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Measuring outcomes in colorectal surgery: the nurse's role

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Why measure outcomes?

"It should be at the core of a true professional's professional identity that they should feel confident that what they do is as good as it could be, as good as it ought to be, and that it makes a difference to patients"

(Burgess, 2011)

Burgess R (2011) *New principles of best practice in clinical audit* (2nd Ed). Oxford: Radcliffe Publishing

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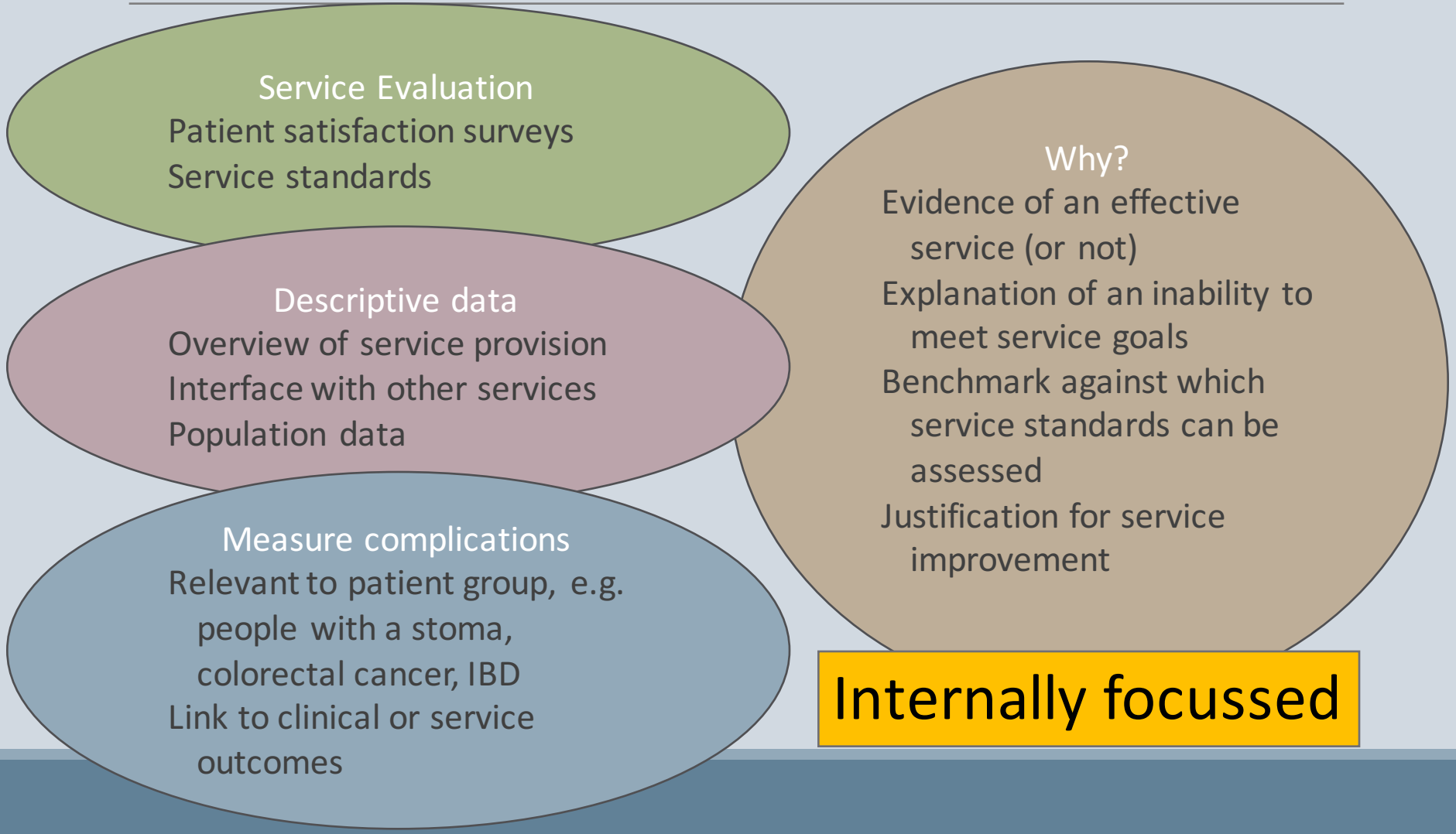
Outcomes in specialist nursing



