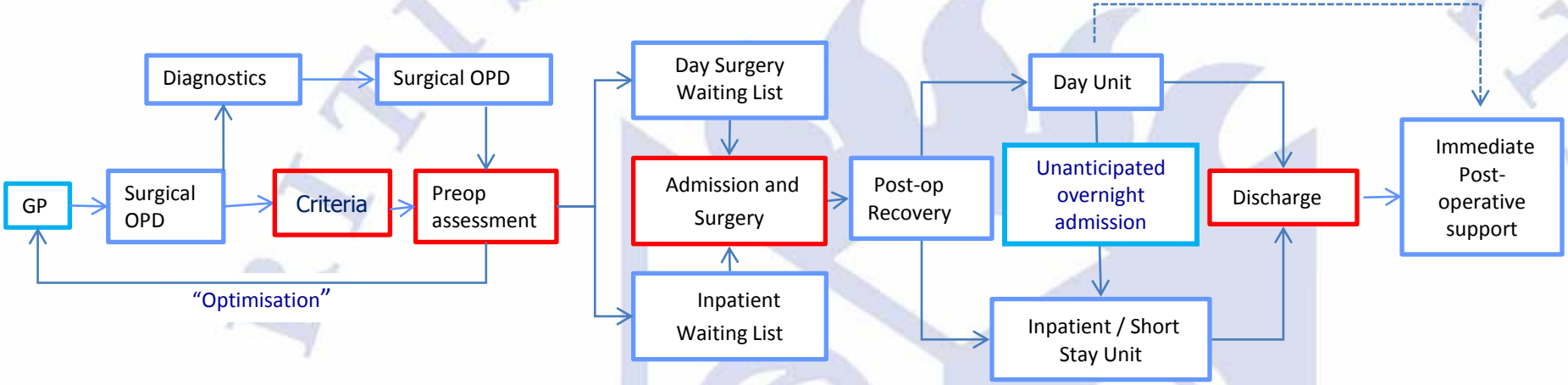
Pathway Design



Day and Short Stay Surgery Pathway

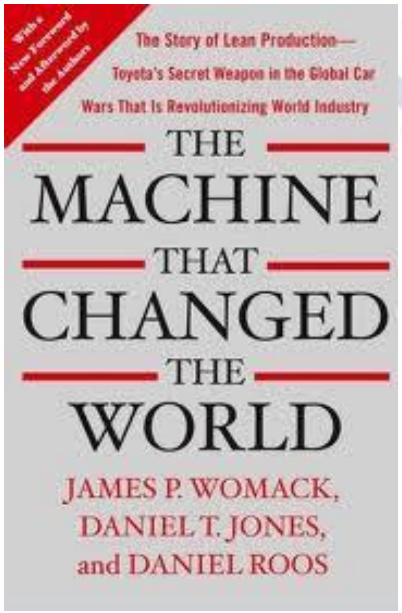


Day and Short Stay Surgery Pathway

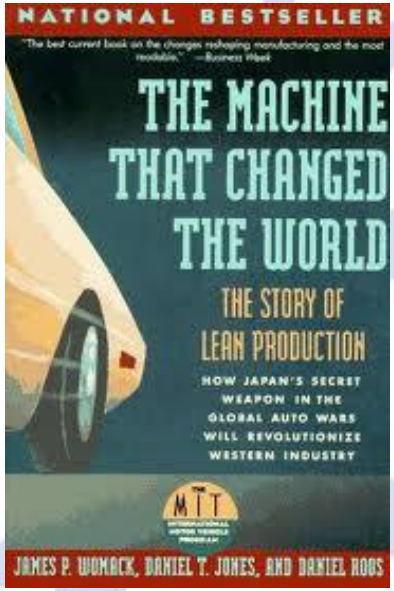
The origins of "lean"

Krafcik JF
"The triumph of the lean production system."
Sloan Management Review
1988 **30** (1):41-52

Recognition of "LEAN"



1990



Massachusetts Institute of Technology

International Motor Vehicle Program
Established 1979
25 Universities worldwide

Lean is ……..

....a systematic approach to improving the flow of a process by identifying and eliminating 'Waste' through continuous improvement.

In other words:

Getting the right **things**

To the right **place**

At the right **time**

In the right **quantities**

To minimize **waste**

And be flexible to **change**

Lean is not……

……an excuse simply to cut costs !

Remember……

it is the elimination of any activity which does not add to patient value.

Key Areas on the Patient Administative Pathway

Rate limiting steps

1. Criteria
2. Preassessment
3. Patient Admission
4. Theatre Efficiency
5. Discharge Process

Domains

1. Quality
2. Cost
3. Safety

Day Case Criteria

Depend on:

- Stand-alone unit
- Hospital-integrated unit

Assessment of physical status

1940-41

American Society of Anaesthesiologists commission Saklad, Rovenstine & Taylor to devise a system for collecting anaesthetic data.

1963

Modification to present-day ASA classification of physical status.

Saklad M. Grading of patients for surgical procedures. Anesthesiology 1941; 2:281-4

ASA 1 Normal healthy
ASA 2 Mild systemic disease
ASA 3 Severe systemic disease
ASA 4 Threat to life
ASA 5 Moribund

Co-morbidity increases with age

By 2019, the population over retirement age in UK will increase from 18.3% to 22.2%

Population Projections (1994 based) Government Actuary Dept. London 1996

By 2030, 26% of the Finnish population will be >65 years of age

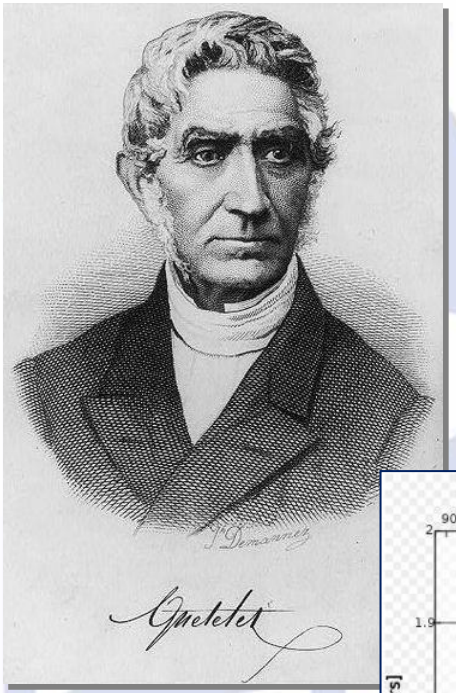
www.stat.fi/til/vaenn/index.html

-

Body Mass Index

1840-46
Quetelet Index

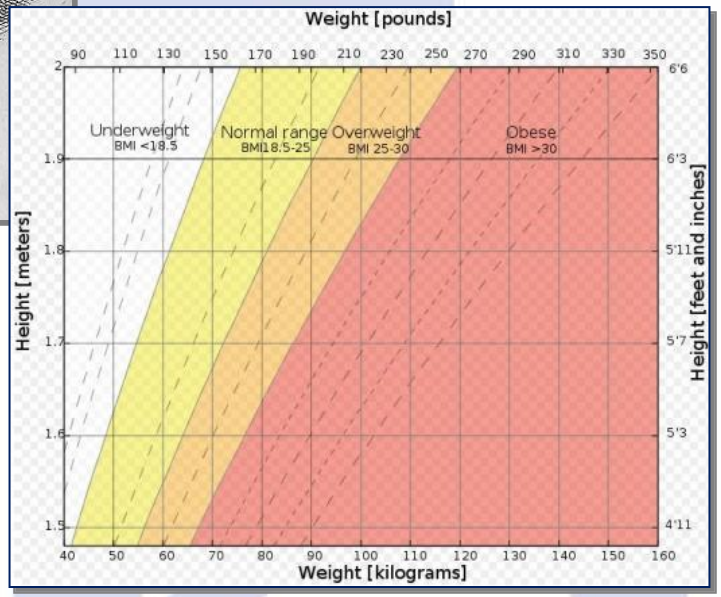
1972
Body Mass Index



$$BMI = \frac{\text{weight (lb)} * 703}{\text{height}^2\ (\text{in}^2)}$$

OR

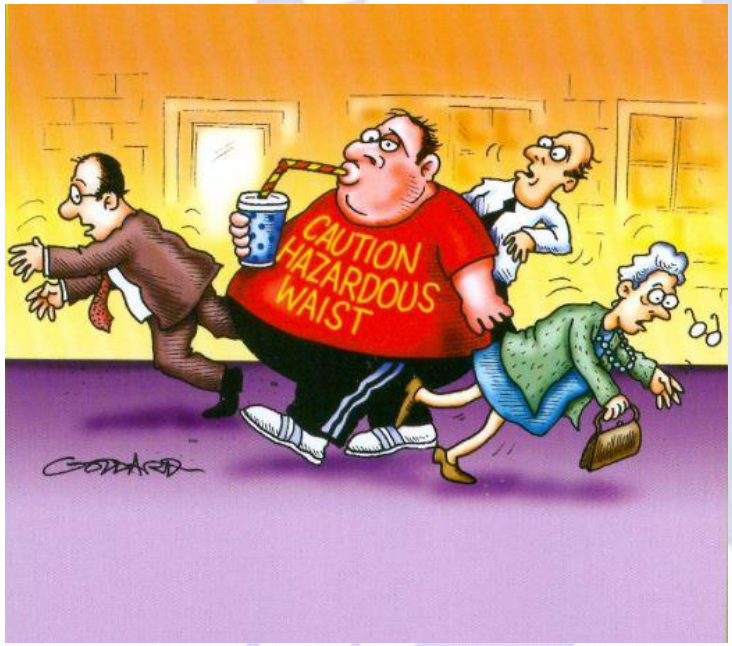
$$BMI = \frac{\text{weight (kg)}}{\text{height}^2\ (\text{m}^2)}$$ (metric)



