

How Does NBOCAP Complement the Work of NCIN?

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How can NBOCAP & NCIN Complement the Work of Each Other?

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use of audit?

- **Improve patient outcomes**
- Improve everyone's performance
- Assess the introduction of new techniques
- Examine the impact of change in practice
- Protect the patient
- Reassure the patient
- Protect the unit
- Protect the surgeon



abuse of audit

- Incorrect assumptions on incomplete data
- Spin & statistical manipulation
- Finger of blame
- Stopping good units working
- Incorrect statistical correction
- Restriction / Exclusion



Not a new concept

- age & sex
- occupation
- disease or accident
- date of operation
- operation
- constitution of patient
- complications - recovery or death



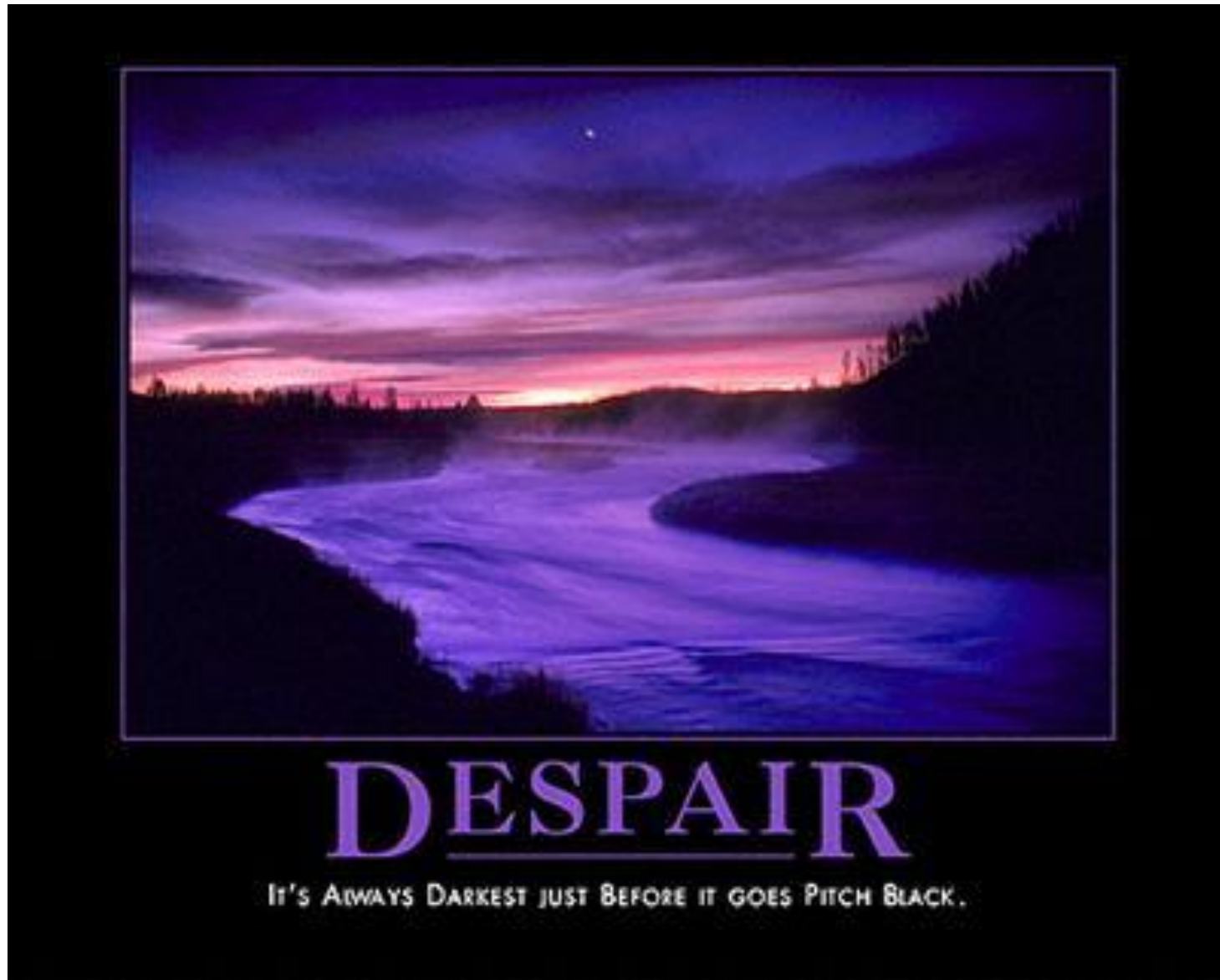
Nightingale: notes on hospitals 3rd ed: 1863



UK bowel cancer audit

- Origin of NBOCAP
- NBOCAP in Action

National Audits



duplicate data collection!

- demographics
- waiting times
- investigations
- radiology
- operation
- oncology
- Histology
- audit