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Colorectal outcomes @ NNUH

Aim: to gain an accurate picture of the extent and nature of postoperative morbidity following colorectal resection at NNUH

Funded by Research Capability Funding to inform development of NIHR research funding application

Structured, piloted, evidence-based approach to data collection

Data recorded and analysed using SPSS

Inclusion:

- Elective or emergency rectal or colonic resection
- General surgical team
- May-Aug 2014

Exclusion:

- Colorectal surgery not involving resection
- Appendicectomy
- Outside general surgery

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Data Collection Time Points

1. DISCHARGE

Postoperative Morbidity Survey (POMS)[1]: pulmonary, infectious, renal, gastrointestinal, cardiovascular, neurological, haematological, wound, pain

Specific data collected:

- Postoperative ileus
- Surgical site infection
- Anastomotic leak

Additional data: age, length of stay, nature of surgery, diagnosis

2. 30 DAYS POST DISCHARGE

Based on organ-system approach[2]: cardiac, respiratory, neurological, GI, renal

Adjusted to assess morbidity specific to colorectal resection:

- Nutrition
- Bowel function
- Genitourinary function
- Wound/abdominal examination
- Pain

Need for non-routine healthcare intervention

[1] Grocott MPW et al (2007) *Journal of Clinical Epidemiology* 60: 919-928

[2] Dindo D et al (2004) *Annals of Surgery* 240(2):205-213

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Overview of sample

Description of Sample (n=142)	
Age	Mean 67.39y (SD 13.692)
Gender	
Male	n=73 (51.4%)
Female	n=69 (48.6%)
Presentation	
Elective	n=98 (69%)
Urgent/Emergency	n=44 (31%)
Stoma	
Ileostomy	n=38 (26.8%)
Colostomy	n=22 (15.5%)
Diagnosis	
Malignant	n=87 (61.3%)
Benign	n=55 (38.7%)
Operation Site	
Left-sided	n=91 (64%)
Right-sided	n=51 (36%)

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Key findings

1. Postoperative ileus, anastomotic leak similar to national average
2. High surgical site infection (SSI) rates – inpatient and post-discharge
3. At 30 days post-discharge:
   - Bowel dysfunction
   - Impaired nutritional status/function
   - Urinary complications

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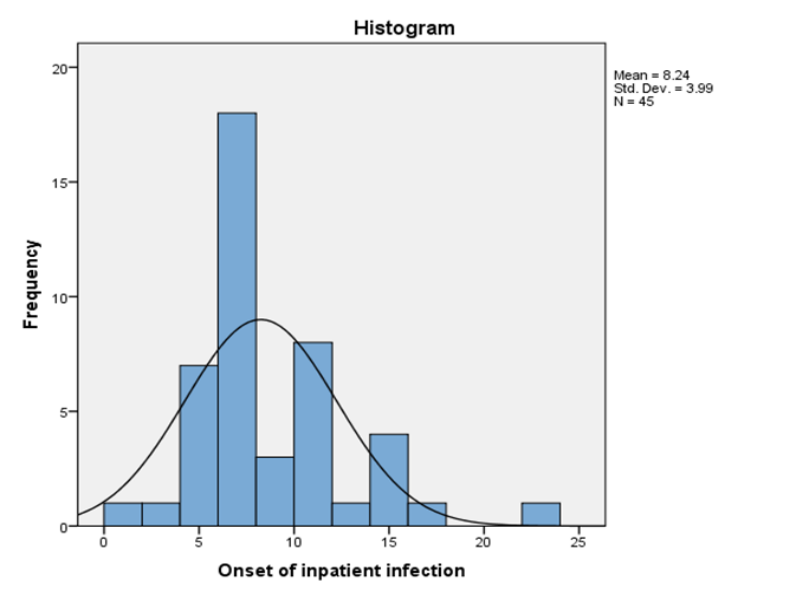
SSI: findings