Keys A, Fidanza F, Karvonen MJ, Kimura N, Taylor HL.
Indices of relative weight and obesity.
J Chronic Dis 125(6):329-43

Worldwide Obesity Epidemic

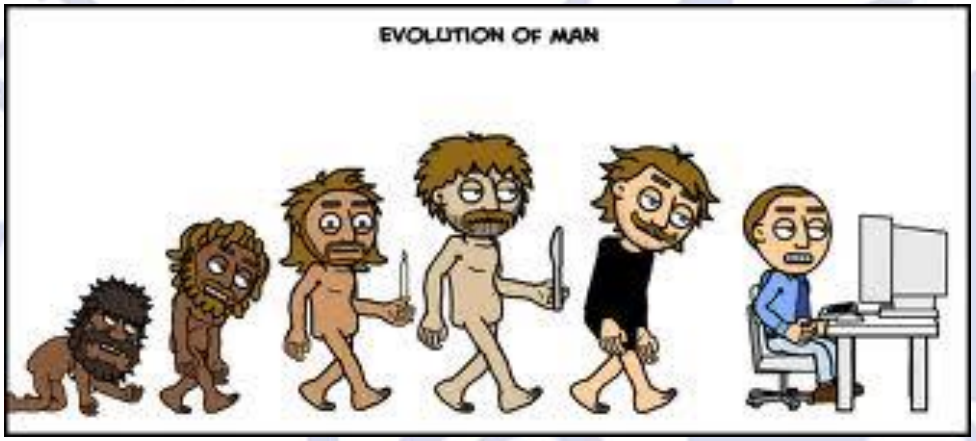
Definition of obesity : BMI > 30



Rank	Country	Obesity - adult prevalence rate (%)
1	American Samoa	74.6
2	Tokelau	63.4
3	Tonga	56
4	Kiribati	50.6
5	Saudi Arabia	35.6
6	United States	33.9
7	United Arab Emirates	33.7
8	Egypt	30.3
9	Kuwait	28.8
10	New Zealand	26.5
11	Seychelles	25.1
12	Fiji	23.9
13	Mexico	23.6
14	Canada	23.1
15	Israel	22.9
16	United Kingdom	22.7
17	Greece	22.5
18	Croatia	22.3
19	Chile	21.9
20	Bosnia and Herzegovina	21.7
21	Malta	20.7
22	Lithuania	19.7
23	Jordan	19.5
24	Poland	18
25	Hungary	17.7
26	France	16.9
27	Australia	16.4
28	Malaysia	16.3
29	Peru	16.3
30	Turkey	16.1
31	Morocco	16
32	Zimbabwe	15.7
33	Finland	15.7
34	Spain	15.6
35	Latvia	15.6

CIA Factbook 2012

Day Case Criteria



Evolution not Revolution

- Require regular evaluation
- Abandon universal selection criteria
- Apply limitations to the procedure rather than the patient

Preassessment

Who ?

Where ?

What ?

How ?

When ?

Preassessment

Default to Day surgery

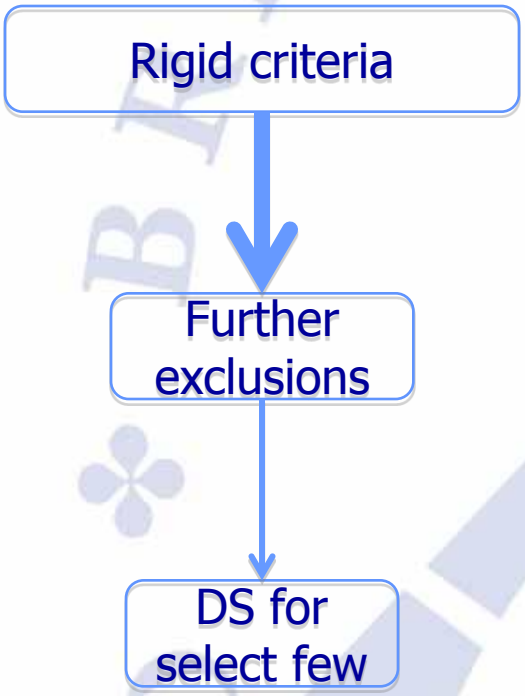
Can this patient be a day case ?

↓

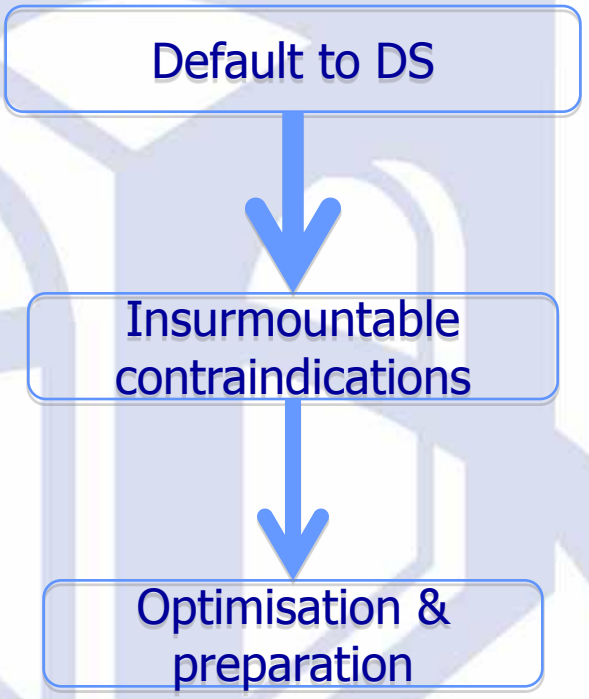
Is there any reason this patient cannot be a day case ?

Changing Philosophy

Previous



Current



Pre-assessment Options

At source (Health Centre)