CaMIS

NHS-wt

Anglia ICE

IMPAX web 1000

theatreman

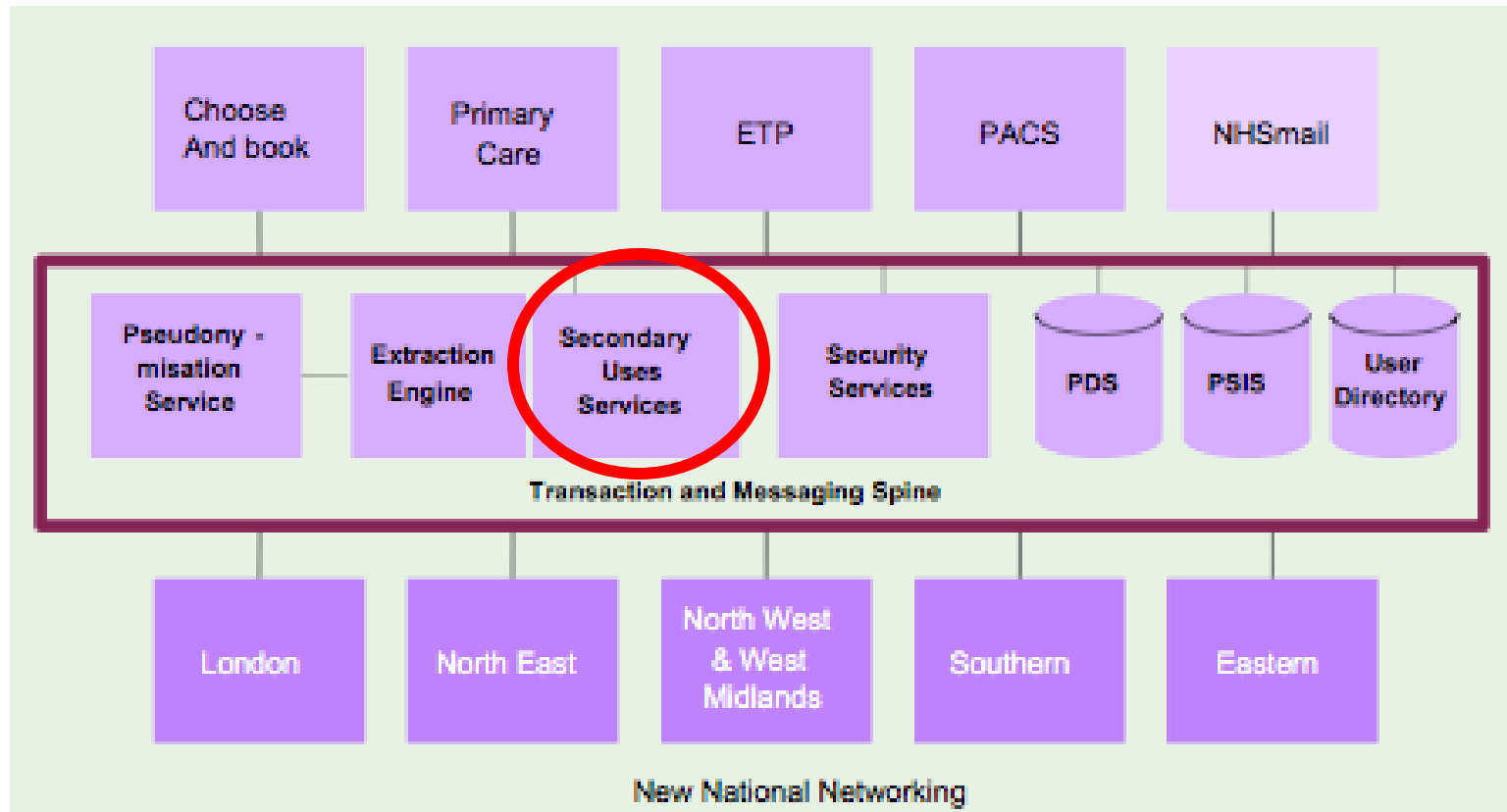
isco

Winpath

ACP database

UK data collection – present/future

■ NHS CfH Care Records Architecture

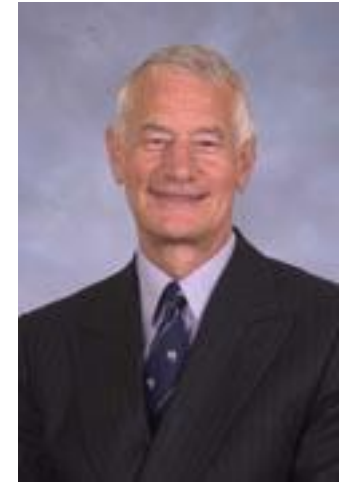


On our own?

