

Evolution of Day Surgery in the UK: Lessons learnt along the way?

Mr Kian Chin FRCS
BADs Executive Council
28th March 2017

Consultant Breast Surgeon & Associate Medical Director
Milton Keynes University Hospital NHSFT



Excellence in short stay surgery

- 
1. Historical Timeline
 2. Government Initiatives
 3. Pathway Re-Design
 4. Team & Facilities
 5. Benchmarking
 6. Incentivisation
 7. Sustainability



Historical timeline

Is day surgery better than in-patient surgery ?

Not evidence based

but...

Day Surgery is a
process not a
procedure



Patients Like Day Surgery

- Quality Care
 - early recovery
 - minimal disruption
 - comfort of own home
- Patient-centred Pathway
- Better Care, Safer Care





Father of Modern Day Surgery

- 1899-1908 reported on 8988 ops
- performed at the Sick Children's Hospital & Dispensary, Glasgow

BMJ 2:753, 1909

James H. Nicoll
(1864–1921)



Reprinted from THE BRITISH MEDICAL JOURNAL, Sept. 18, 1909

THE SURGERY OF INFANCY

By JAMES H. NICOLL, M.B., C.M.GLASG.,

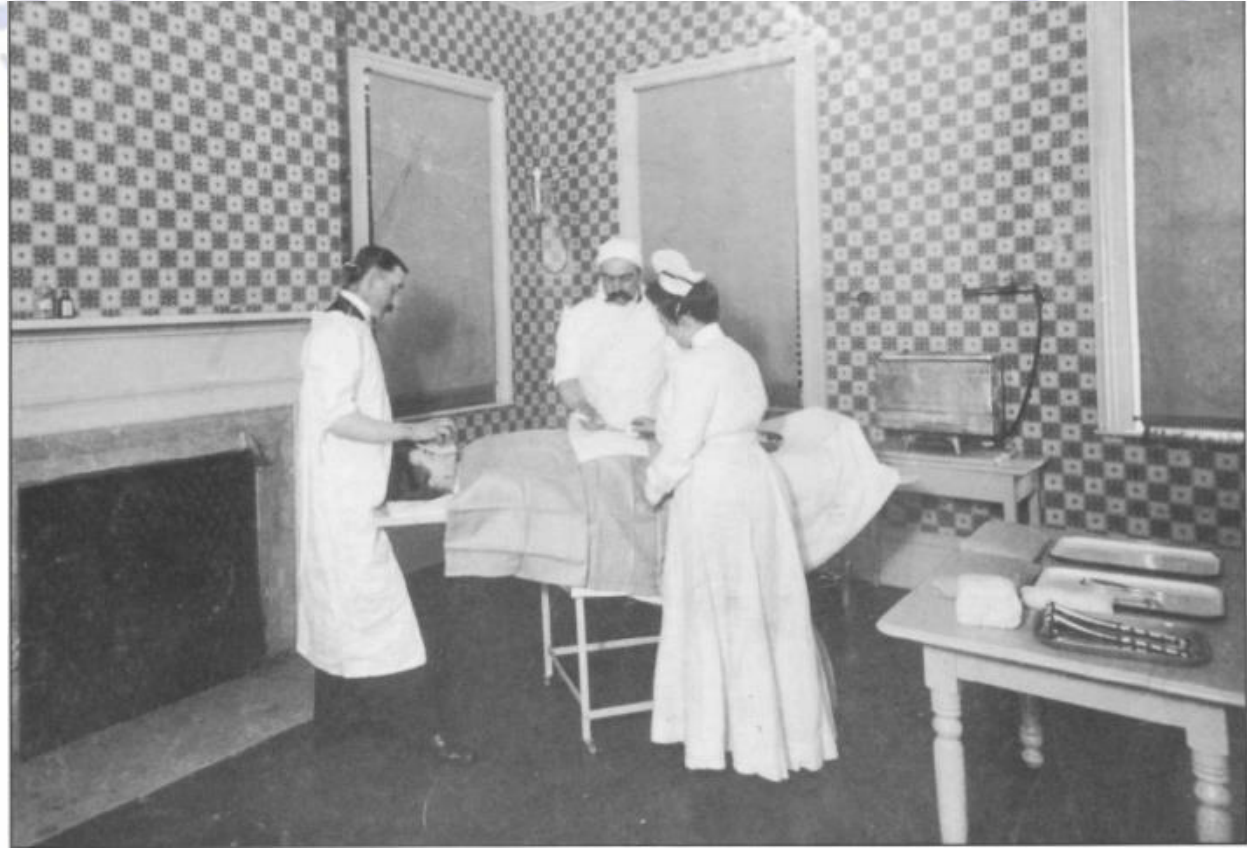
Surgeon, Western Infirmary; and to the Royal Hospital for Sick Children, Glasgow.

I DESIRE to bring forward certain views concerning surgical operations in infants and young children, and it may be well, in the first instance, to indicate the basis on which such conclusions as I have arrived at have taken shape.

As influencing my opinions, doubtless the experiences of some twenty years of private surgical practice, and of my wards in the Western Infirmary, have been factors; but I desire to found myself mainly on the out-patient practice of the Glasgow Royal Hospital for Sick Children, in which for some fifteen years I have been in charge of a clinic. During the past ten years (1899 to 1908 inclusive) the work in that clinic has included some 9,000 operations (strictly, 8,988), of which 7,392 have been performed by myself. They have embraced operations for many of the usual affections of childhood, which in a city such as Glasgow naturally include a large proportion of cases of surgical tuberculosis of bones, joints, and glands. Amongst others, however, there have been 610 operations for talipes (tarsectomy, tarsotomy, astragalectomy, and tendon operations); 406 for hare-lip and cleft palate; 36 for spina bifida; 23 for depressed birth fracture of skull; 18 for congenital stenosis of pylorus; 167 for mastoid empyema; 143 for ligature or resection of internal jugular vein in course of radical mastoid operation or excision of cervical glands; and 220 for hernia, inguinal, umbilical, and ovarian (during the past five years only).

**Ralph Waters
(1883–1979)**

**1919: The Down-Town Anesthesia
Clinic, Sioux City, USA**



USA: First Hospital Based Day Surgery Units

Opened in

1951: Grand Rapids, Michigan

1952: Los Angeles

Widely realized benefits drove the progress of DS in the USA and Australia, 50s, 60s and 70s

Table 1.1 A timeline for day and short-stay surgery

| Date | Key events |
|------|---|
| 1909 | James Nicoll, a Glasgow surgeon, publishes 'The surgery of infancy' in the <i>British Medical Journal</i> |
| 1916 | Ralph Waters opens his 'downtown anaesthesia clinic' in Sioux City, Iowa |
| 1951 | The first hospital-based day surgery unit is opened in Grand Rapids, Michigan |
| 1955 | Eric Farquharson, an Edinburgh surgeon, publishes a series of 458 consecutive day case inguinal hernia repairs in <i>The Lancet</i> |
| 1969 | The first free-standing ambulatory surgical centre is opened in Phoenix, Arizona |
| 1969 | James Calnan opens the first day unit in the UK at the Hammersmith Hospital, London |
| 1985 | The Royal College of Surgeons of England suggest a 50% target for elective surgical procedures to be performed as day cases |
| 1989 | The British Association of Day Surgery (BADS) is formed |
| 1991 | Audit Commission <i>Basket of 20</i> published |
| 1993 | National Day Surgery Task Force suggests a 60% target for day surgery |
| 1995 | International Association of Ambulatory Surgery formed |
| 2001 | Audit Commission <i>Basket of 25</i> published Modernization Agency indicates a 75% target for day surgery |
| 2006 | BADS <i>Directory of Procedures</i> published |

**Early Years
Little progress
in the UK**

and the strongest of several reasons for restricting the use of streptomycin to those types of case most likely to benefit from it. The result of making the drug more widely available will be an insistent demand for it from many patients in whom its use is unlikely to have any but a transient effect, and it will be the duty of the profession to resist such demands firmly. To treat a chronic advanced case with cavitation can have little effect but to convert the patient into a much more dangerous source of infection for other people. There is no evidence whatever that a tubercle bacillus—or indeed any other organism—which has acquired streptomycin resistance can lose it again. So far as is known the change is permanent.