Health screen

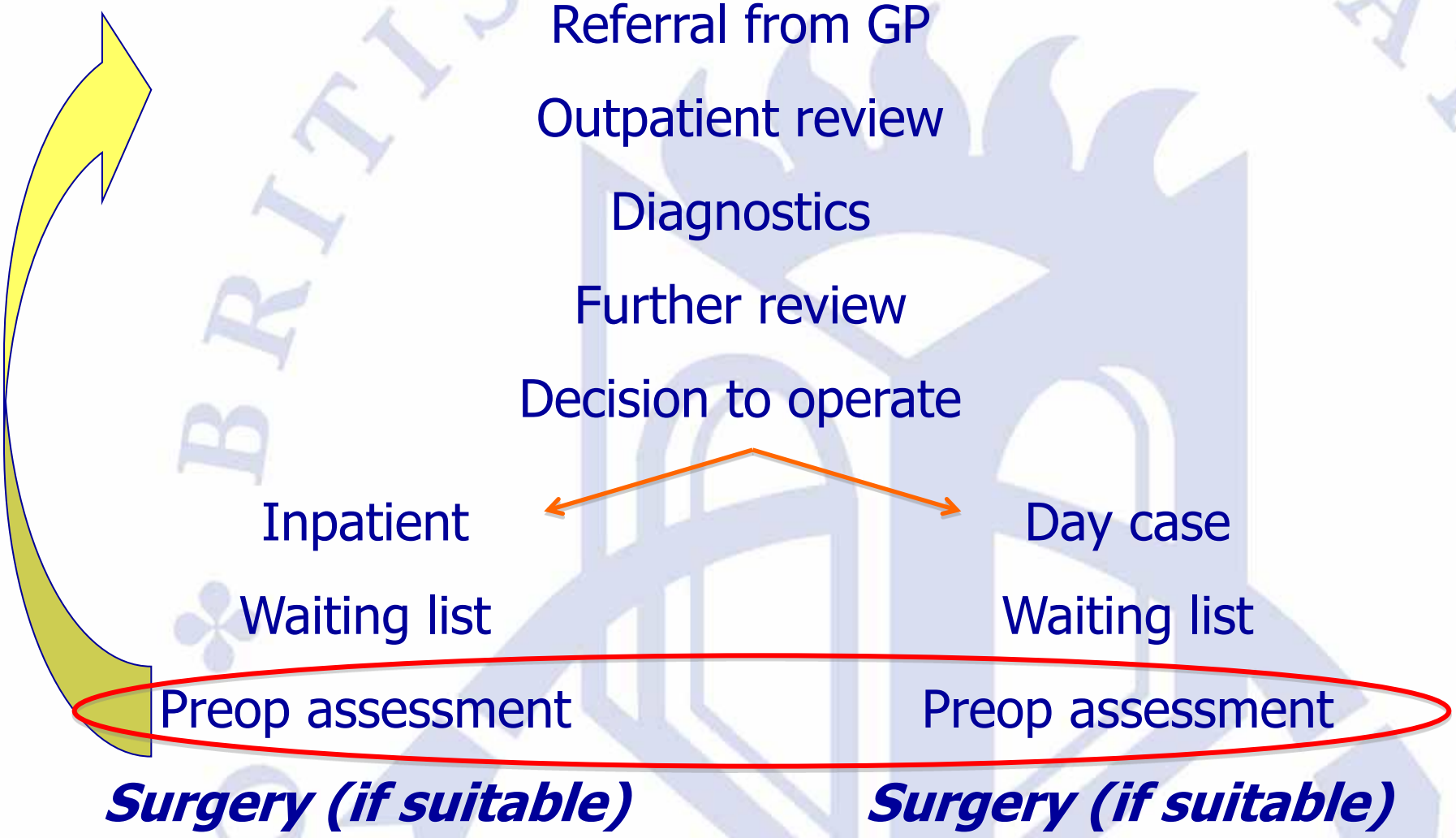
Telephone

Formal (Hospital)

- immediate
- interval

On-line

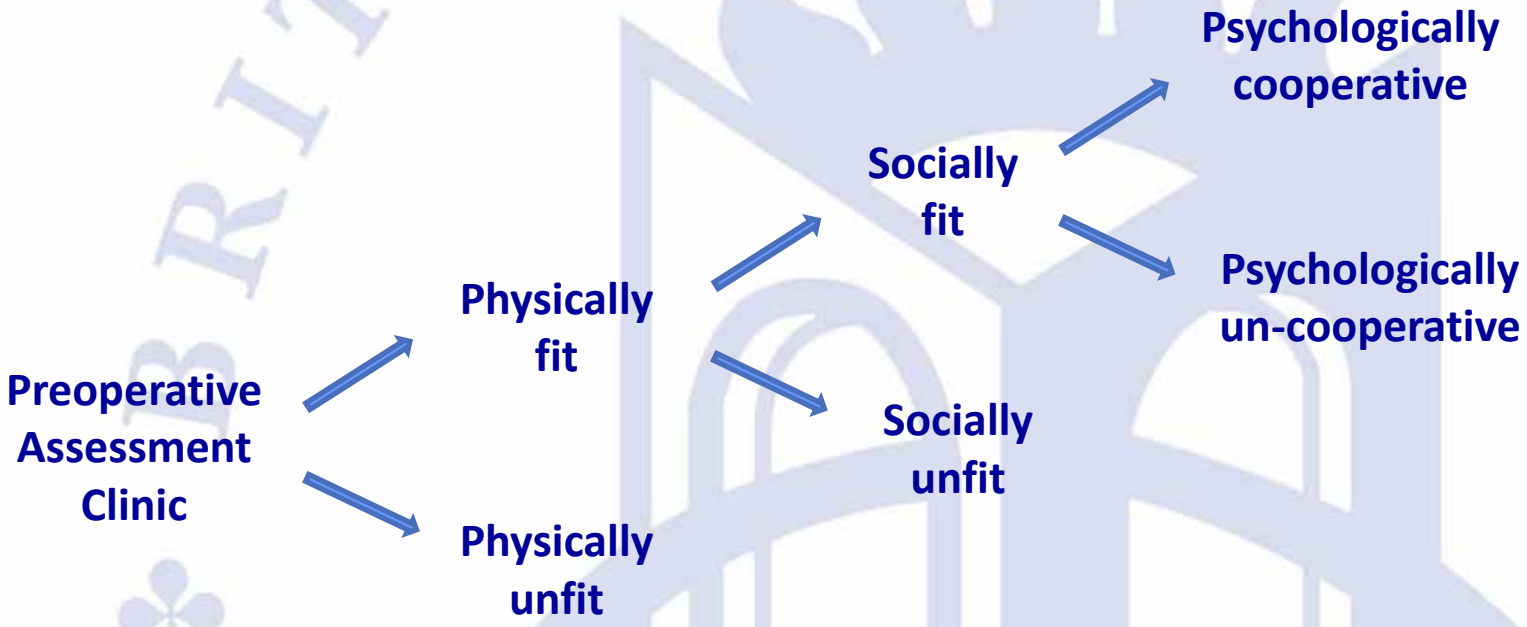
Typical Surgical Pathway



The Rules of Preassessment

- Preassessment for all elective surgical patients
- Opt out of day surgery rather than opting in
- Empower the preassessment team to allocate the appropriate length of stay option
- Perform preassessment early in the pathway

Preoperative Assessment in 2012



Social Factors

Responsible adult

Adequate housing conditions

- -inside toilet
- -telephone access
- -heating
- -stairs

Maximum 1 hours' drive

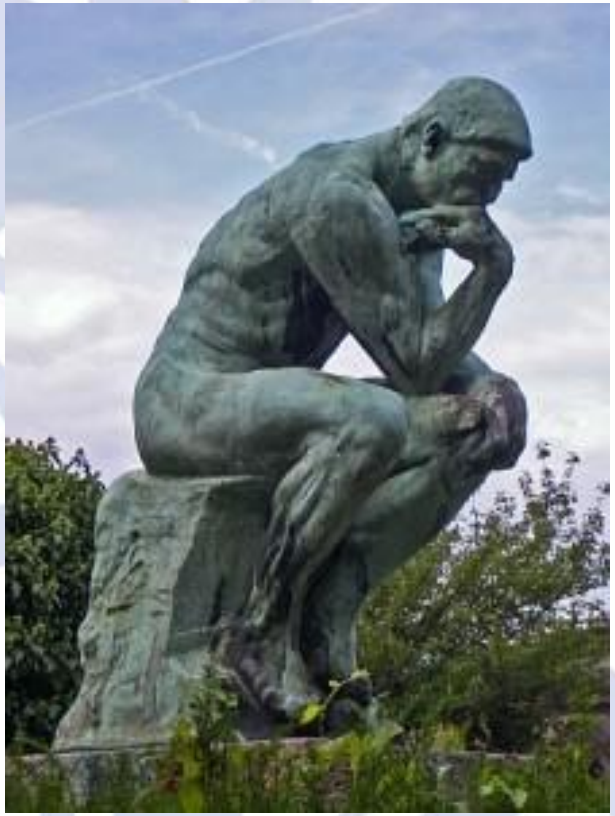
Psychological Factors

Trust and Motivation
- -past personal experience
- -experience of others
- -hearsay
- -prejudice

Personality

Intelligence

Culture
- -extended family
- -safety issues in home country



Patient Matrix

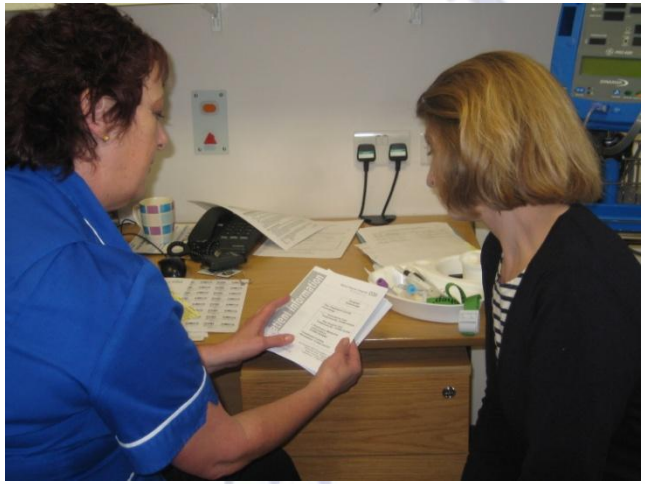
Fit Cooperative	Fit Un-cooperative
Un-fit Cooperative	Un-fit Un-cooperative