2014-15 national recorded SSI incidence for large bowel surgery: inpatient & readmission 10.4% (Public Health England, 2015)

SSI @ NNUH:

Inpatient: 28% with 12.5% organ-space SSI

Within 30 days following discharge 23% of infection-free inpatients had developed SSI (identified using screening questions)

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SSI: classification

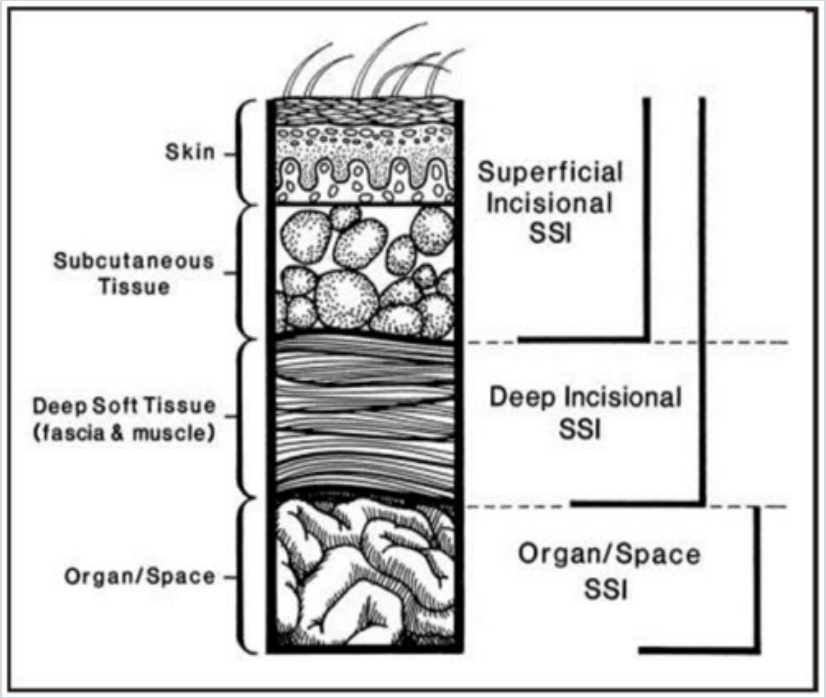

Image Copyright: Centers for Disease Control & Prevention (CDC) 1999

Since leaving hospital, has (have) your wound(s):

- Been red/inflamed/hot/more painful?
- Opened? If so how much/deep?
- Produced any discharge? If so how much, what was its appearance and did it smell?
- Been assessed by a healthcare professional who said it was infected?
- Required dressing (and packing)?
- Been swabbed?

Have you taken any antibiotics for your wound?

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Outcomes at 30d clinic

46% appetite depressed at 30d following discharge; 26% estimated eating half usual intake or less

47% restricting oral intake, most in an attempt to improve bowel function

19% of those without a stoma opened bowels 4 or more times per day

19% experienced impaired urinary function (delay, incontinence, changed sensation, urgency, UTI)

How do we determine what is a complication and what is an accepted consequence of surgery at 30 days post-discharge?

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Developing a framework

Nurse-led follow-up provides an ideal opportunity to gather outcome data

Questions to consider:

- Why do you need outcome data?
- How will the results be used?
- Which outcomes are important?
- How will they be measured?
- How will they be recorded?
- When will they be measured and why that time-frame?
- Who will measure and record them?
- What can you measure them against?