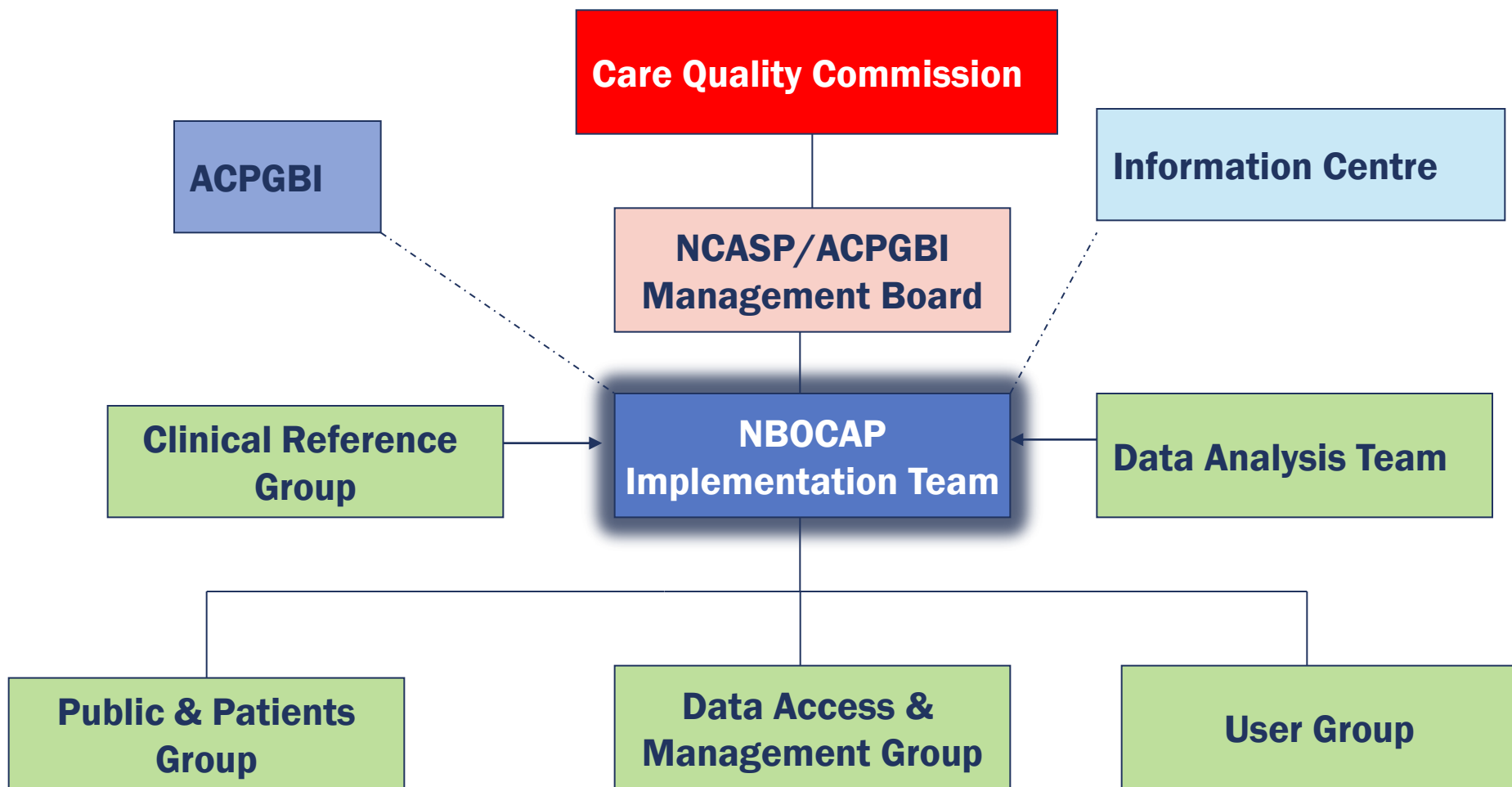


Origin of NBOCAP

- Regional population audits
 - ◇ (wessex, trent, wales, scotland) in 1990's
- Voluntary participation across UK in 2000
 - ◇ 45,000 cases
 - ◇ 50% participation
 - ◇ 30% capture



Current NBOCAP structure



National BOwel Cancer Audit Programme

Bowel Cancer Audit - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://www.openexeter.nhs.uk/nhsia/NBOCAP/NBCPatientDetails> Go Links

Google Search 0 blocked Check AutoLink AutoFill Options

NHS Bowel Cancer Audit

Logged in as : NBC1 - NBOCAP

[Back](#) [Help](#) [Main Menu](#) [Log-out](#)

Patient Details

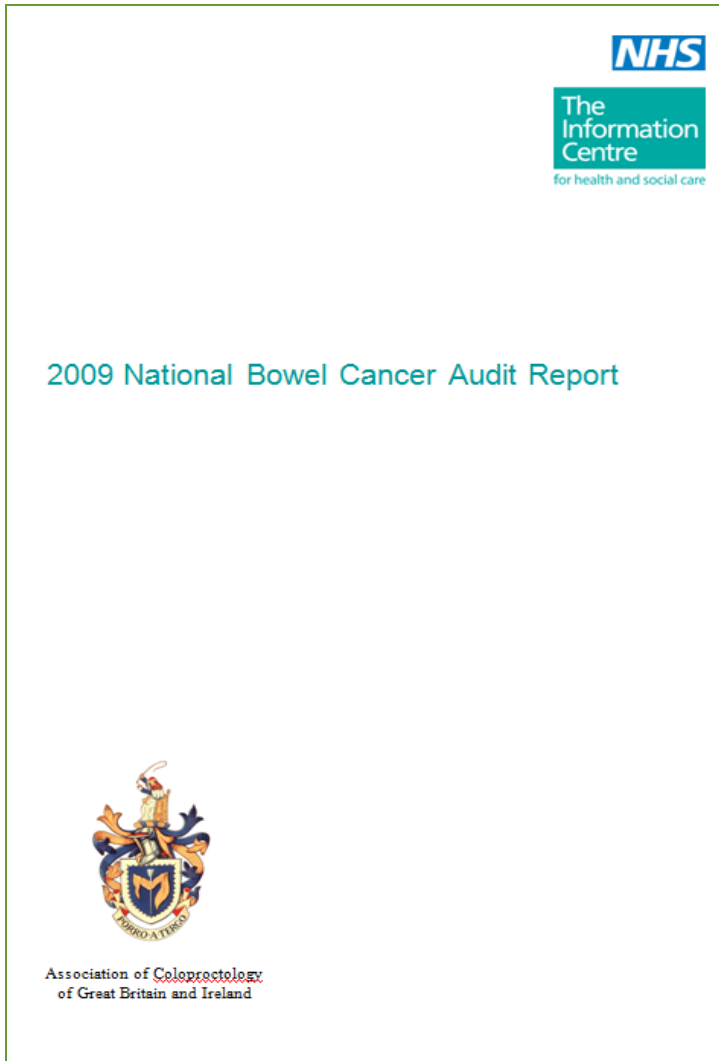
MAIN DETAILS			
Organisation Code	NBC1	Local Patient Identifier	X999999
Age	56	Sex	Male
Postcode	X991XX	NHS Number	1234567889
Forename	John		
Surname	Doe		
Consultant/Firm	Spratt		
Height (cms)	180	Weight (kgs)	85

SURVIVAL DETAILS	
Date of Death	
Cause of Death	
Post Mortem?	