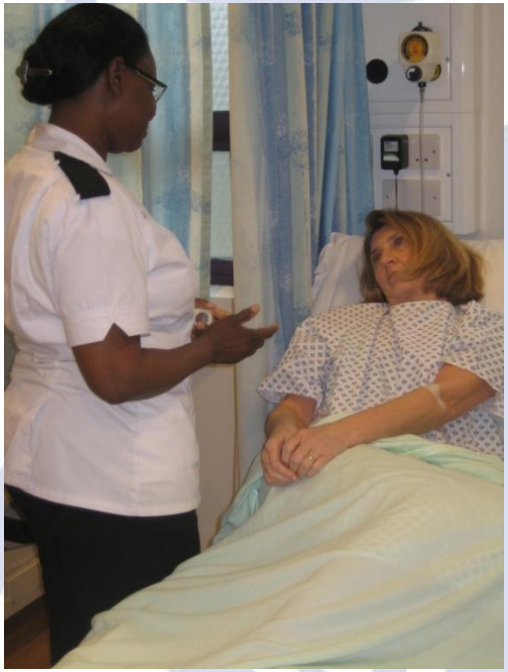
Patient Matrix

Fit Cooperative	Fit Un-cooperative
Un-fit Cooperative	Un-fit Un-cooperative

Fit but Uncooperative

Manage information and expectations





Unfit but Cooperative

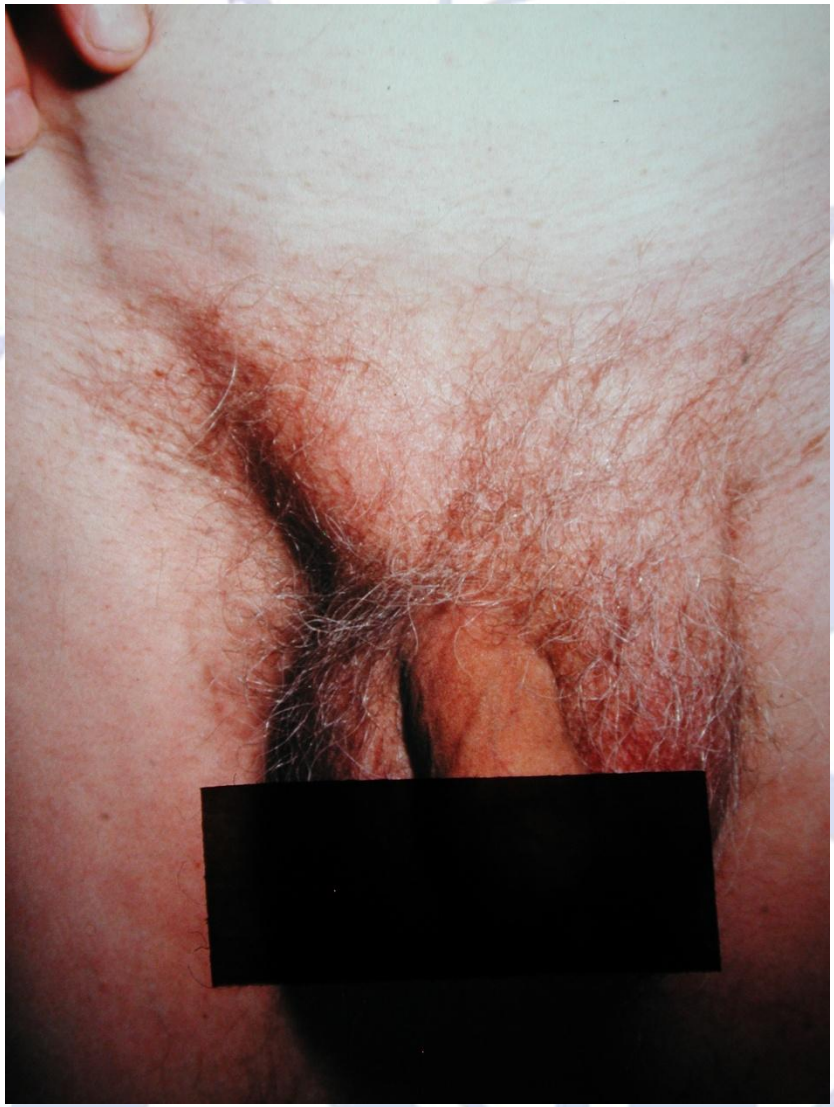
- Try as a Day Case
- Consider superficial rather than abdominal procedures
- Do not compromise patient safety
- Consider alternative forms of anaesthesia

Regional Anaesthesia

Passing Urine

"Passing urine for patients at low risk of post-operative urinary retention is not essential before going home."

Jackson I, McWhinnie D, Skues M
The pathway to success.
BADS London 2012



Patient Admission

Dedicated Facilities for day surgery

Unplanned admissions

Dedicated day unit - 1.0 %
In-patient ward - 17.0 %
Satellite day unit - 2.7 %

Day Surgery in Different Guises
Fehrmann K, Matthews CM, Stocker ME
J One-Day Surgery 2011; 19;39-47

Patient Admission

Dedicated facilities for overnight stay

Same-day admissions unit

Day of surgery admissions unit

- Located near theatres
- Chairs, not trolleys
- Lower staffing costs
- Walk to theatre
- Reduced transfer time
- Ward admission after theatre

Operating Theatre Efficiency

Theatre Costs

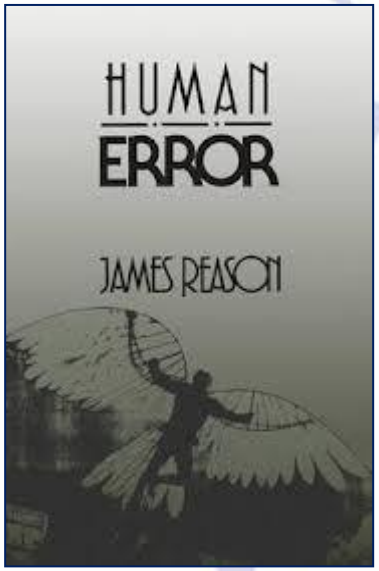
Dependent on

- Size of theatre suite
- Specialty
- Pay
- Non-pay
- Consumables
- Contribution

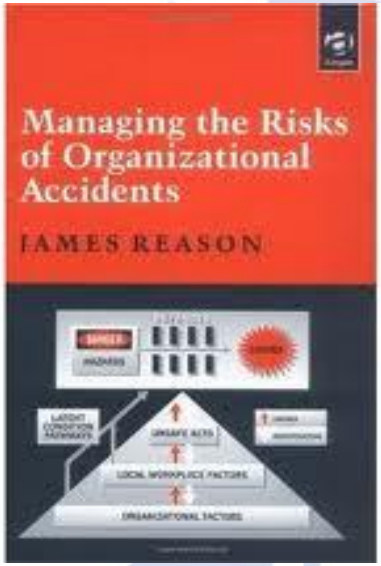
.....etc

2007 NHS Institute - £900 / hr
2009 Loughead et al - £800 / hr
MKGH - £1620 / hr

Safety – The Cumulative Act Effect



Reason J. Cambridge University Press 1990



Reason J. Ashgate 1997

James T Reason
Professor of Psychology
University of Manchester

Theory of Accident Causation

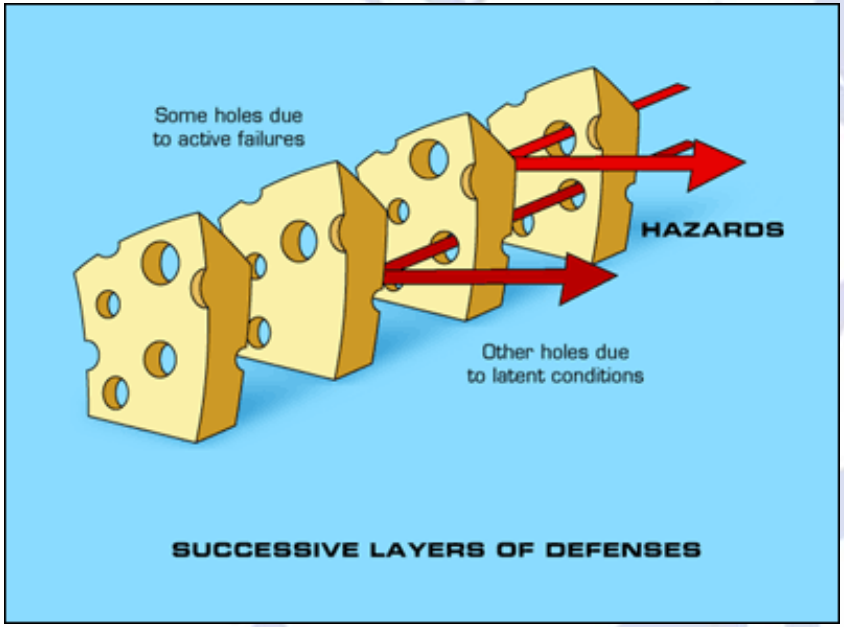
Levels of Failure

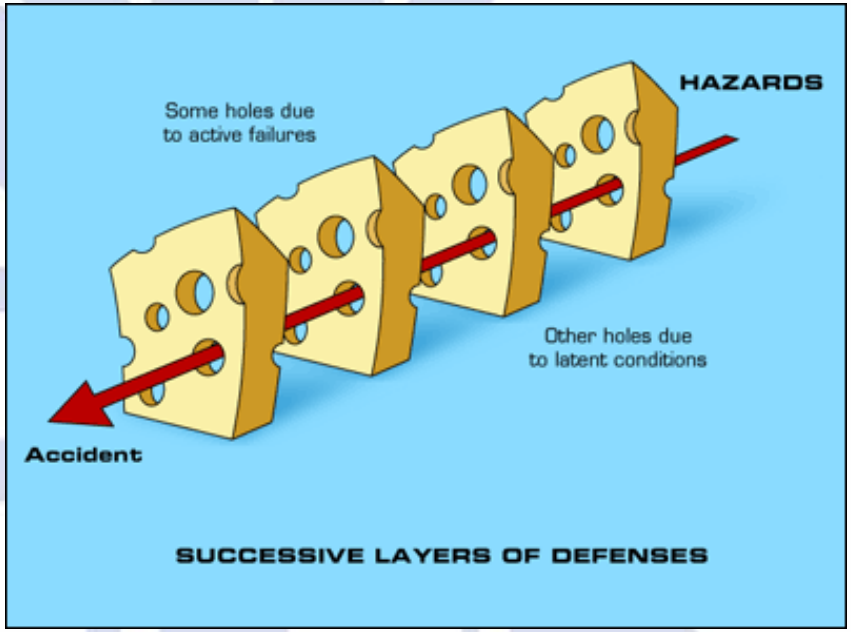
1. Organisational influences
2. Unsafe supervision
3. Preconditions for unsafe acts
4. Unsafe acts