EARLY RISING AFTER OPERATION

To make patients get out of bed a day or two after operation is not a new idea, and though this practice is rapidly becoming more popular there is still considerable opposition to it in many parts of Britain. Emil Ries is reputed to have been the first advocate of early post-operative ambulation in America. His paper was presented at a meeting of the American Medical Association in 1899 and was given a most favourable reception by all the succeeding speakers except one. It is, therefore, rather surprising that Ries's advice was not widely accepted. Perhaps it was because tradition and habit die hard in medicine, and this is especially true of methods sanctioned and advocated by great authorities. In this country we have not lacked distinguished supporters for the therapeutic importance of rest: John Hunter described it as the most powerful aid which the surgeon could bring to disordered tissue; Hugh Owen Thomas stated that "rest must be enforced, uninterrupted, and prolonged"; and there are few of us who were not advised as students to read the classical essays of Hilton.²

Up to 1939 confinement to bed for ten to fourteen days after a major operation was the usual custom in this country and the United States. Continental practice was more adventurous, and early rising was occasionally advocated in Russia and Germany in a manner which many considered almost barbaric. But shortage of hospital beds during the war and the pressing demands on manpower encouraged a change of view, and there is now a growing and enthusiastic body of supporters of early post-operative ambulation. The majority of patients can readily get out of bed by the third or fourth day after operation, and many of them might with advantage get up even earlier. There is more than historical interest in the fact that Dr. Ephraim McDowell, who did the first successful ovariectomy in 1809, found his patient up making her bed on the fifth day after operation.³

What are the benefits of early ambulation? First, morale is greatly improved by early rising, and most patients,

having overcome their natural apprehension, are gratified to find how comfortable and fit they are. General health and strength are better maintained, and convalescence is more rapid. Secondly, retention of urine, together with those difficulties associated with the use of the bed-pan, is almost entirely obviated, and the work of the nurses is made easier. For patients who are not fit enough to walk to the lavatory the wheeled chair described by Bohmanson and Malmros,⁴ which can be pushed over a w.c., is of considerable value. The patient is thereby spared embarrassment and discomfort, while his neighbours avoid those unpleasant odours which are commonplace in hospital wards. Thirdly, as many authors have reported,⁵⁻¹⁰ early ambulation diminishes the incidence of post-operative pulmonary collapse, and if collapse does occur it generally resolves more rapidly. Churchill¹¹ demonstrated an appreciable reduction in the vital capacity after abdominal and hernia operations, while Cutler¹² has shown that the vital capacity returns to normal in half the time if the patient is up and active. As a result of studying the diaphragmatic movements after operation Howkins¹³ concluded that so long as the patient had to remain in bed he should be in a comfortable recumbent position with free and frequent movement. Like Spalding,¹⁴ he condemns the Fowler position and advocates early ambulation wherever this is possible. Finally, most workers believe that venous thrombosis and its sequelae are not so likely to occur if early rising is practised.¹⁵⁻¹⁷ According to some reports these complications are lessened tenfold, but most authorities find that the incidence is not reduced by much more than half.¹⁸ It is suggested by others that rising on or after the fourth post-operative day produces little or no diminution in thrombosis and embolism; the greatest reduction in these complications appears to occur when patients get up on the first or second day after operation.

The abdominal surgeon's chief anxiety about early rising has been the integrity of his suture line, and wound disruption and post-operative herniation were much feared. For these reasons metallic sutures, and especially stainless steel wire, have been advocated,^{1, 19} but operation wounds will heal rapidly and securely even without such desirable aids as non-absorbable sutures. Royster and his co-workers²⁰ showed that wound healing was as sound in ambulant dogs as in those which had been kept inactive, and Newburger²¹ found that wounds healed more rapidly in ambulant rats, thus confirming the earlier work of Kimbarovsky.²² Experience with human patients supports these findings. There is no published evidence that early rising increases the recurrence rate of inguinal hernia.^{23, 24}

Contraindications to early ambulation after operation are peritonitis, severe ileus, shock and haemorrhage, cardiac failure, and infective conditions of the legs which preclude

² *Proceedings of the International Assembly of the Inter-State Postgraduate Medical Association of North America*, 1941, p. 232.

³ *Lancet*, 1948, 2, 35.

⁴ *Ibid.*, 1946, 1, 643.

⁵ Jorgens, E., *Heparin in the Treatment of Thrombosis*, 1946, Oxford University Press, London.

⁶ Crafoord, C., Personal communication, 1947.

⁷ Ochsner, A., *J. Amer. med. Ass.*, 1946, 132, 827.

⁸ Allen, A. W., *et al.*, *Ibid.*, 1945, 128, 297.

⁹ Abel, A. L., and Hunt, A. H., *British Medical Journal*, 1948, 2, 379.

¹⁰ *Surg. Gynec. Obstet.*, 1948, 88, 565.

¹¹ *Surgery*, 1943, 13, 692.

¹² *Nov. chir. Arch.*, 1935, 38, 57.

¹³ Hodgett, J. R., and Beattie, E. J., *Surg. Gynec. Obstet.*, 1947, 84, 716.

¹⁴ Pratt, G. H., *ibid.*, 1948, 88, 530.

¹⁵ *British Medical Journal*, 1947, 2, 967.

¹ *J. Amer. med. Ass.*, 1899, 33, 454.

² *Rest and Pain*, 1892, George Bell and Sons, London.

³ Haggard, W. D., *Surg. Gynec. Obstet.*, 1934, 58, 415.

⁴ *Lancet*, 1947, 2, 509.

⁵ Booth, J. D., *Conn. med. J.*, 1947, 11, 609.

⁶ Deming, C. D., *ibid.*, 1947, 11, 611.

⁷ Cornell, N. W., and Lin, D. T. W., *Surg. Gynec. Obstet.*, 1947, 88, 294.

⁸ Davison, T. C., *et al.*, *J. med. Ass. Can.*, 1947, 38, 299.

⁹ Leithausner, D. J., *Arch. Surg.*, 1943, 67, 203.

¹⁰ Leithausner, D. J., *et al.*, *ibid.*, 1941, 62, 1086.

¹¹ *Surg. Gynec. Obstet.*, 1927, 44, 483.

Little progress in DS

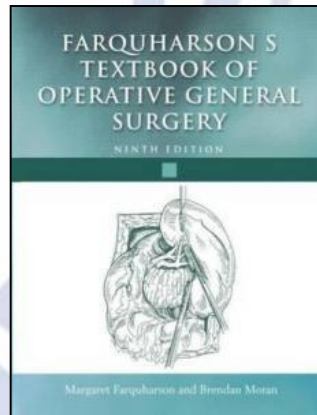
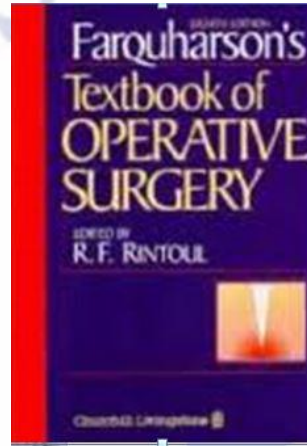
British Medical Journal in 1948:

Any surgeon who allows a patient to leave hospital within 14 days of an abdominal operation (this would include hernia repair) would be in a difficult position should complications occur'.

Day Case Inguinal Hernia 1955



Eric L Farquharson



458 Consecutive Day
Case Inguinal Hernia
Repairs

Farquharson EL, Lancet
1955;ii:517-9

1967: Day Surgery in Hammersmith Hospital, London

- Professor James Calnan (b.1916) (Physician, Anaes. and Surgeon)
- Day case surgery in a car park. Operated 10,000 in the first 10 years.
- But DS adoption remains slow partly due to DS requires change of culture: seeing patient on the same of admission



UK Day Surgery

The Early Years:

- Sporadic pioneers throughout the world

The Formative Years: Late 1970s – early 1980s

- pioneering enthusiasts
- local developments
- medical & nursing establishment apathetic

The Modern Era: 2000 onwards

- RCSEng published: 50% of elective surgery to be done as day case
- NHS Modernisation agency
- British Association of Day Surgery, BADS (formed 1989)

British Association of day Surgery

Strategic Aims of BADS:

Maintain **visibility** of DS nationally and internationally

Provide **education** about DS for patients and professionals

Support **research** and **quality improvement**

Offer specialist **advice** and support on DS related topics

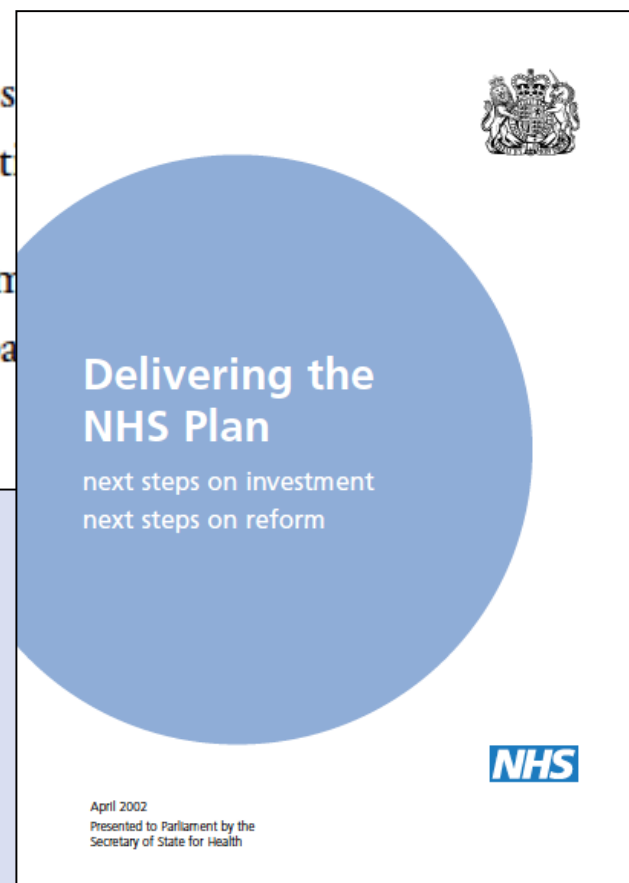


Government initiatives

3.7 In addition we will expand and make better use of hospital capacity through a combination of measures. By 2008 we expect the NHS will have:

- increased the number of operations carried out as same day cases to over 75% of all operations – the equivalent of adding an extra 1,700 general and acute beds in hospitals;
- opened 42 additional major hospital schemes most using PFI with 13 more major schemes under construction;
- additional fully operational Diagnostic and Treatment Centres and the generation of fast-track surgery centres which separate elective from emergency surgery.