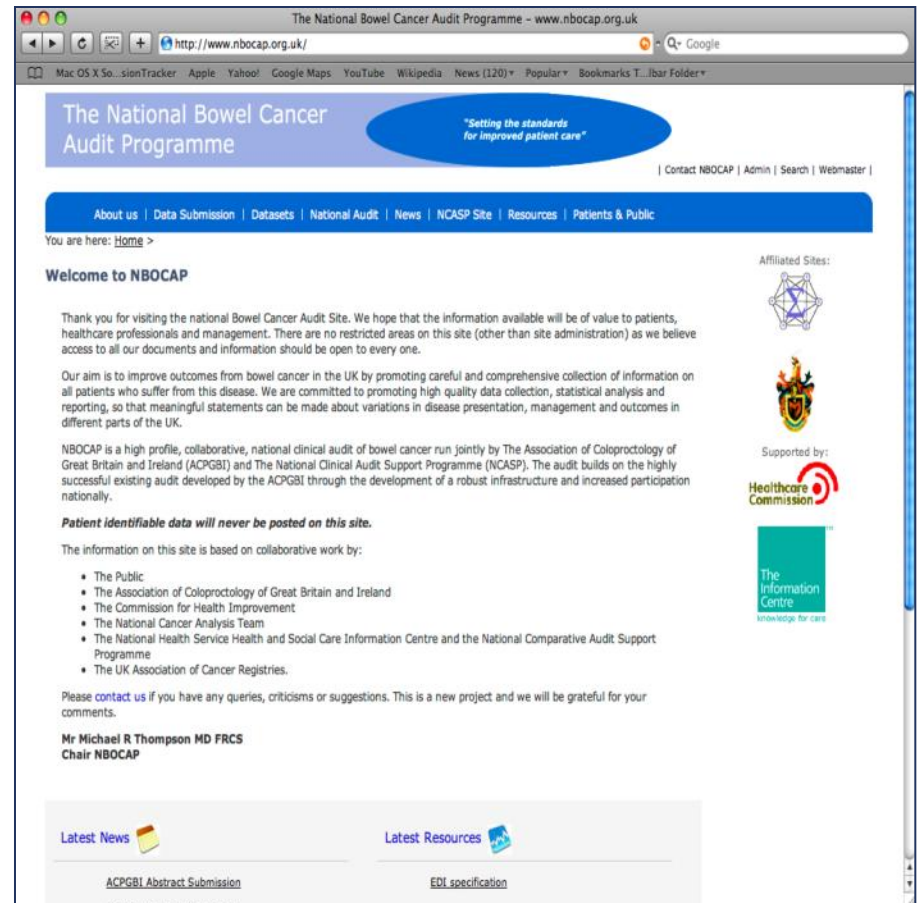
Done Internet

Reporting results

Printed



Online – www.nbocap.org.uk



Open Reporting in the UK - 2009

■ 11 measures reported by named trust in 2009

- ◇ Participation – **95%**
- ◇ Case ascertainment – **69%**
- ◇ Data quality – **50%**
- ◇ Discussed @ MDT – **82%**
- ◇ Seen by CNS – **51%**
- ◇ CT performed – **61%**
- ◇ Rectal cases staged with MRI – **51%**
- ◇ Rectal cases having CRM commented on – **59%**
- ◇ Rectal cases having pre-operative therapy – **32%**
- ◇ Emergency presentation – **18%**
- ◇ Lymphovascular involvement – **26%**

Risks of open reporting

...a common fallacy is the supposition that it is possible to rate people... to put them in rank order for performance for the next year based on performance last year.....

- Clinical outcomes not a precise science
- Effect on staff morale
- Case-mix variation
- Misinterpretation & misuse of results
- Danger of reducing benefit of the audit
- Restriction of choice
- Creating of hostile environment for clinicians

Reducing the risks of open reporting

...useful criterion for recognition of outstanding performance is...demonstration of improvement year on year over a period of 7 or more years ...the opposite criterion namely persistent deterioration over a period of 7 years may indicate people that are in need of help...

- Collect high quality data
- Formalise data capture in the clinical record
- Central submission, web based data capture
- Case-mix / risk-adjustment
- Allow for year on year variation
- Set appropriate national standards
- Feedback & governance
- Staged move to full open reporting

Big Brother is Watching.....

“There is no going back.....

The department is not seeking your permission.

It is merely seeking your help.”

**Sir Bruce Keogh
Medical Director of the NHS
28 May 2008**



What can we do?

- NBOCAP strengths

So why audit?

‘Routine feedback of risk adjusted data on local performance... heightens awareness and leads to self- examination and self-assessment, which in turn improves quality and outcomes.’

Quality Improvement in Cardiac Surgery –Grover et al.. '2001

Audit – quality relationship?



Quality Markers in Colorectal Cancer

Short-term Markers

Operative mortality / 30 day mortality

Lymph-node yield

CRM Rates

APER rates

MDT discussion

Length of postoperative hospital stay

Preoperative imaging (e.g. MRI, CT vs Ba Enema, colonoscopy)

Morbidity (including leak rates)