} Active failure

} Latent failure

Swiss Cheese Model of Accident Causation





" a trajectory of accident opportunity "

Patient Safety Campaigns

EVERY PATIENT EVERY TIME
SCOTTISH PATIENT SAFETY PROGRAMME

PATIENT SAFETY
High quality health care in Finland

YMGYRCH 1000 LIVES CAMPAIGN
O FYWYDAU

PATIENT SAFETY FIRST

Never events 2011-12

1. Wrong site surgery
2. Wrong implant/prosthesis
3. Retained foreign object post-operation
4. Wrongly prepared high-risk injectable medication
5. Maladministration of potassium-containing solutions
6. Wrong route administration of chemotherapy
7. Wrong route administration of oral/enteral treatment
8. Intravenous administration of epidural medication
9. Maladministration of Insulin
10. Overdose of midazolam during conscious sedation
11. Opioid overdose of an opioid-naïve patient
12. Inappropriate administration of daily oral methotrexate
13. Suicide using non-collapsible rails
14. Escape of a transferred prisoner
15. Falls from unrestricted windows
16. Entrapment in bedrails
17. Transfusion of ABO-incompatible blood components
18. Transplantation of ABO or HLA-incompatible Organs
19. Misplaced naso- or oro-gastric tubes
20. Wrong gas administered
21. Failure to monitor and respond to oxygen saturation
22. Air embolism
23. Misidentification of patients
24. Severe scalding of patients
25. Maternal death due to post partum haemorrhage after elective Caesarean section

www.dh.gov.uk/en/Publicationsandstatistics/...DH_124552

Never events 2011-12

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Surgical Safety Checklist

World Health Organization | Patient Safety
A World Alliance for Safer Health Care

Before induction of anaesthesia

(with at least nurse and anaesthetist)

Has the patient confirmed his/her identity, site, procedure, and consent?
- ☐ Yes

Is the site marked?
- ☐ Yes
- ☐ Not applicable

Is the anaesthesia machine and medication check complete?
- ☐ Yes

Is the pulse oximeter on the patient and functioning?
- ☐ Yes

Does the patient have a:

Known allergy?
- ☐ No
- ☐ Yes

Difficult airway or aspiration risk?
- ☐ No
- ☐ Yes, and equipment/assistance available

Risk of >500ml blood loss (7ml/kg in children)?
- ☐ No
- ☐ Yes, and two IVs/central access and fluids planned

Before skin incision

(with nurse, anaesthetist and surgeon)

- ☐ **Confirm all team members have introduced themselves by name and role.**
- ☐ **Confirm the patient's name, procedure, and where the incision will be made.**

Has antibiotic prophylaxis been given within the last 60 minutes?
- ☐ Yes
- ☐ Not applicable

Anticipated Critical Events

To Surgeon:
- ☐ What are the critical or non-routine steps?
- ☐ How long will the case take?
- ☐ What is the anticipated blood loss?

To Anaesthetist:
- ☐ Are there any patient-specific concerns?

To Nursing Team:
- ☐ Has sterility (including indicator results) been confirmed?
- ☐ Are there equipment issues or any concerns?

Is essential imaging displayed?
- ☐ Yes
- ☐ Not applicable

Before patient leaves operating room

(with nurse, anaesthetist and surgeon)

Nurse Verbally Confirms:
- ☐ The name of the procedure
- ☐ Completion of instrument, sponge and needle counts
- ☐ Specimen labelling (read specimen labels aloud, including patient name)
- ☐ Whether there are any equipment problems to be addressed

To Surgeon, Anaesthetist and Nurse:
- ☐ What are the key concerns for recovery and management of this patient?

This checklist is not intended to be comprehensive. Additions and modifications to fit local practice are encouraged.