Alan Milburn
NHS Plan (2002)



Government Initiatives

NHS Modernisation Agency

- 2002–5
- Clinical Champions
- BADS Collaboration
- Benchmarking exercise with other Trusts



The British Association of Day Surgery

In association with



VANGUARD HEALTHCARE

Presents a one day conference

Day Surgery 2003 New Partnerships

on Friday 21st March 2003

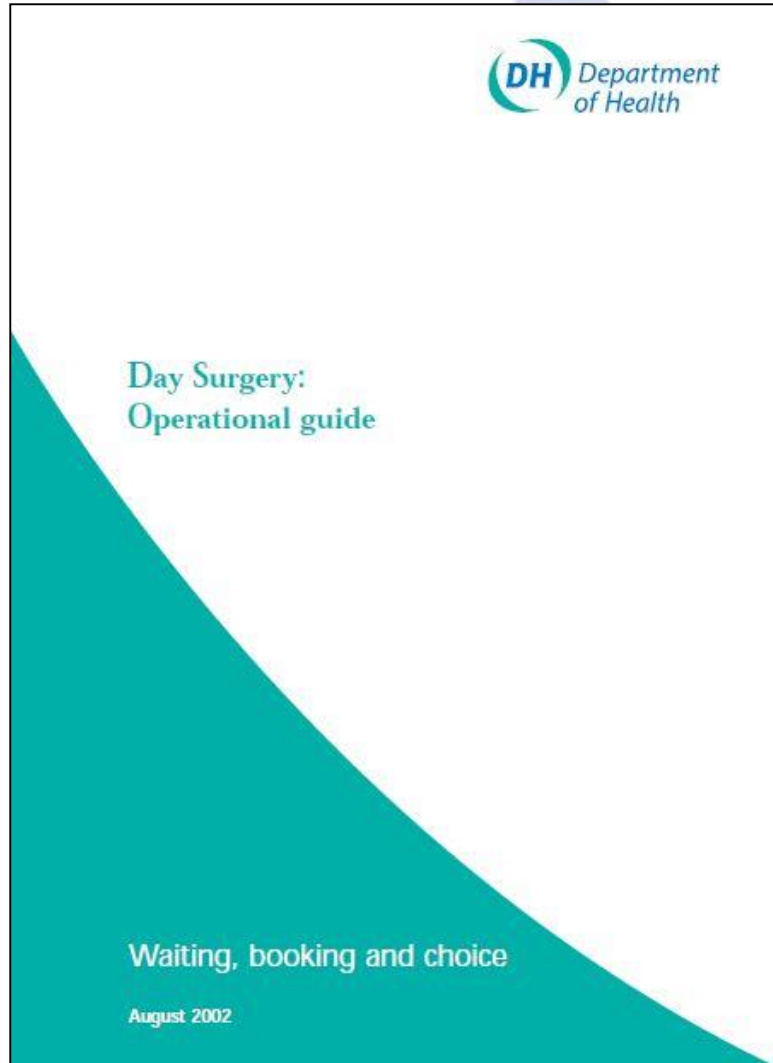
at the Queen Elizabeth II Conference Centre, Westminster, London

Keynote: Day Surgery in the Modernisation Agenda

Mr Michael Scott

Director for Service Improvement, NHS Modernisation Agency

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

Service Improvement and Delivery

Top High Impact factor:

Treat day surgery (rather than in-patient surgery) as the norm for elective surgery



John Reid (2003 -05)

NHS Mod. Agency, 2004

Table 1: 10 High Impact Changes for service improvement and delivery

- Change N°1:** Treat day surgery (rather than inpatient surgery) as the norm for elective surgery.
- Change N°2:** Improve patient flow across the whole NHS system by improving access to key diagnostic tests.
- Change N°3:** Manage variation in patient discharge, thereby reducing length of stay.
- Change N°4:** Manage variation in the patient admission process.
- Change N°5:** Avoid unnecessary follow-ups for patients and provide necessary follow-ups in the right care setting.
- Change N°6:** Increase the reliability of performing therapeutic interventions through a Care Bundle approach.
- Change N°7:** Apply a systematic approach to care for people with long-term conditions.
- Change N°8:** Improve patient access by reducing the number of queues.
- Change N°9:** Optimise patient flow through service bottlenecks using process templates.
- Change N°10:** Redesign and extend roles in line with efficient patient pathways to attract and retain an effective workforce.

The Labour Party Manifesto 2010



Labour
labour.org.uk

labour.org.uk/manifesto

The Labour Party Manifesto 2010

Health



Patricia Hewitt:
Health Secretary, 2005

The challenge for Britain

To build a better health service by protecting NHS spending and by shifting to more preventative and personal care, clear patient guarantees and greater care in the home. The Tories will not introduce the necessary reforms, would fail to guarantee access to services, usher in a postcode lottery, and put the interests of patients second.

The next stage of national renewal

- Legally binding guarantees for patients including the right to cancer test results within one week of referral, and a maximum 18 weeks' wait for treatment or the offer of going private.



What Next?

All of sudden, there is sense of adopting DS
to deliver 18 weeks targets?

But how?

Pathway Re-Design

TOPICS:

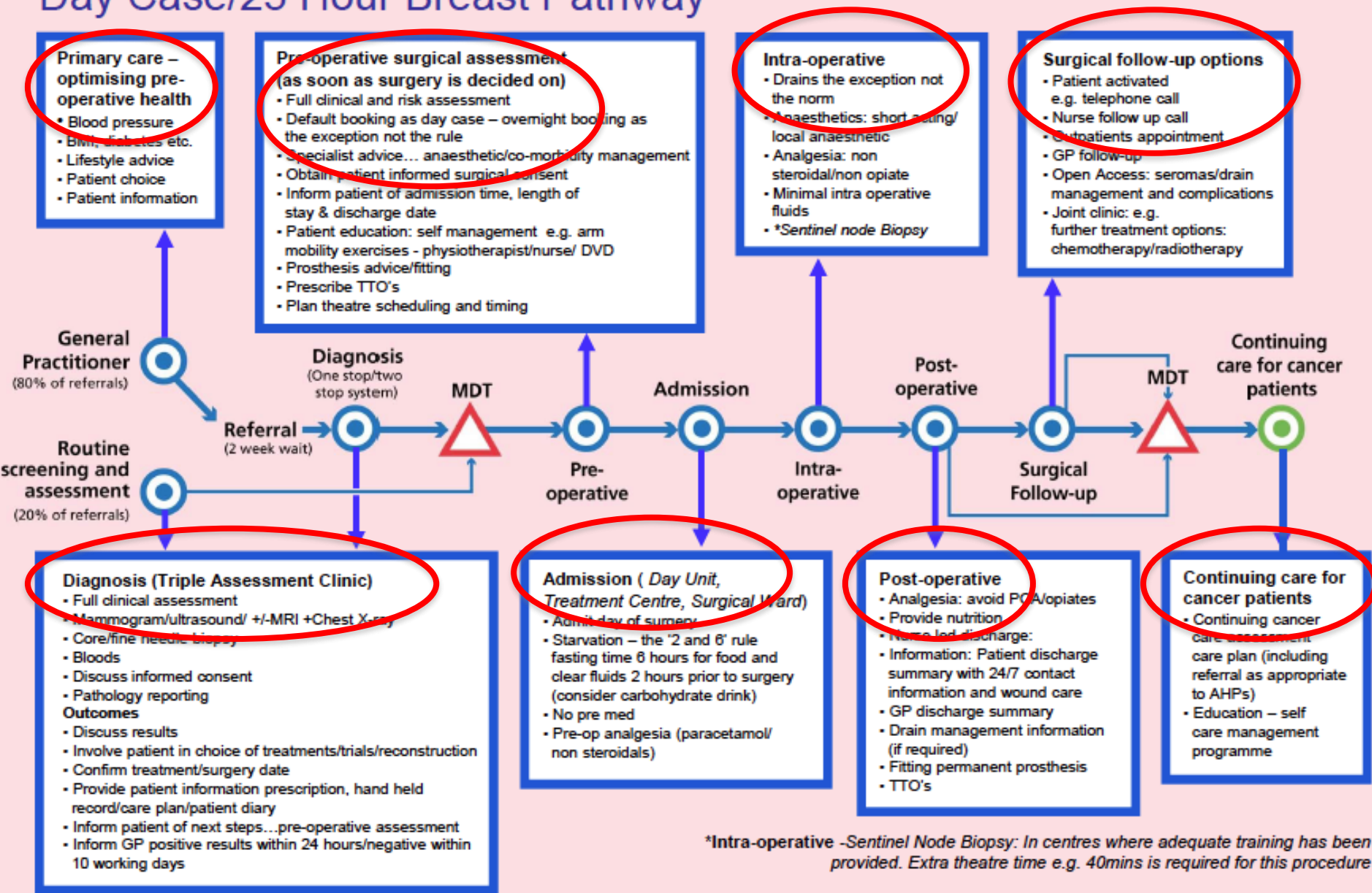
- Patient Referral
- Patient Selection
- Preoperative assessment
- Booking for surgery
- The day of surgery
- Patient Discharge and support

THE PATHWAY TO SUCCESS -
Management of the
Day Surgical Patient



Excellence in short stay surgery

Day Case/23 Hour Breast Pathway



*Intra-operative -Sentinel Node Biopsy: In centres where adequate training has been provided. Extra theatre time e.g. 40mins is required for this procedure