Long-Term Markers

5 year survival rates

5 year local recurrence rates

5 year disease-free survival

Cancer Wait Times

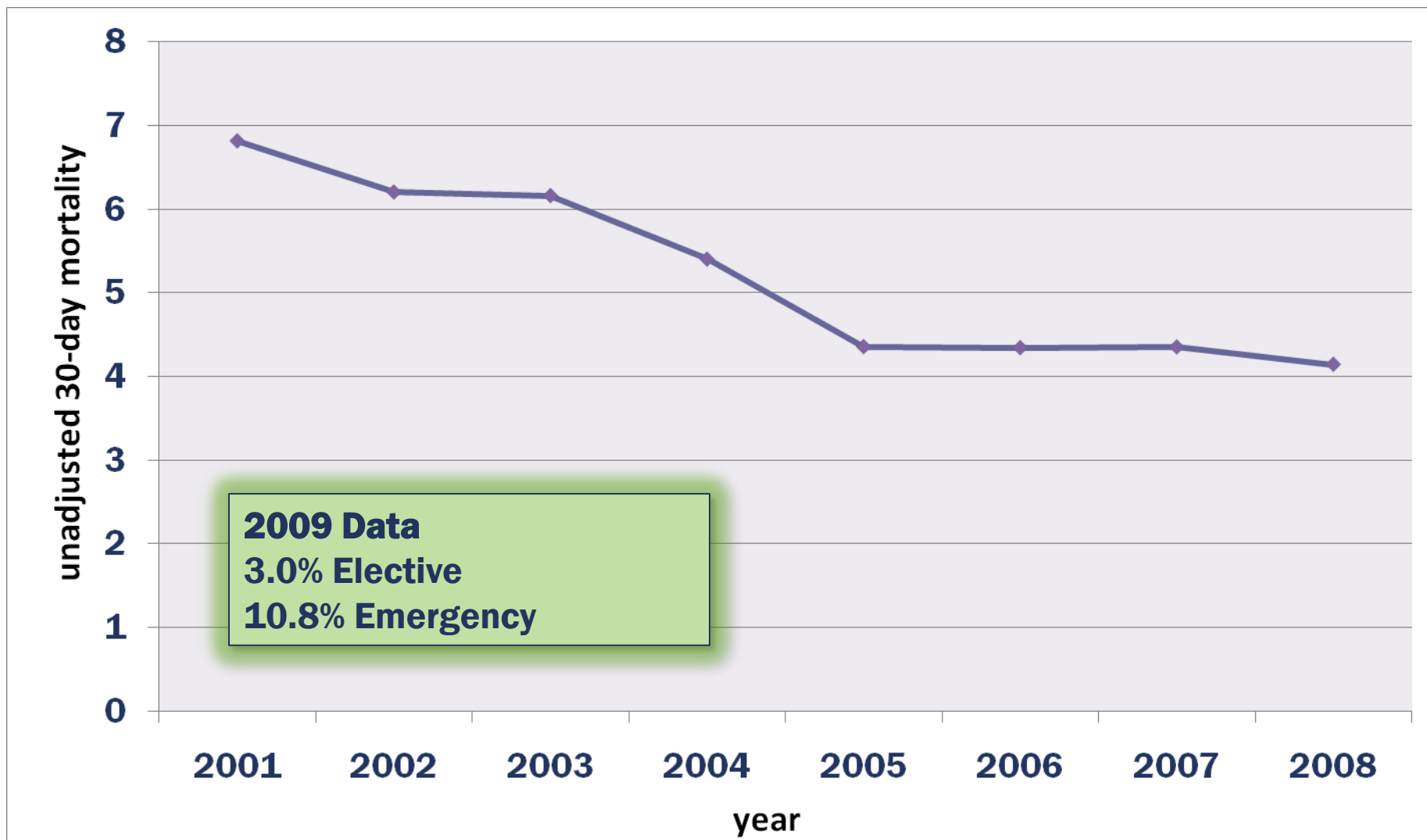
31-days decision – treat

62-days referral – treat

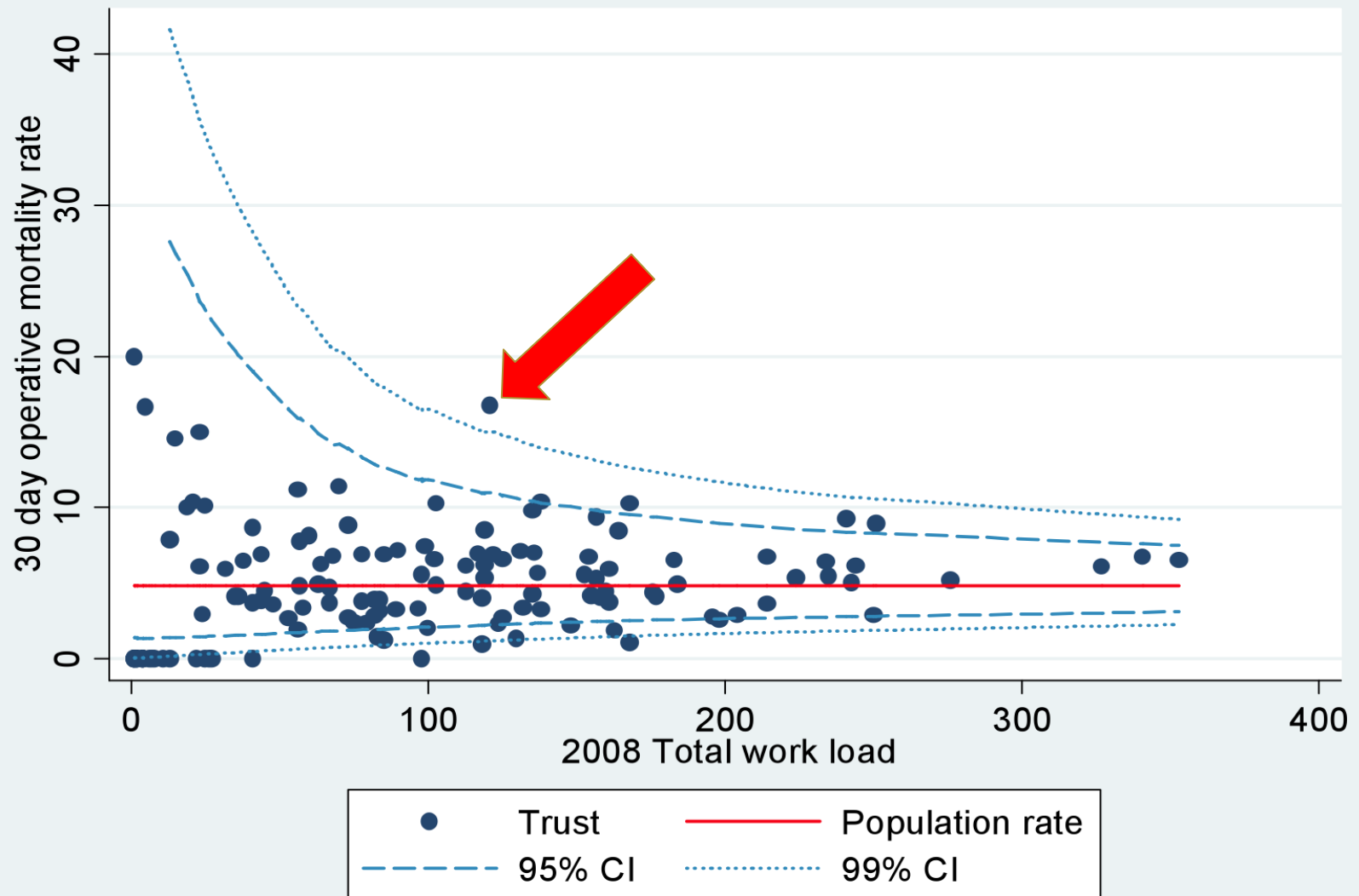
HES & Clinical Datasets

- Comprehensive population coverage
- Trained coders?
- Good for regional level analysis
- Poor for individual/team level analysis
- Better staging data
- Patient Pathway information
- Care processes
- Co-morbidity etc
- Clinical data
- Better for individuals

Mortality Rates



OMG – Mortality is 3 times national average!!!