Revised 1 / 2009

Theatre scheduling and efficiency

Dedicated day cases

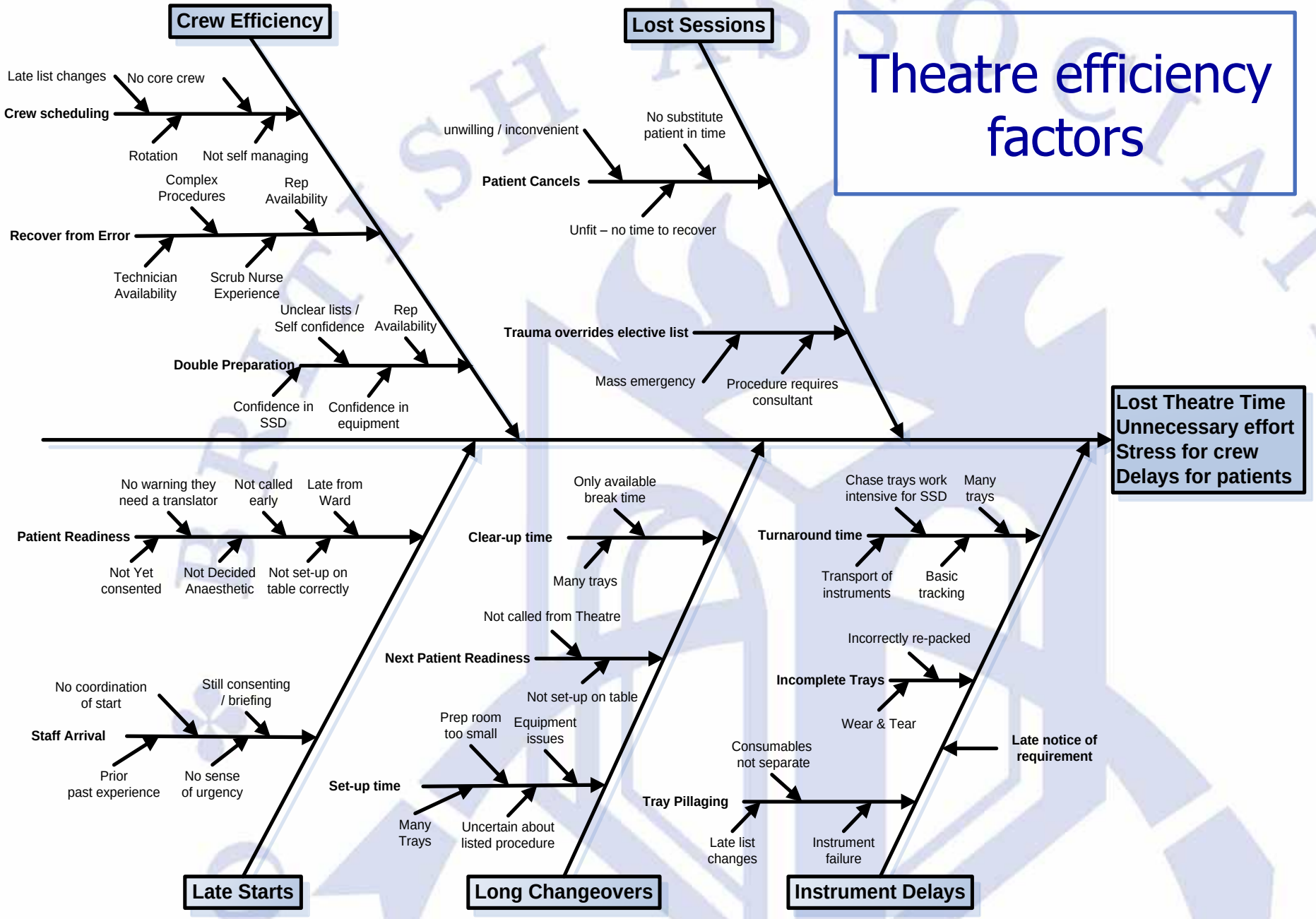
Dedicated 12 & 23hr cases

Mixed day case/inpatients

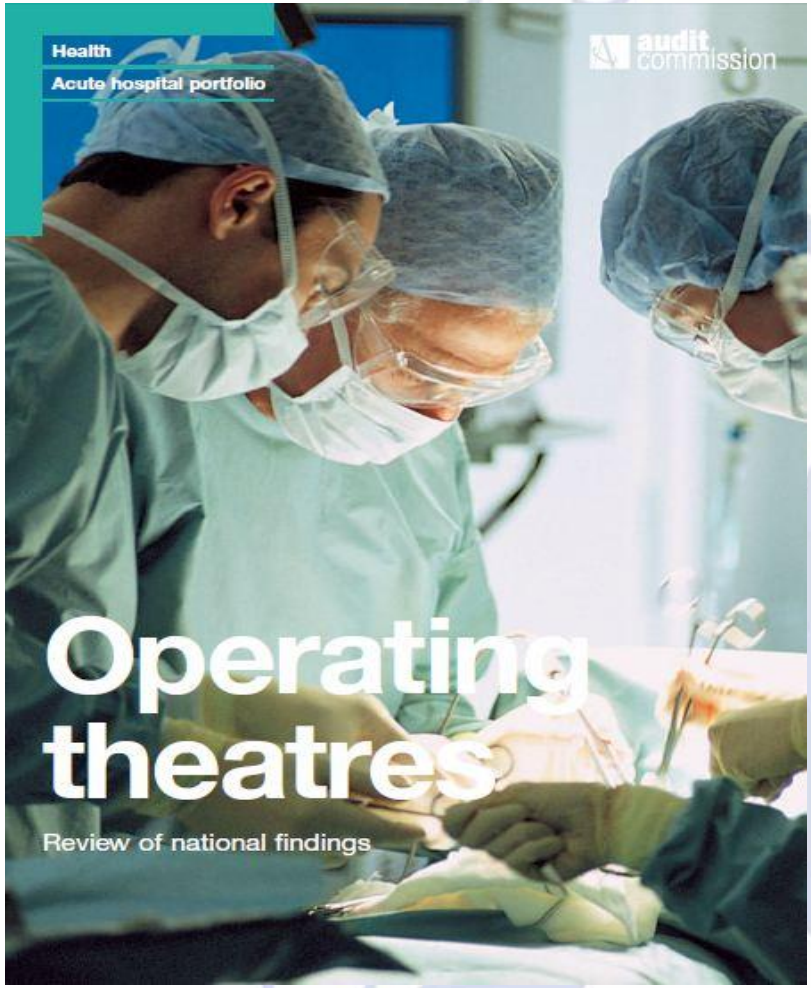
-Day cases first

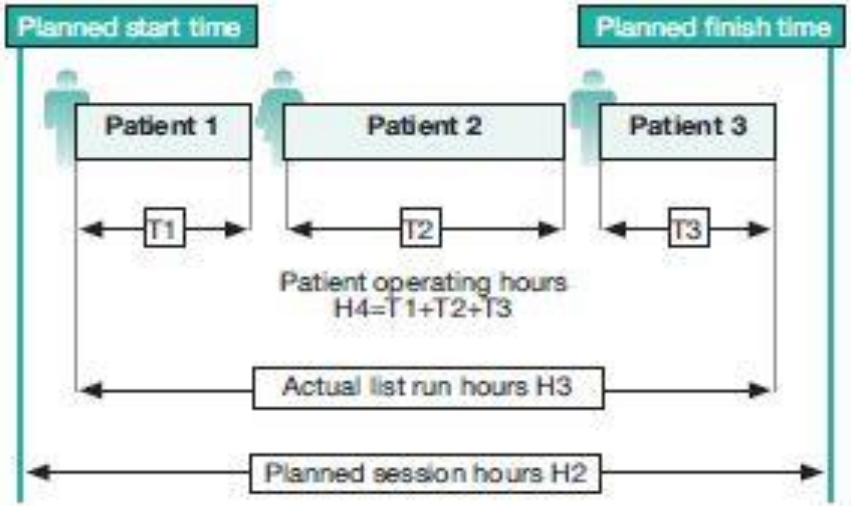
-Day cases post major case

Theatre efficiency factors



Theatre Efficiency





- 10% lists cancelled
- 7.5% gap time

- Audit Commission 2003

What is "Gap Time?"

"The time taken between operations."

- anaesthetic time
- transfer time to operating table
- surgical preparation time
- transfer time to recovery

Gap Times


NHS HIGHLAND | RAIGMORE HOSPITAL
Theatre 100 | Speciality | 4 August 2009
Surgeon: A.Nother | Anaesthetist: G. Asman
8:00
9:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
Downtime
D28.2
Downtime
V09.2
Downtime
D28.2
Downtime
E49.9
Downtime
D12.8
Downtime
D10.6
Downtime
E03.6
Downtime

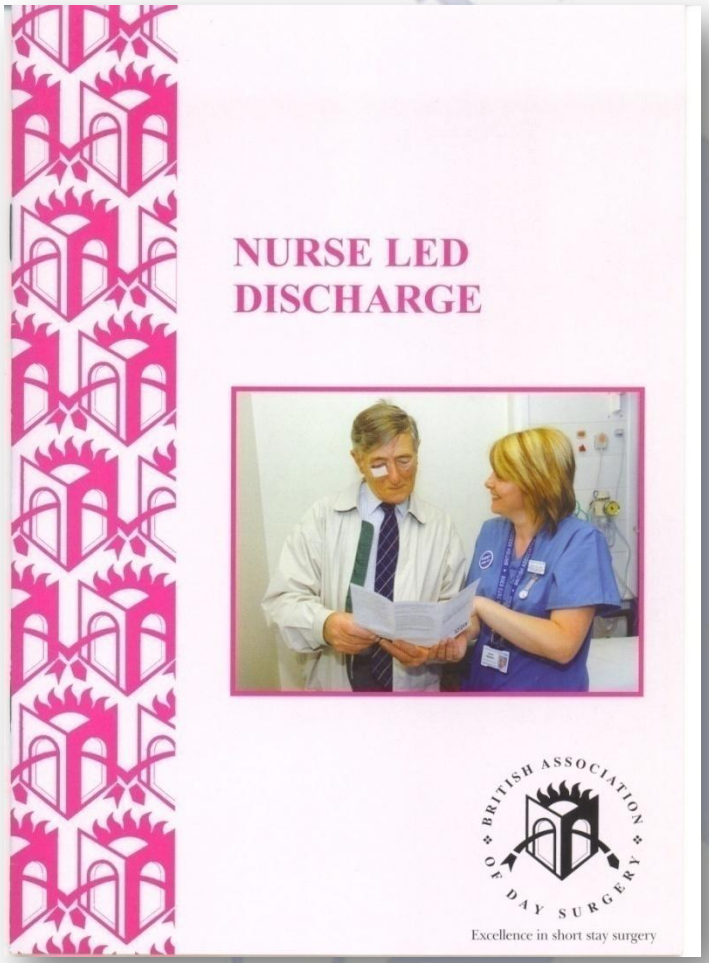
Operating theatre utilisation

23 ambulatory lists

Anaesthetic time	871	(18.0%)
Gap time	691	(14.3%)
Operating time	2981	(61.3%)
Total available	4843	
Time utilised	4543	(94%)

Orchard M, Ellams J, McWhinnie D
Journal One-Day Surgery 2010:20;4-6

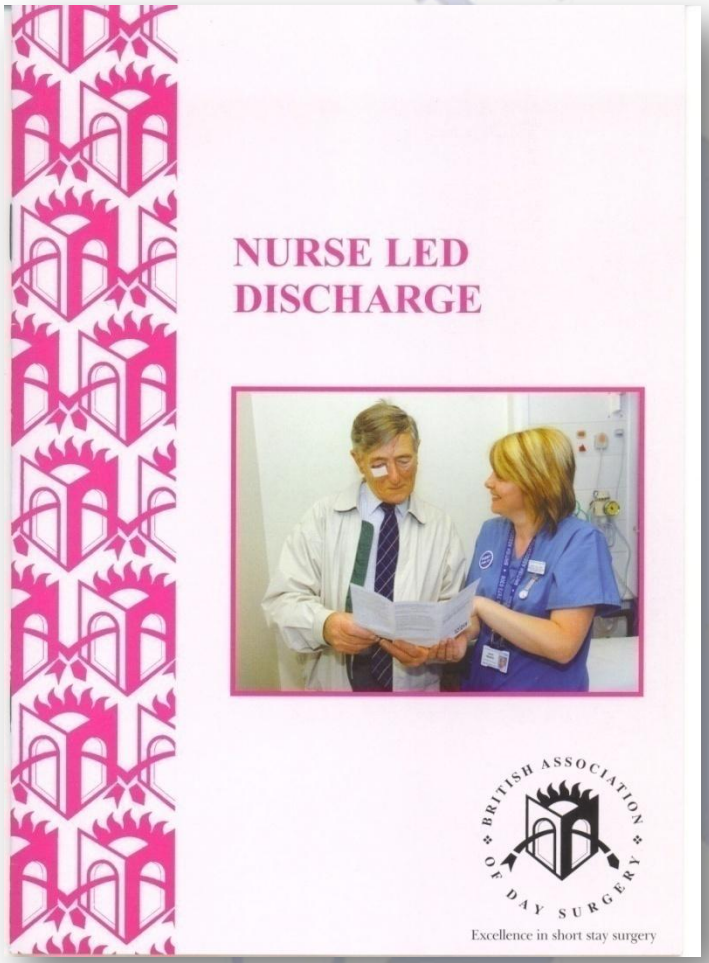
Discharge process



Discharge Criteria

- Vital signs stable
- Orientation
- Pain controlled
- Oral analgesics supplied
- Understands medication
- Ability to dress and walk
- Minimal nausea & vomiting
- Minimal wound bleeding
- Responsible adult to take them home
- Carer at home for next 24 hrs
- Driving after surgery
- Passing urine before discharge

Discharge process



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- Passing urine before discharge

Driving after Surgery

Dependent on.....