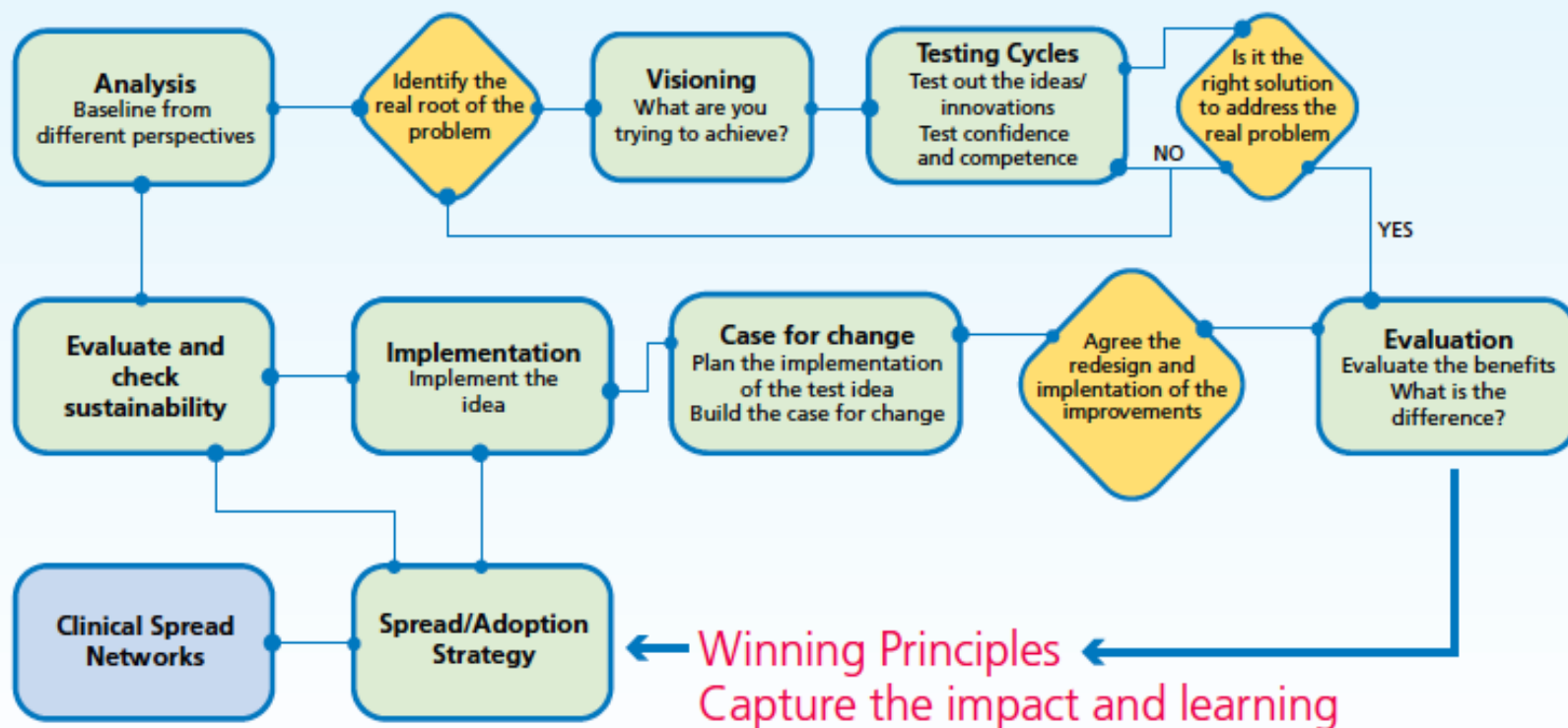
'Patient involvement & Choice Guarantee'

'Professional & Patient Outcome Audits'

← Patient informed decision making →

Keep improvement simple

Figure 5: A consistent systematic approach was applied to capture the impact and learning



2. Learning and unlearning

Learning and unlearning

Many lessons have been learned over the four years. Some of the learning was new, reiterative and challenging.

It was evident across the sites that there was variation in service improvement understanding and application. Also, the time required for redesign was a challenge for many organisations. This can make the continuous spread of improvement difficult.

Supporting spread: Key learning from the clinical spread networks:
The knowledge of 13

Take a systematic approach to service improvement. This takes time but **builds up a good evidence base** and gets to the real root of the problem.

Understand the national and local context and coherence with local values and priorities. This should not be underestimated and is needed to **gain commitment to deliver in challenging times**.

Give the right messages in the right language to the different audiences and to spread the knowledge for persuasion and decisions.

Clinicians don't like targets, managers do, and patients are more concerned with getting better.

Patient experience and feedback is a key factor in accelerating the pace of spread.

Engagement with key people leading change is not enough, **support them to manage, organise and mobilise the change**.

Build relationships across professions and organisational boundaries.

There is a need to create the common purpose.

Feedbacks from Network

- 'Systemic approach'
- 'Collate evidence'
- 'Patient Experience'
- 'Engagement'
- 'Create a common purpose'
- 'Give right messages'

NATIONAL CLINICAL SPREAD NETWORKS BREAST CANCER SURGERY DAY CASE / 23 HOUR STAY



Initial workshop August 2010, London

- Agreement about:
 - Implementation
 - The pace of change
 - Identify drivers for change / influence current clinical practice
 - Disseminate and clinical evidence
 - Reach a consensus Hour Pathway
 - Agree outcome measures and assess impact

From testing to spread... the approach

Throughout the service improvement phases (Figure 4) NHS Improvement shared the learning across the NHS to encourage local spread, adoption and adaptation.

Figure 4: Service Improvement stages

| Phase | Year | Service Improvement stages | NHS coverage | Spreading the learning |
|-------|---------|---|---|--|
| 1 | 2007 | <ul style="list-style-type: none"> • Baseline the current situation • Review clinical procedures • Listen to all views and perspectives • Understand the culture, context and content of Trusts, clinical teams and pathways • Identify best practice and challenges | | |
| 2 | 2008 | <ul style="list-style-type: none"> • Testing out the idea: Proof of Principle – What could be achieved. The Winning Principles (2008) | 7 NHS hospital sites | The Winning Principles: Transforming Inpatient Care (July 2008) Meeting the Challenge Together (October 2008) |
| 3 | 2009 | <ul style="list-style-type: none"> • Prototype testing the transferability, confidence and competence of the improvement | 25 NHS hospital sites | Spreading the Winning Principles and Good Practice (July 2009) Consolidation Report (2009) From Testing to Spread |
| 4 | 2010-11 | <ul style="list-style-type: none"> • Spread, adoption and adaptation | 13 clinical spread networks (72 hospital sites) 41% coverage across England | Spreading the Winning Principles case studies (July 2010) Breast day case/one night stay case studies www.improvement.nhs.uk |

Project Start to finish:
2007 - 2010

Some clinical practice were just clinical myths!!

Four specific aspects were commonly highlighted:

1. Changing clinical practice relating to the use of wound drains, drainage of seromas and pain control.
2. Assumptions that patients would not want to go home earlier.
3. Perceptions that the redesign was a cost cutting exercise.
4. Preconceptions “We do this anyway” and “this will increase re-admissions.”

“One must learn by doing the thing, for though you think you know it, you have no certainty until you try.”

Sophocles, 400BC

Nurse-Led Discharge protocol

NURSE LED DISCHARGE



Excellence in short stay surgery

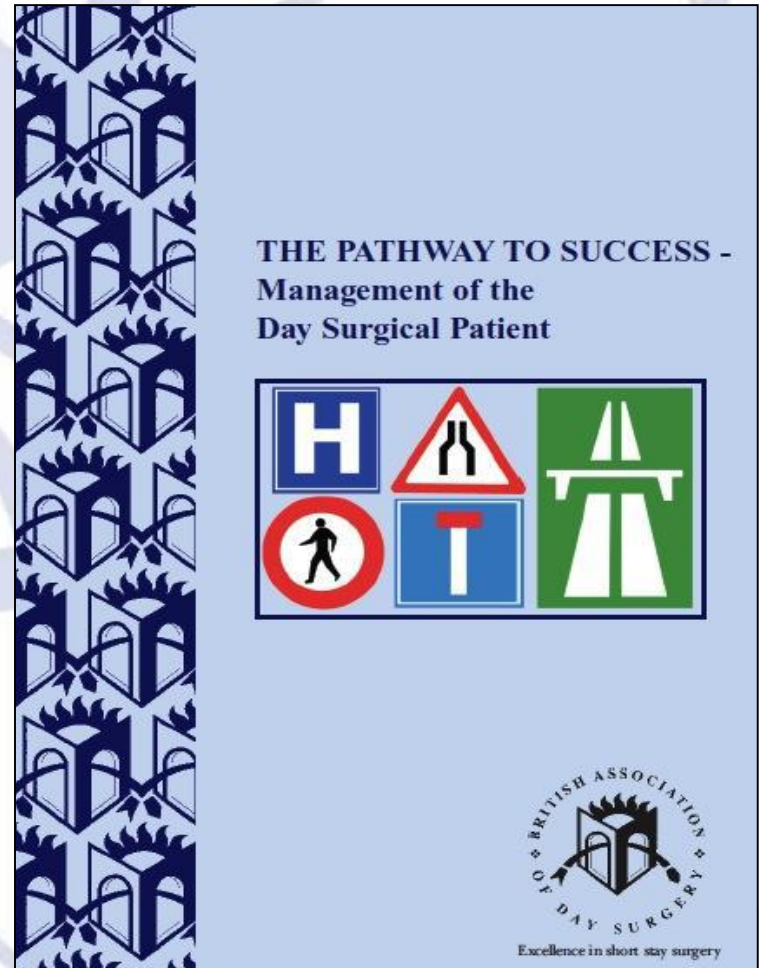
Discharge Criteria:

- 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**

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



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





Staff & Facilities

Facilities: What's Important?