Which risk factors, model formation

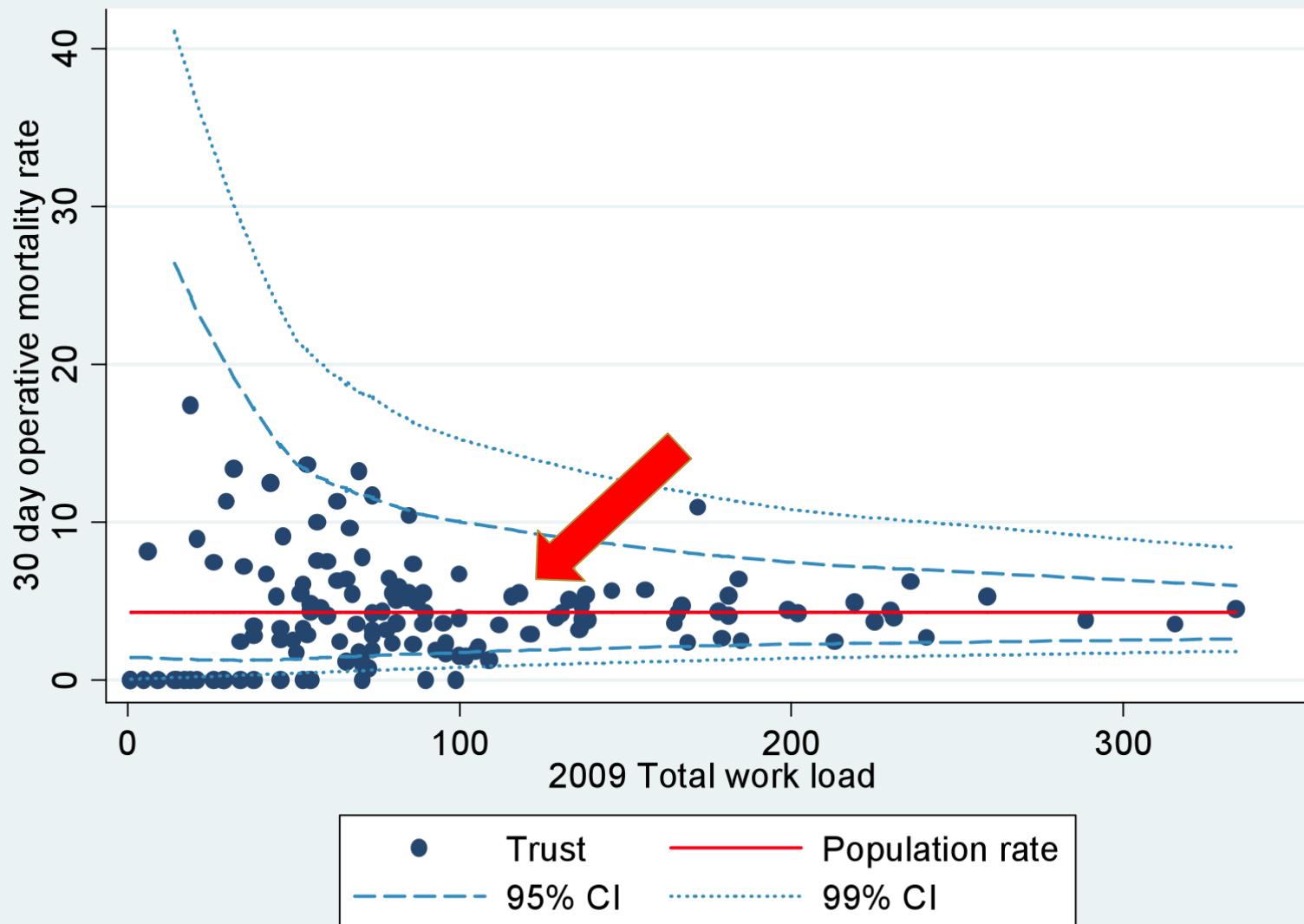
- Age
- ASA
- Mode of Surgery
- Cancer resection
(operation type)
- Dukes' stage

ACPGBI model 2003: 3-level model Area-district-patient

$$\begin{aligned}
 & \left. \begin{aligned} \text{DEATH}_{ijk} &\sim \text{Binomial}(\text{denom}_{ijk}, \pi_{ijk}) \\ \text{DEATH}_{ijk} &= \pi_{ijk} + e_{1ijk} \text{bcon}^* \end{aligned} \right\} \\
 & \text{logit}(\pi_{ijk}) = \beta_{0jk} \text{cons} + 0.797(0.135) \text{ASA_1_2}_{ijk} + \\
 & \quad 1.442(0.140) \text{ASA_1_3}_{ijk} + 2.359(0.174) \text{ASA_1_4}_{ijk} + \\
 & \quad 0.018(0.113) \text{B}_{ijk} + 0.121(0.116) \text{C\#1}_{ijk} + 0.662(0.129) \text{D}_{ijk} + \\
 & \quad 0.803(0.087) \text{Urgent}_{ijk} + 1.122(0.106) \text{Emergency}_{ijk} + \\
 & \quad 0.586(0.102) \text{65-74}_{ijk} + 1.065(0.096) \text{75-84}_{ijk} + \\
 & \quad 1.598(0.121) \text{85-94}_{ijk} + 2.705(0.365) \text{95+}_{ijk} + \\
 & \quad 1.588(0.316) \text{No_excision\#2}_{ijk} + \\
 & \quad -0.824(0.352) \text{ASA_1_2.No_excision}_{ijk} + \\
 & \quad -0.713(0.383) \text{ASA_1_3.No_excision}_{ijk} + \\
 & \quad -1.370(0.448) \text{ASA_1_4.No_excision}_{ijk} \\
 & \beta_{0jk} = -5.067(0.151) + v_{0k} + u_{0jk} \\
 & [v_{0k}] \sim N(0, \Omega_v) : \Omega_v = [0.038(0.036)] \\
 & [u_{0jk}] \sim N(0, \Omega_u) : \Omega_u = [0.183(0.091)] \\
 & \text{bcon}^* = \text{bcon}[\pi_{ijk}(1 - \pi_{ijk})/\text{denom}_{ijk}]^{0.5} \\
 & [e_{1ijk}] \sim (0, \Omega_e) : \Omega_e = [1.000(0.000)]
 \end{aligned}$$

Tekkis PP. Poloniecki JD. Thompson MR. Stamatakis JD.
Operative mortality in colorectal cancer: prospective national study.
BMJ. 327(7425):1196-201, 2003 Nov 22

But not any more – why???