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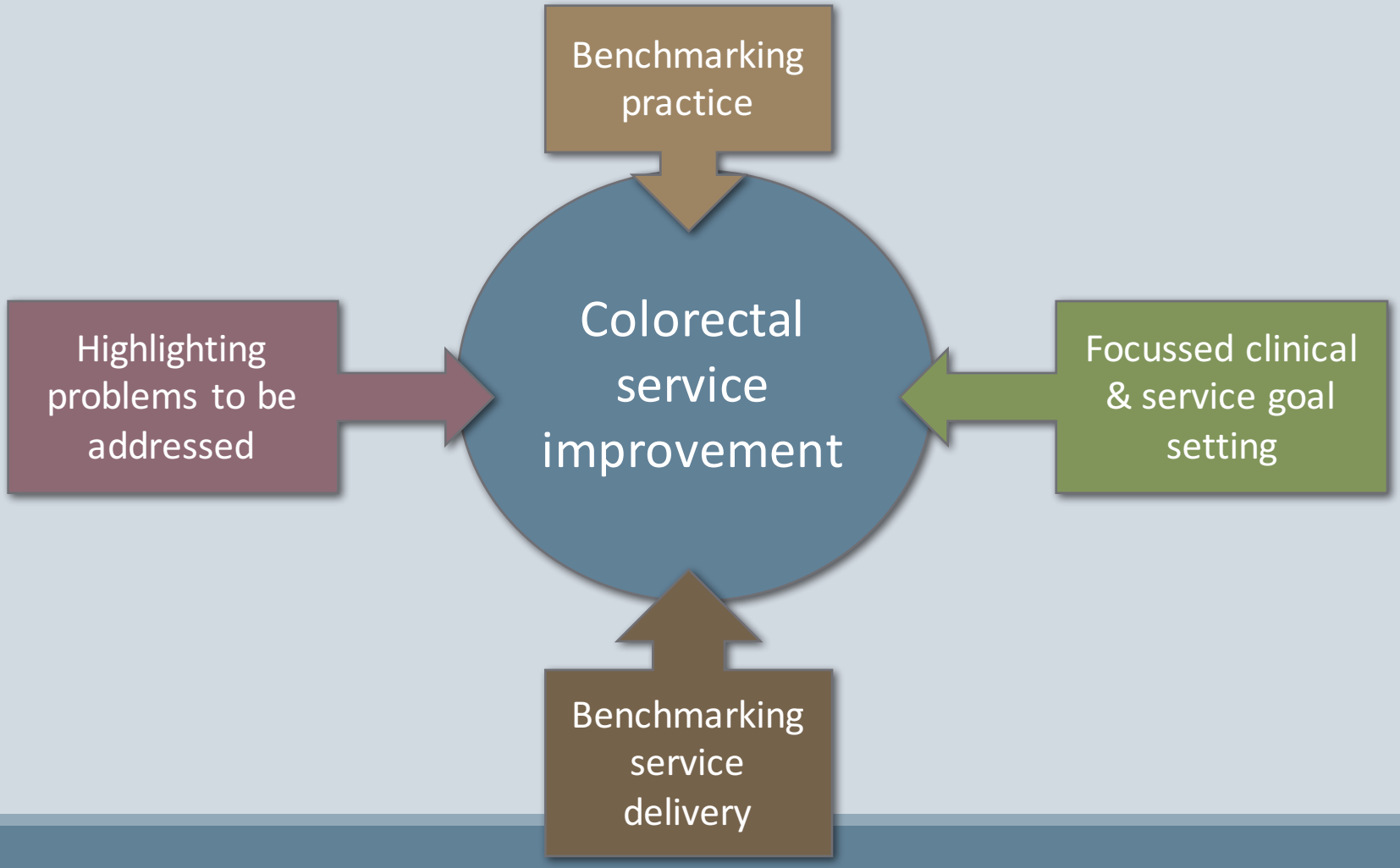
Using outcome data



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Next steps @ NNUH

Undertaken as a fact-finding mission so no formal audit measures set

Combination of audit and service evaluation due to no prior data regarding some outcomes

Developments as a direct response to outcome evaluation:

- Changes to perioperative care
- Enhanced recovery clinician
- Re-evaluation of nurse-led follow-up
- Service improvement proposal
- Potential areas for research

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Thank you

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