Recovery from the procedure

Recovery from anaesthesia/sedation

Impairment due to analgesia

Physical restriction due to the surgery

Therefore.....

Ability to perform an emergency stop

Driving after Surgery

Dependent on.....

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Physical restriction due to the surgery

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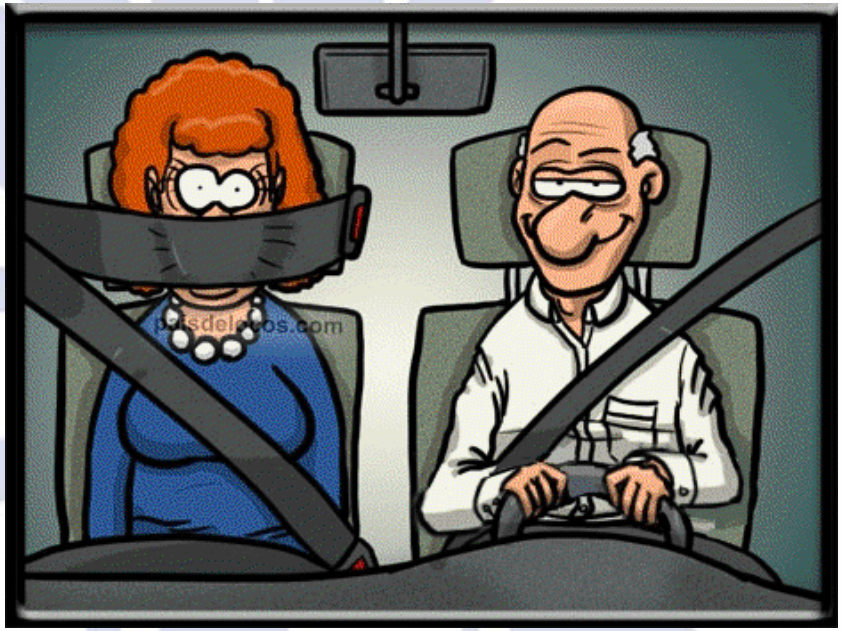


Passing Urine

"Passing urine for patients at low risk of post-operative urinary retention is not essential before going home."

Jackson I, McWhinnie D, Skues M
The pathway to success.
BADS London 2012

Fast Track Surgery

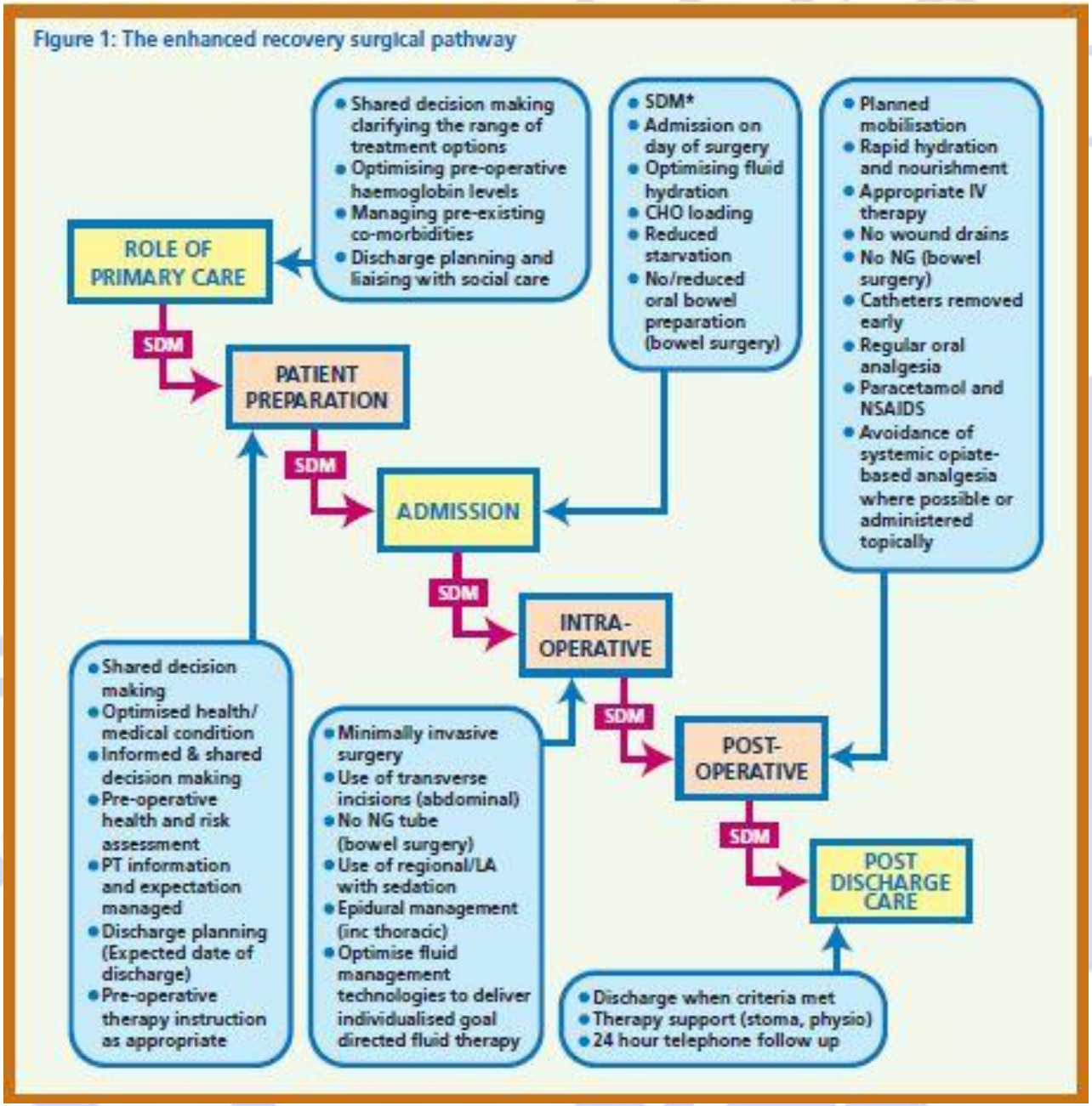
BJS British Journal of Surgery

British Journal of Surgery
1999;86:227-30

"Hospital stay of 2 days after open sigmoidectomy with a multimodal rehabilitation programme"

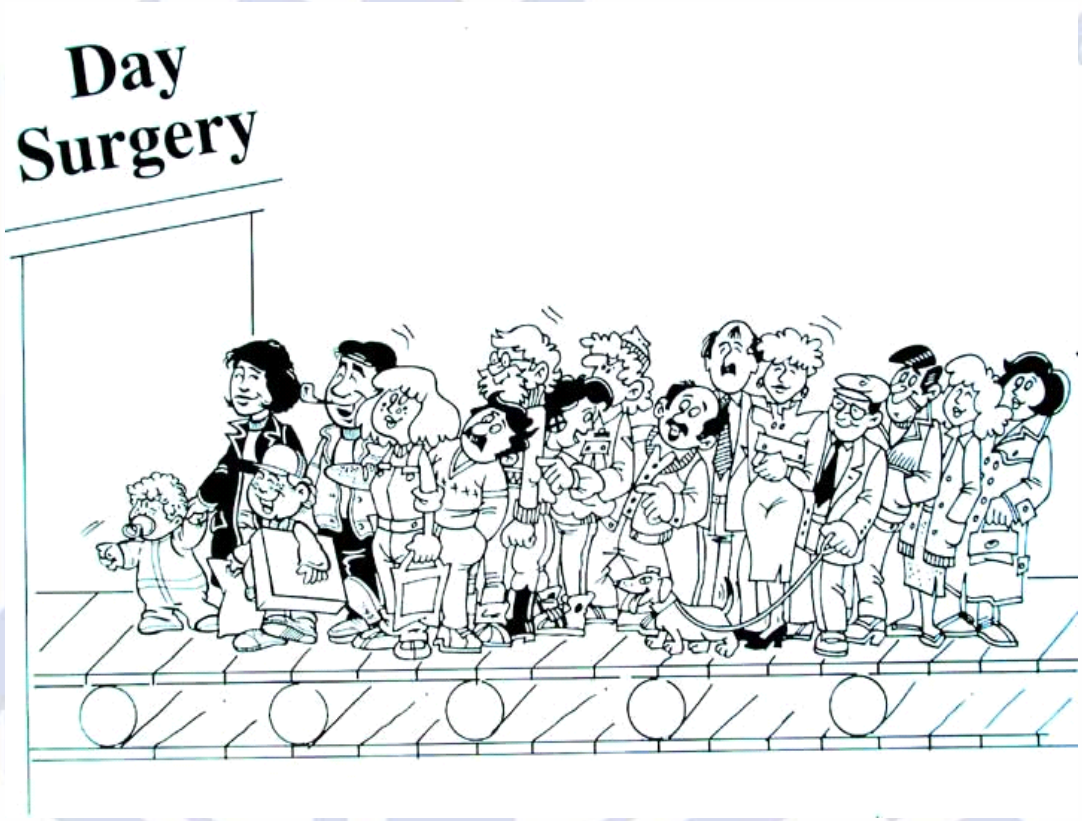
16 unselected patients (median age 71 years)
Epidural,immediate mobilization and nutrition
Median stay 2 days