Risk Prediction in Surgery



Regression Models Available

Jason J Smith & Paris P Tekkis

[Calculate Risk](#)

[Background](#)

[Downloads](#)

[Further Info](#)

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[Feedback Form](#)

April 17, 2010

RiskPrediction.org.uk
in association with:



Association of
Coloproctology of GB&I



Cleveland Clinic
Foundation



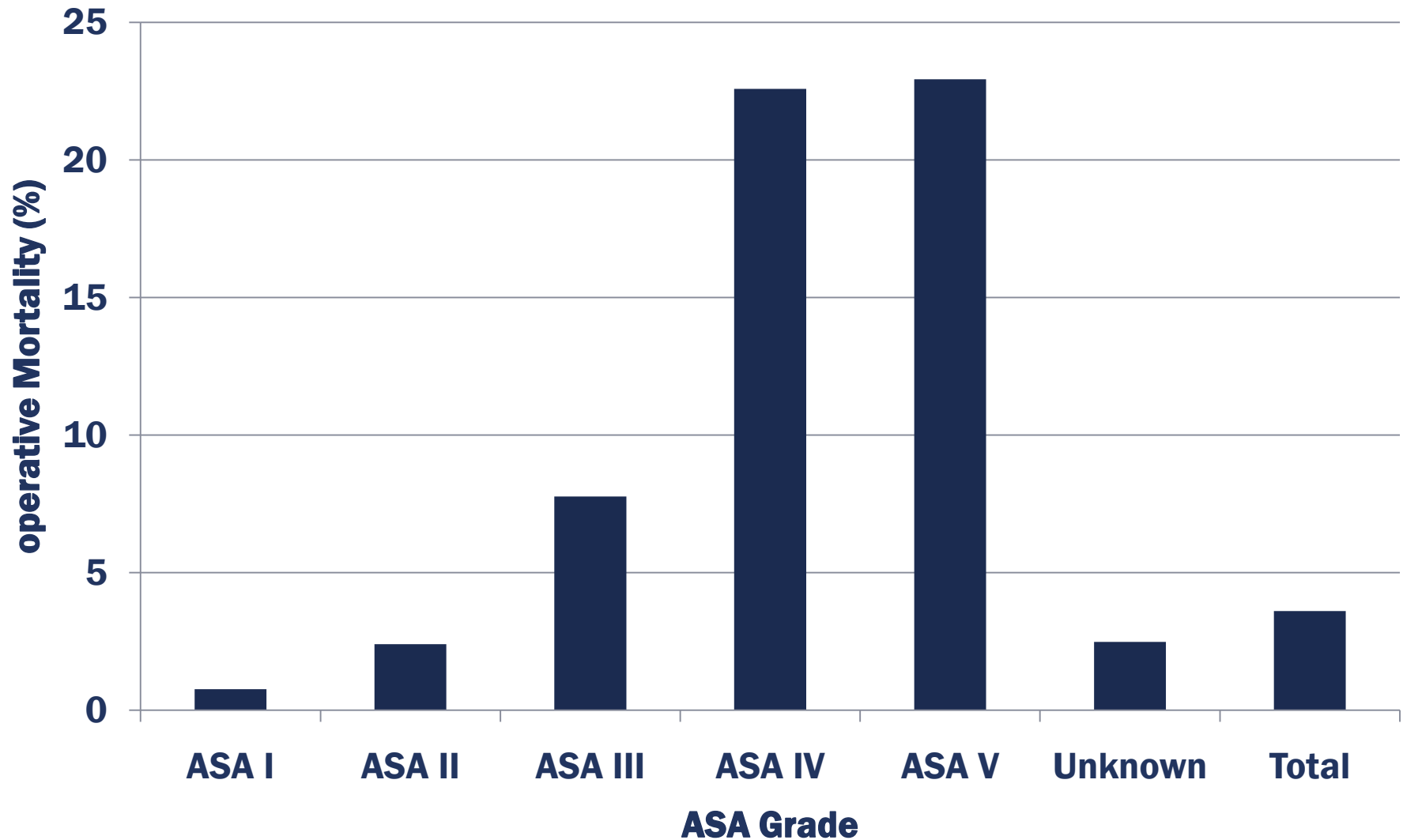
This site has been developed to allow surgeons to estimate risk online for their patients undergoing surgery. This service is provided for individual use to help surgeons more fully consent their patients by giving mortality and other surgical risk predictions based on relevant prognostic factors including age, disease severity and co-morbidity. Risk adjusted operative mortality can be used as an objective measure of outcome for monitoring performance within a centre or between centres.

Risk Models

- [ACPGBI CRC Model](#) **UPDATED!** (April 2010)
- [ACPGBI Malignant Large Bowel Obstruction Model](#)
- [ACPGBI Lymph Node Harvesting Model](#)
- [St Mark's Lymph Node Positivity Model](#)
- [The Cleveland Clinic Colorectal Laparoscopic Conversion Model](#)
- [The Cleveland Clinic Ileal Pouch Failure Model](#)
- [CR-POSSUM](#)
- [P-POSSUM](#)
- [O-POSSUM](#)
- [Vascular-POSSUM models](#)
- [MUST screening tool \(malnutrition\)](#)
- [Life Expectancy Calculator](#)
- [Performance Status Calculator](#)

www.riskprediction.org.uk

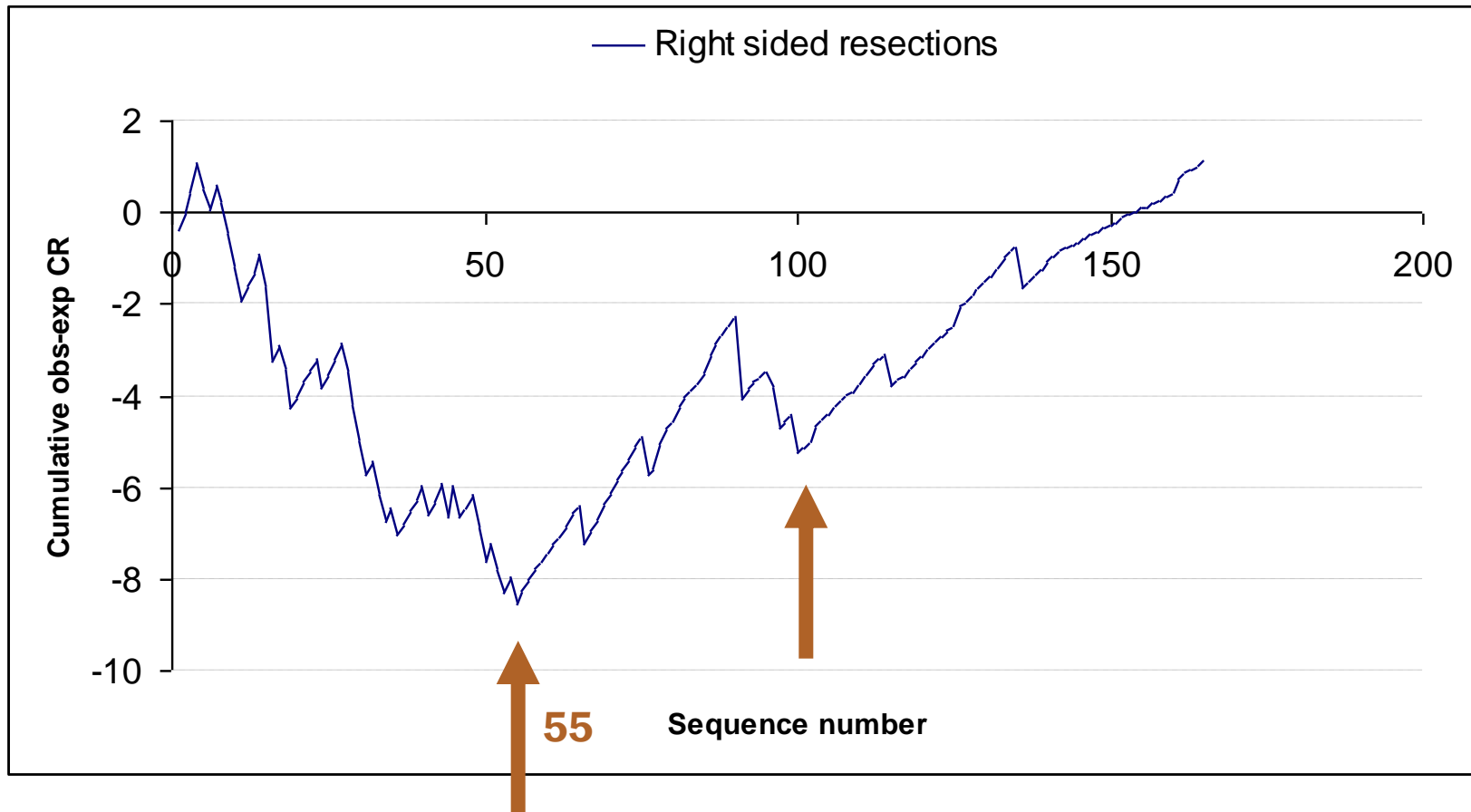
ASA (2009)