Torbay Hospital: Patient Admission With Dedicated Facilities For Day Surgery

Unplanned admissions

Dedicated day unit :

1 %

In-patient ward:

17 %



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

Day Surgery Facilities

Day Case and 23hr stay

- Pro: Maximise bed capacity
- Con: Staff can be confused with priorities

Mixed Elective and Urgent Surgical Facilities

- Pro: Not ideal from a elective DS point of view
- Con: But may be suitable for Ambulatory Emergency Surgery

Dedicated Day Surgery Ward

- Pro: Ideal
- Con: But bottle necks of using the main operating theatres

Day Surgery vs Inpatient Nursing

- Higher turnover
- Lower dependency
 - time for individual needs
 - different priorities
- Wider ranging
 - sub-specialty skills
 - value of protocols



Medical Staffing



Day Surgery:
Operational guide

Waiting, booking and ch

August 2002

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND



Commission on
the Provision of Surgical Services

Report of the Working Party
on

GUIDELINES FOR DAY CASE SURGERY

Revised Edition
March
1992

The high standards required demand that:

operator & anaesthetist must be experienced

trainees should be personally supervised

requires higher consultant ratio

Choice of Anaesthetist

| Grade | Number of cases | Unplanned admission rate |
|--------------|-----------------|--------------------------|
| Consultant | 36,719 | 2.3% |
| Career Grade | 11,657 | 3.1% |
| Trainee | 9,908 | 3.3% |

*Hanousek, et al. —
Anaesthesia 64:152, 2009*

BADS Indicators for Quality in Day Surgery

- Management team
- Benchmarking day surgery rates
- Strategy for QI
- Dedicated Team / Staff working in DS
- Appropriate facilities for LA / GA
- Monitoring of Theatre Utilisation
- Dedicated preop assessment team
- Effective Nurse led discharge programme / protocol
- Audit programme for DS
- Good Information Prescription
- 24 hour access to care post discharge



Benchmarking

Day Surgery Performance

Where to find it?

Audit Commission's Basket of 25 Procedures 2001

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

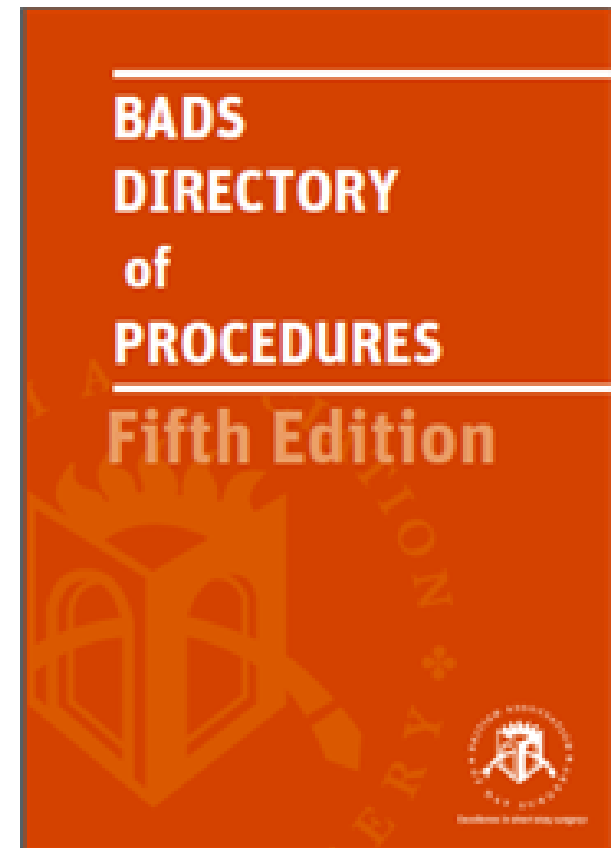
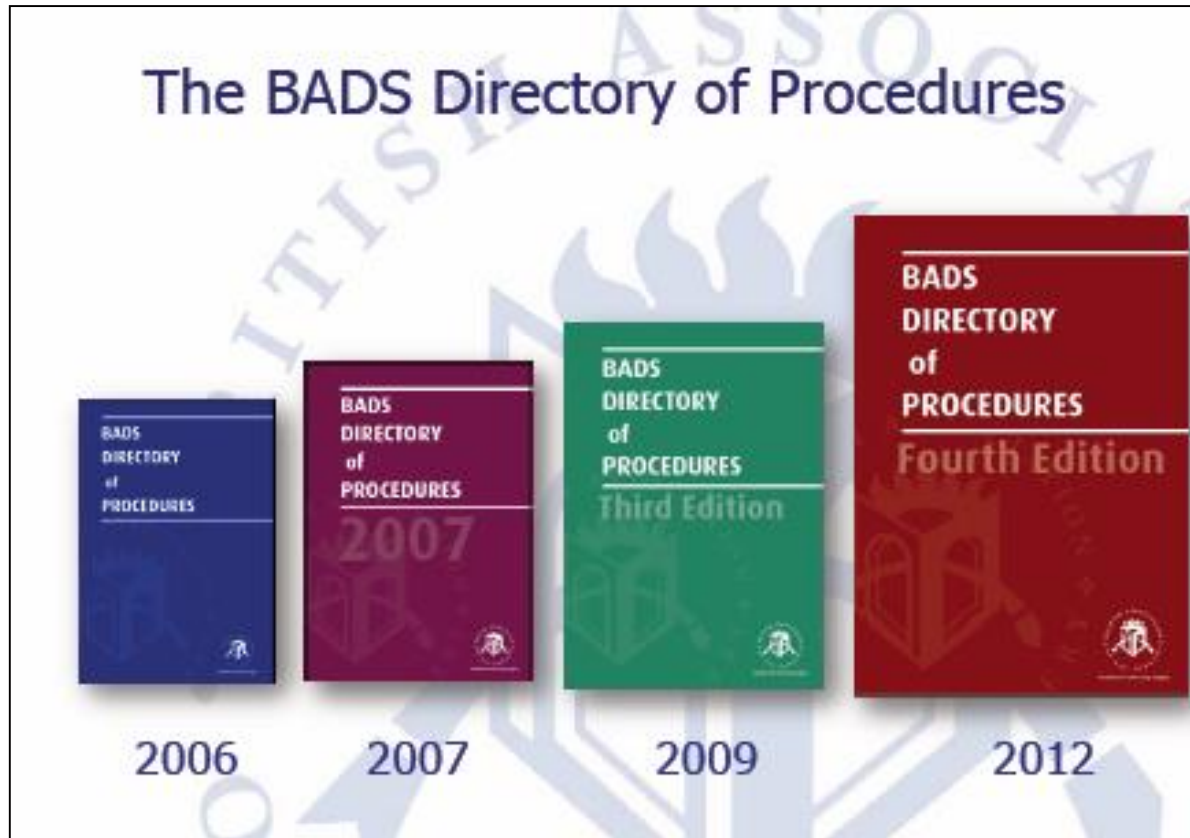
Circumcision

Arthroscopy

SMR

Termination of pregnancy

BADS Directory 5th Edition (2016)



12 sub-specialties, > 180 procedures

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.

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.



Photograph courtesy of The Sentinel

Day Case Awake Craniotomy for Tumour Resection

CRISPIN WEIDMANN & PAUL GRUNDY

Keywords: New day surgery procedures; Neurosurgery; Case report

Abstract:

We report a patient who underwent an image-guided awake craniotomy for tumour resection and was discharged home the same day. We believe this is the first day case craniotomy for resection of an intracranial tumour described in the United Kingdom



Weidmann & Grundy —
J One-day Surg 18: 45, 2008

Introduction

Awake craniotomy is becoming more popular for supratentorial tumour resection¹. Cortical mapping allows 'eloquent brain' (i.e., functional brain such as motor cortex, sensory cortex or speech areas) to be identified and preserved, facilitating maximal tumour resection whilst minimising the risk of permanent deficit. Day case awake craniotomies have been undertaken for a number of years in other international centres² and the concept of awake craniotomies being performed on a day case basis in the United Kingdom has been suggested previously³⁻⁴. However, we believe this is the first such case actually performed for tumour resection.

Case Report

In December 2006, a 47 year old right handed female presented with a history of focal seizures causing speech and visual disturbance. She had a past history of breast cancer. Radiological investigations revealed a 1.5 x 2.0 cm subcortical lesion in the left parietal region close to the surface. The mass was uniformly enhancing with surrounding oedema and lay anatomically in, or close to, Wernicke's area.

Following a multidisciplinary meeting and discussion with the patient, neurosurgical resection was advised, prior to further adjuvant therapy. In view of the location, surgery was performed with the patient awake to facilitate cortical mapping and identification of speech and sensory cortex in order to minimise the risk of permanent deficit and allow maximal tumour resection. Preparation for surgery began in the neurosurgical outpatient clinic. Extensive consultation was undertaken and the patient was given verbal and written information about the procedure. This was reinforced by a

preoperative anaesthetic assessment on the day of admission. Following consent, premedication of ranitidine, 150 mg and metoclopramide, 10 mg orally, were given prior to surgery, potentially minimising the risk of gastric aspiration.