Figure 1: The enhanced recovery surgical pathway

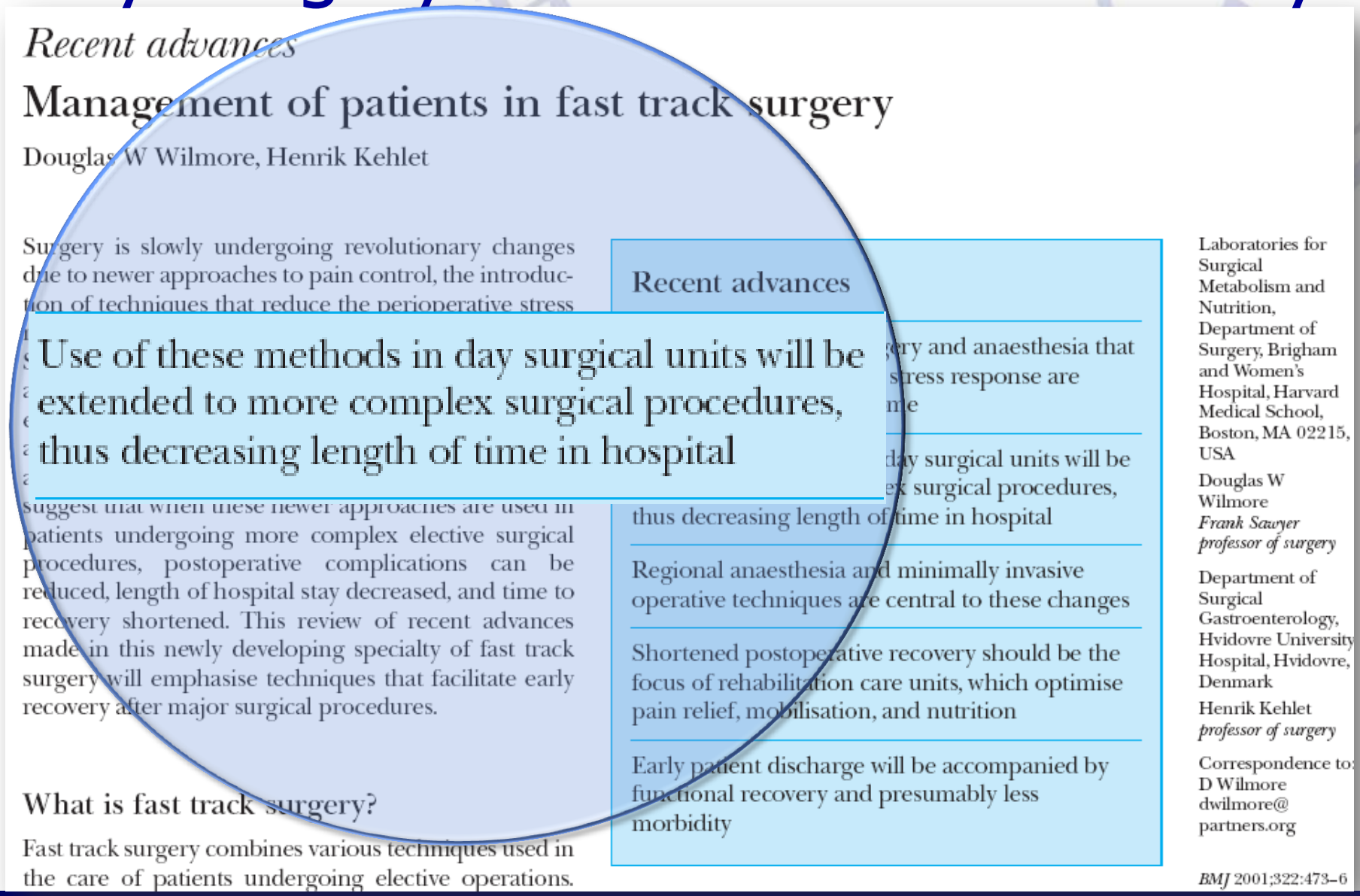


Quality Ambulatory Principles

Pre-assessment
Optimised Health
Patient information
Discharge Planning
Minimally invasive
Regional anaesthesia
Goal directed fluid therapy
Planned mobilisation
Regular analgesia
Avoid Opiates
Nurse Led Discharge
Discharge information
Follow up if required



Day Surgery and Enhanced Recovery



Recent advances

Management of patients in fast track surgery

Douglas W Wilmore, Henrik Kehlet

Surgery is slowly undergoing revolutionary changes due to newer approaches to pain control, the introduction of techniques that reduce the perioperative stress

Use of these methods in day surgical units will be extended to more complex surgical procedures, thus decreasing length of time in hospital

suggest that when these newer approaches are used in patients undergoing more complex elective surgical procedures, postoperative complications can be reduced, length of hospital stay decreased, and time to recovery shortened. This review of recent advances made in this newly developing specialty of fast track surgery will emphasise techniques that facilitate early recovery after major surgical procedures.

What is fast track surgery?

Fast track surgery combines various techniques used in the care of patients undergoing elective operations.

Recent advances

…ery and anaesthesia that …stress response are …e

…day surgical units will be …x surgical procedures, thus decreasing length of time in hospital

Regional anaesthesia and minimally invasive operative techniques are central to these changes

Shortened postoperative recovery should be the focus of rehabilitation care units, which optimise pain relief, mobilisation, and nutrition

Early patient discharge will be accompanied by functional recovery and presumably less morbidity

Laboratories for Surgical Metabolism and Nutrition, Department of Surgery, Brigham and Women's Hospital, Harvard Medical School, Boston, MA 02215, USA

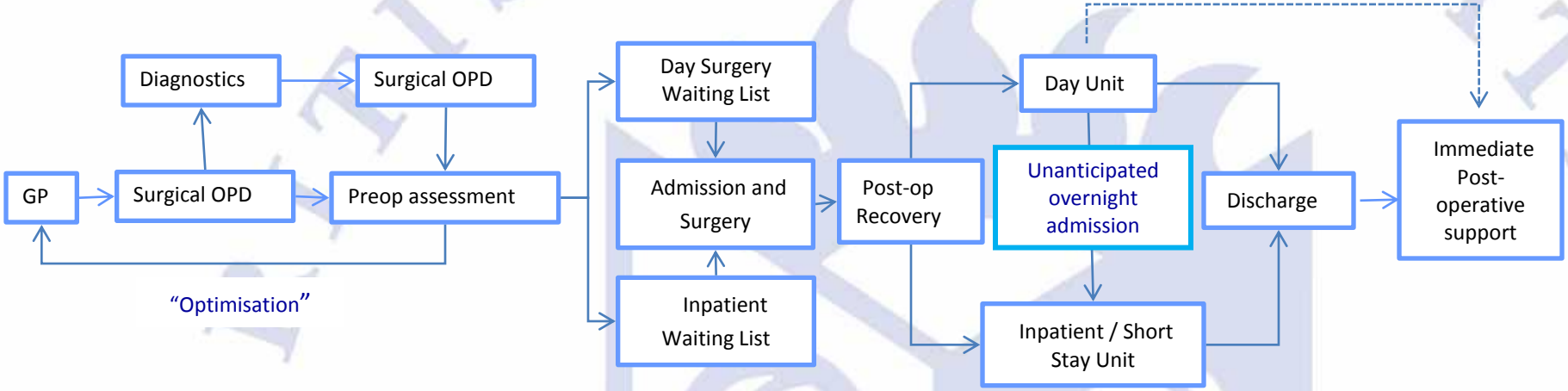
Douglas W Wilmore
Frank Sawyer professor of surgery

Department of Surgical Gastroenterology, Hvidovre University Hospital, Hvidovre, Denmark

Henrik Kehlet
professor of surgery

Correspondence to: D Wilmore dwilmore@partners.org

BMJ 2001;322:473–6



Day and Short Stay Surgery Pathway

Key Areas on the Patient Administative Pathway

Rate limiting steps

1. Criteria
2. Preassessment
3. Patient Admission
4. Theatre Efficiency
5. Discharge Process

Domains

1. Quality
2. Cost
3. Safety