Learning curve – laparoscopic surgery

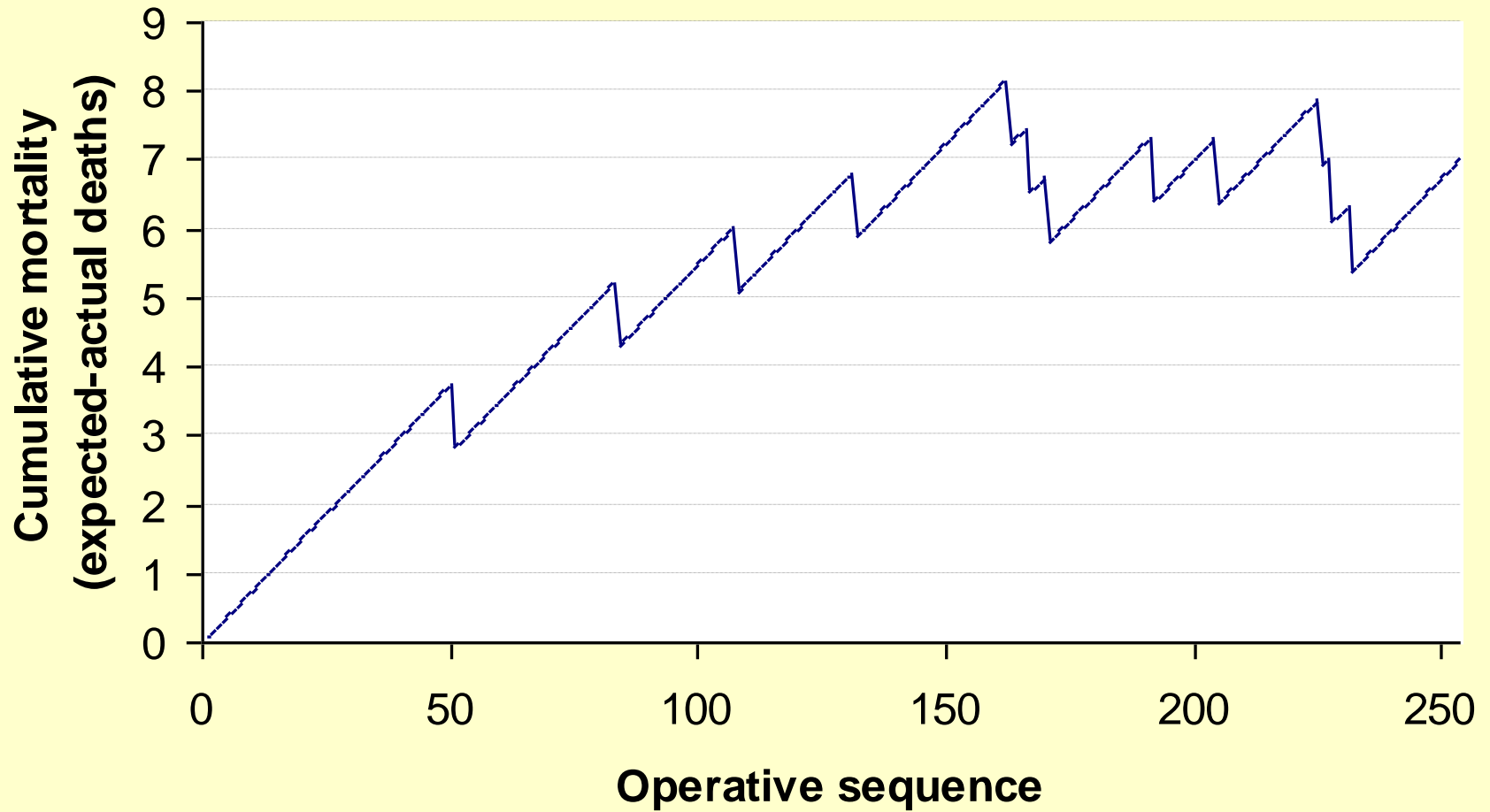


Lap Rt Hemi



two learning curves !!

Identifying good units



Areas of Potential Collaboration

NBOCAP

- Co-morbidity / deprivation
- More accurate *clinical* info
- UK wide (ish)
- International contacts & work
- Clinical modelling of outcomes
- National voice in bowel cancer care
- Trusted by the profession

NCIN

- HES links
- ONS Links
- Organisation
- Full access to all datasets



International collaboration



A High Quality Audit