In the anaesthetic room standard monitoring was placed, including noninvasive blood pressure, ECG, and pulse oximetry. A single large bore intravenous cannula was sited. No invasive monitoring was used and no urinary catheter was placed. To supplement anxiolysis, midazolam 2 mg was given intravenously. Identification and marking of the optimal pin positions on the patient's skull was followed by induction of an ultra-short general anaesthetic using a plasma site target controlled infusion [TCI] of propofol at 4 µg/ml in combination with a remifentanyl infusion (10 µg/ml) running at 20 ml/h. During this short anaesthetic, bag and mask ventilation was provided to maintain gas exchange. At loss of eyelash reflex, 2 ml of 1% lidocaine was injected into the scalp at each identified pin site for the Mayfield clamp. Once the clamp was in position, the TCI propofol was turned off and the patient allowed to awaken before being transferred to the operating theatre.

The patient was placed in the right lateral position and the Mayfield clamp was secured to the operating table. Monitoring was reconnected and supplemental oxygen was given via a Hudson mask at 3 l/min. In addition, a gas sampling line was inserted in to the side of the mask to give a guide of the expired partial pressure of carbon dioxide. With the patient now easily roused, any pain or discomfort was ascertained. TCI propofol was recommenced with a plasma target of 0.7 µg/ml and the remifentanyl was continued at 20

Authors' Addresses:
CRISPIN WEIDMANN Consultant Neuroanaesthetist
PAUL GRUNDY Consultant Neurosurgeon
Stackleberg Department of Anaesthetics, Southampton University Hospital Trust,
Teston Road, Southampton, SO16 6TD

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

Other data sources for performance benchmarking

NHS Better Care, Better Value Indicators
(incorporating Opportunity Locator)


Improving Quality

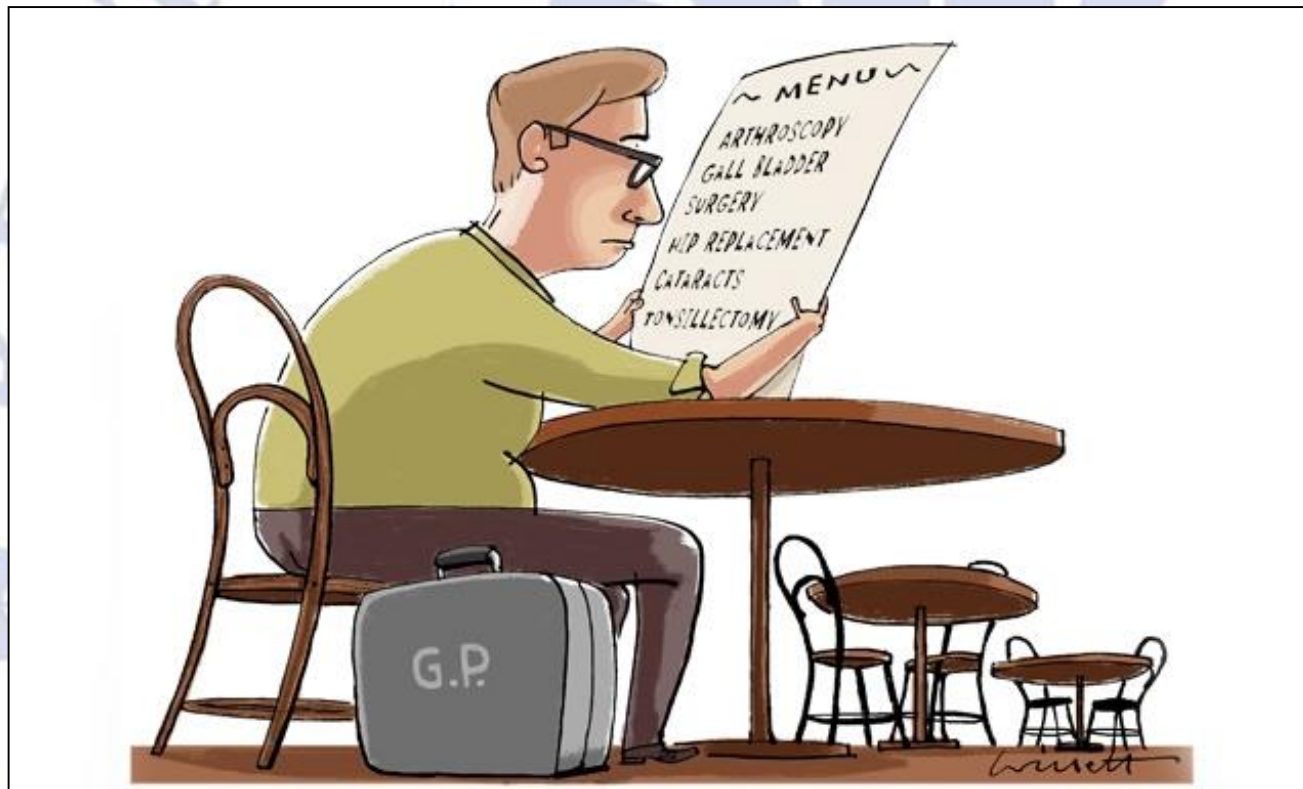
CCG/Trust data

GP data

www.productivity.nhs.uk

- Previously run by NHS Institute (disbanded)
- NHS Elect (Stopped march 2015)
- NHS Improving Quality (To be decommissioned 2017)

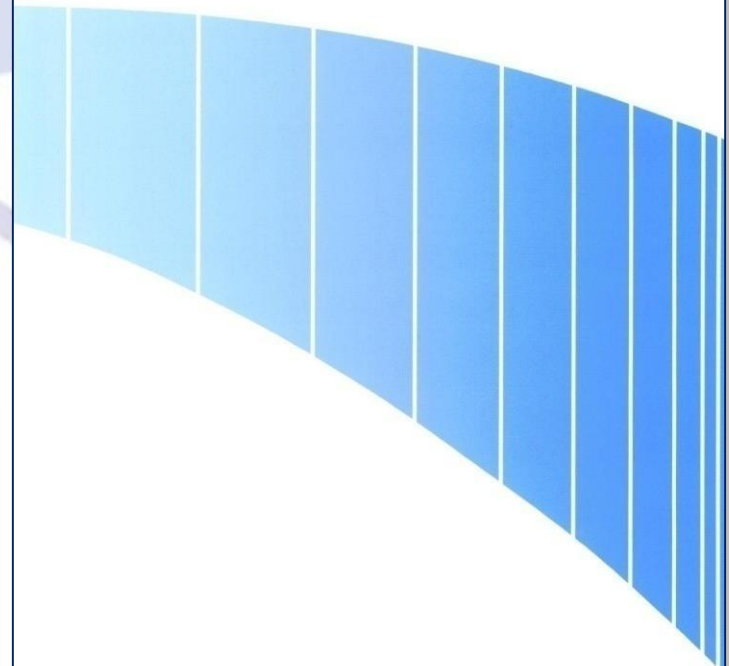
Incentivisation



Payment by Results BADs/PbR Steering Group

- Before 2010: Tariff reflects total workdone
- After: Proposed same tariff for IP and DC
- Then the clever PCT realised you can do better with DC
- BADs: we want tariff to reflect BPT. Hence, BADs coined Best Practice tariff for DC laparoscopic cholecystectomy was introduced

Options for the Future of Payment by Results: 2008/09 to 2010/11



Promoting Quality Day Care

Best Practice Tariff – Laparoscopic Cholecystectomy

2012/13

| | | Daycase tariff (£) | Elective spell tariff (£) |
|-------|---|--------------------|---------------------------|
| GA10D | Laparoscopic Cholecystectomy with length of stay 1 day or more without CC | - | 1,367 |
| GA10E | Laparoscopic Cholecystectomy with length of stay 0 days without CC | 1,662 | 1,367 |

Planned as day case }
Discharged day of surgery }



Tariff incentivisation for 2011-12

Enhanced reimbursement

- Breast Surgery
- Hernia Surgery
- Orthopaedic Forefoot Surgery

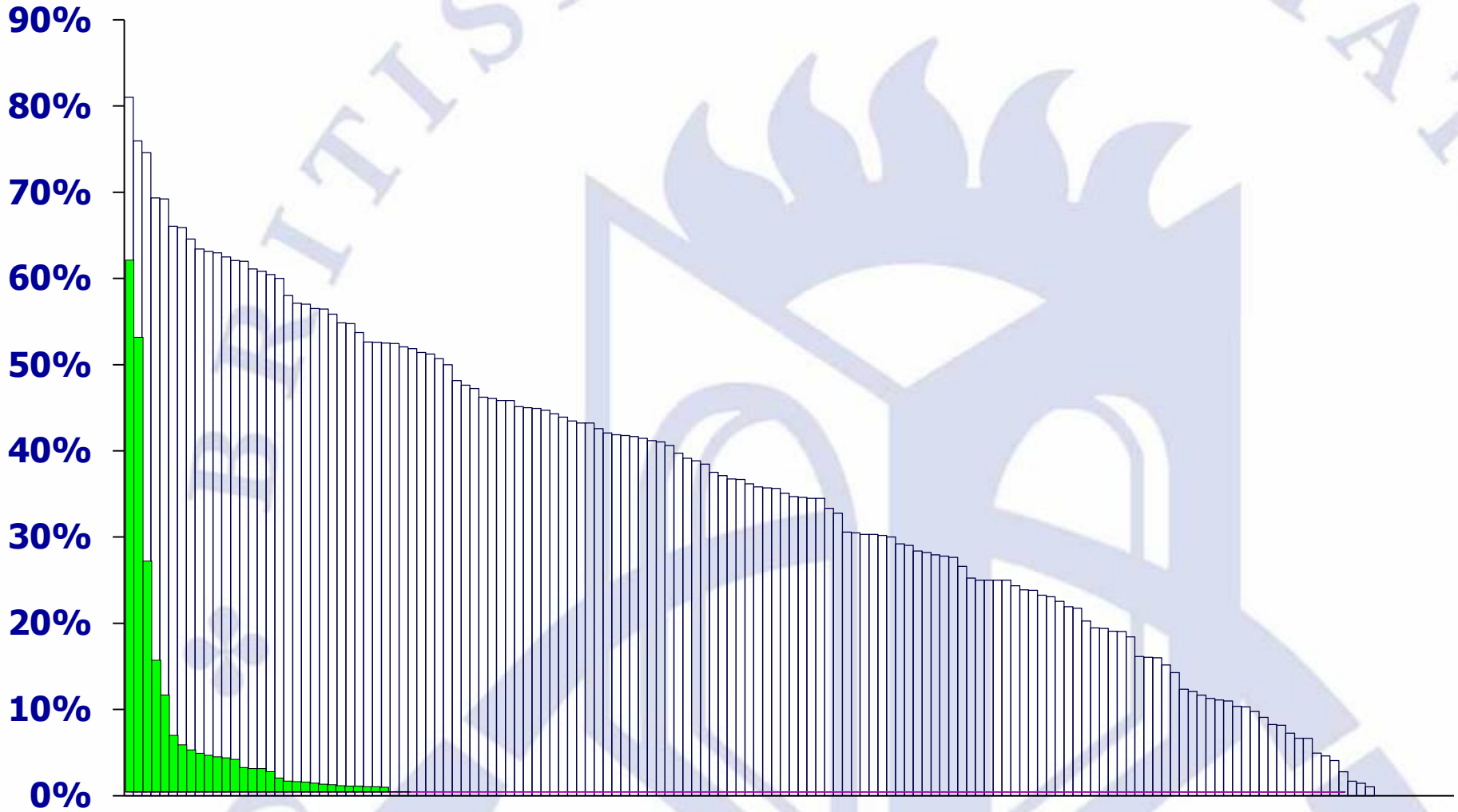
.....**IF** performed as Day Case!!

Impact of Best Practice Tariff



Howard, et al. J One-day Surg 21: 4, 2011

Over the last 10 years





Sustainability

It Won't Work Here...

Rural population

Urban population

Teaching hospital

DGH

Local poverty

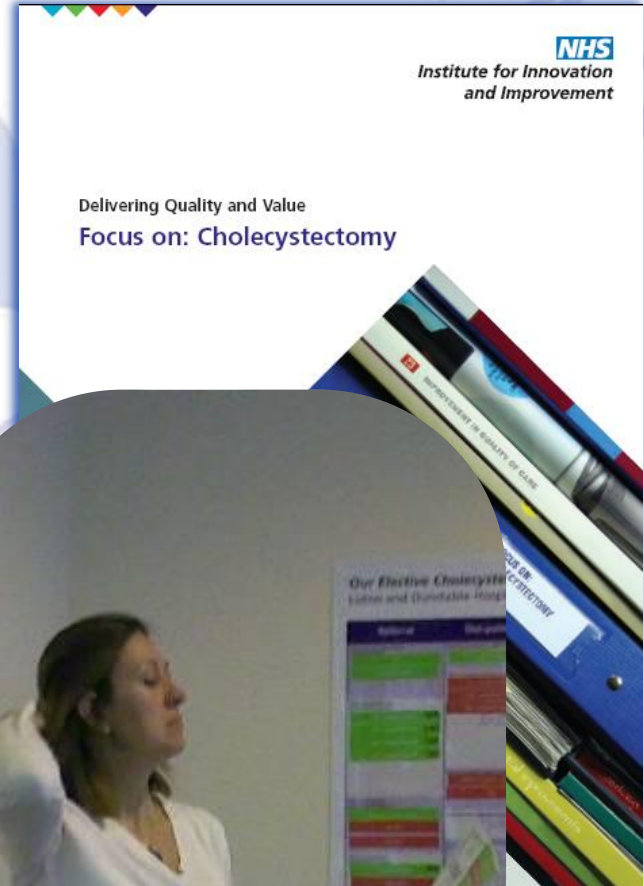
Local co-morbidities

DSU capacity

Layout of wards/theatres



NHS Institute for Innovation and Improvement toolkit



NHS
Institute for Innovation and Improvement

Our Elective Cholecystectomy Pathway

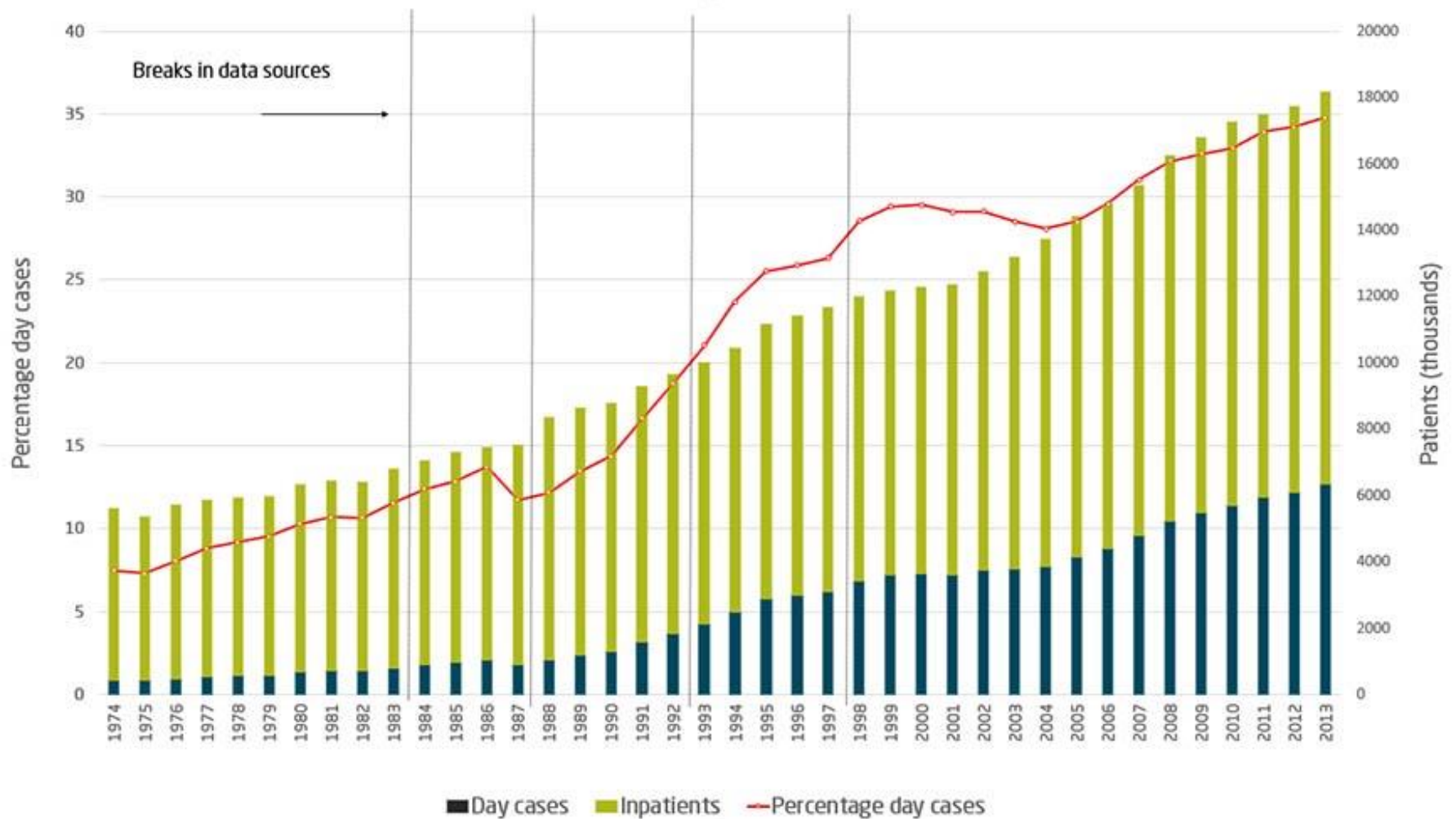
If any change is indicated off any table happens once

| Referral | Outpatients | Pre-assessment | Scheduling | Admission | Theatre | Post-operative care | |
|--|--|--|--|--------------------------------------|--|--|--|
| Who refers your patients? | How do you manage cancellations and did not attend? | When does pre-assessment occur? | Who performs pre-assessment? | When is the date for surgery given? | What bed/trolley facilities do you have? | How are theatre sessions agreed? | Do you have standardised discharge procedures? |
| A1 | B1 | C1 | C5 | D1 | E1 | F1 | H1 |
| A1 | What investigations are performed at outpatient appointment? | C1 | What process do you have for deciding day case or inpatient? | D1 | E1 | F1 | H1 |
| A1 | B2 | Where do patients go for pre-assessment? | C6 | Who compiles the theatre lists? | F1 | F1 | H1 |
| What investigations are completed prior to referral? | B2 | C2 | Is status for surgery reviewed? | D2 | E2 | F1 | H1 |
| A2 | B2 | C2 | C7 | D2 | Is day unit used as an escalation area? | Do you have briefings and de-briefings? | H1 |
| A2 | B2 | What investigations are performed at pre-assessment? | What BMI restriction do you have for day cases? | Who finalises order of theatre list? | E3 | F2 | H1 |
| What information is provided by the referrer? | What information is recorded at outpatient appointment? | C3 | C8 | D3 | When are patients admitted? | Who performs laparoscopic cholecystectomies? | H1 |
| A3 | B3 | C3 | What information is provided at pre-assessment? | D3 | E4 | F3 | When do you discharge your patients? |
| A3 | B3 | C3 | C9 | | | F3 | H2 |

Total number of elective laparoscopic cholecystectomies
Day Case Ratio
Average length of stay

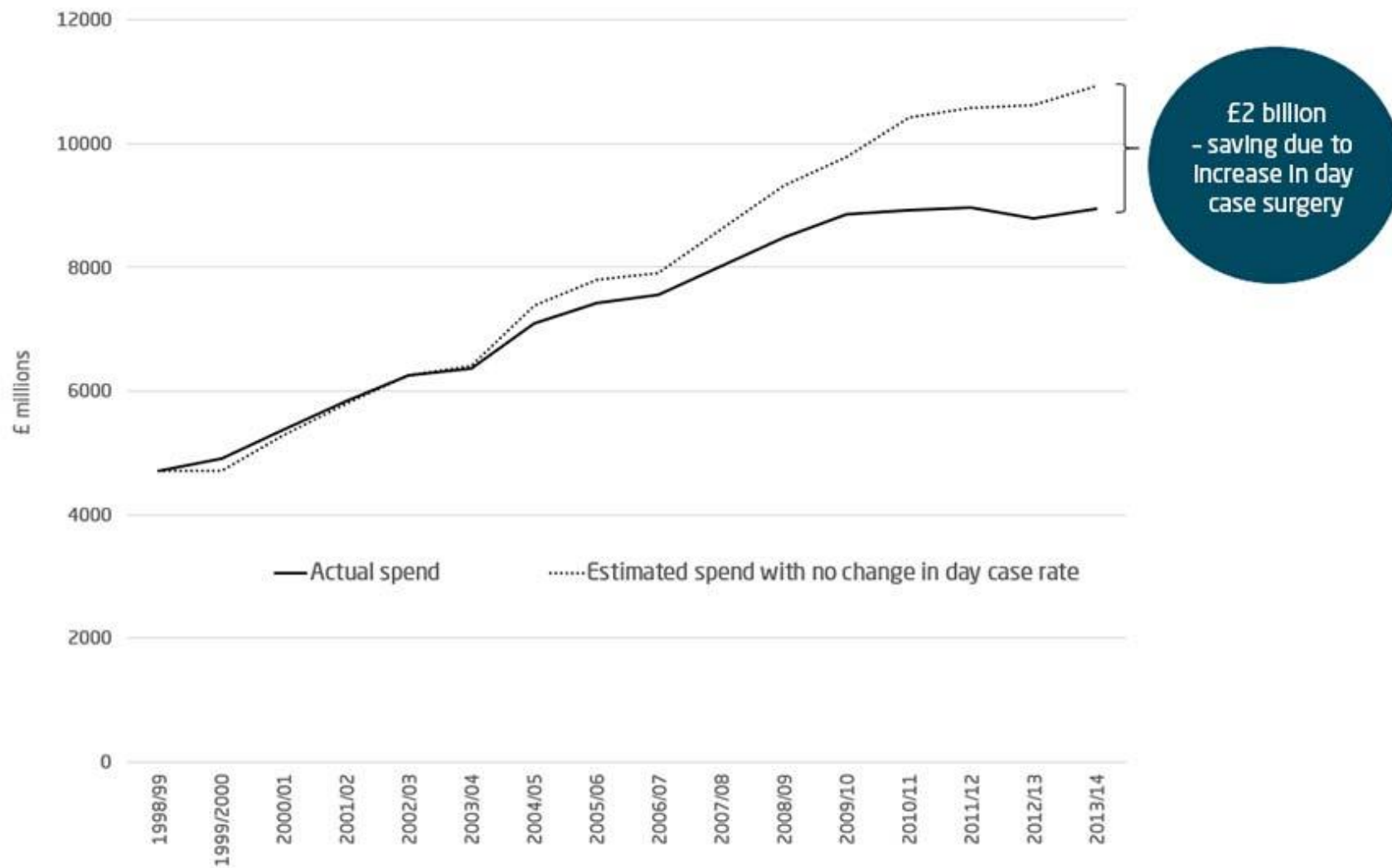


Figure 1: Proportion of all patient activity during the year carried out as day cases: England, 1974-2013



John Appleby, King's Fund, 2015

Figure 2: Spending on elective inpatients and day case patients in England, 1998-2014: actual versus estimated amount if day case activity remained at 1998 levels



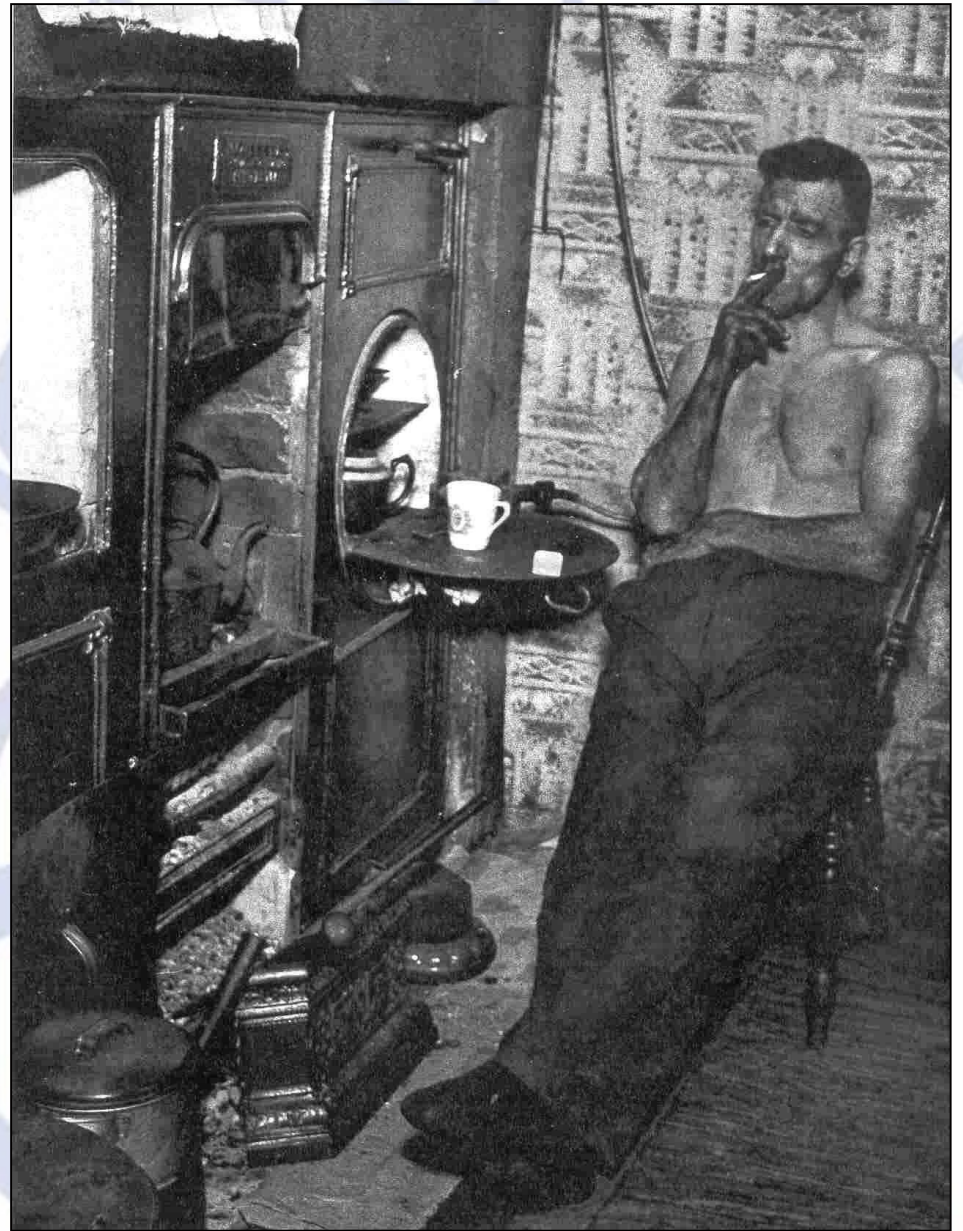
Ambulatory Emergency Surgery



Visions for SAEC in the UK:

- Minimize chaos management
- Identify a baseline
- Pathways re-design
- Collect Local and National Data
- Benchmark performance
- Specialized commissioning
- Accreditation of services

‘I don’t need a bed in
the hospital.
I have got a ***** bed
at home. What I need
is good medical care’



BADS Annual Scientific Conference 22 & 23 June 2017 (Southport Convention Centre)



Excellence in short stay surgery