

Post Discharge Surgical Site Infection Surveillance Made Easy
Prof. Judith Tanner, De Montfort University, UK
A Webber Training Teleclass

Post discharge SSI surveillance made easy

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Hosted by Debbie King
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HPA SSI surveillance 2007

Category	No of Hosp's	% SSIs
Abdominal hyst	12	0.3
Hip	166	0.5
CABG	12	2.7
Vascular	19	3.6
Small bowel	5	7.4
Large bowel	20	8.3

Head Nurse for Surgery
Lead Nurse for Tissue Viability
Ward Sister
Infection Control Nurse




- Surveillance programme**
- January 2008 – April / May 2008
 - Colorectal and primary breast surgery
 - SSI definition (HPA and CDC)
 - Surveillance nurse
 - Full 30 day follow up
 - Phone calls
 - Visiting patients in their own home

- Findings – colorectal surgery**
- Total of 126 patients - colorectal surgery
 - 8 lost to follow up
 - 6 died
 - 7 had further surgery
 - Therefore 105 patients included in surveillance

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Findings – colorectal surgery

- Total of 126 patients - colorectal surgery
- 8 lost to follow up
- 6 died
- 7 had further surgery
- Therefore 105 patients included in surveillance
- 29/105 patients had SSI (27%)

Findings – colorectal surgery

- 29 infections - 18 superficial
- 11 deep
- Presenting infection – 13 days average
- Diagnosis - 17 in-patient
- 12 post discharge (inc. 3 re-adm)
- Length of stay - non infected median 17 days
- infected median 25 days
- Significant risk factors – BMI above 30

Findings - Compliance

- Stellitept body wash
- Pre-op hair removal
- Prophylactic antibiotics
- Vacuum assisted closure dressings

Specimen results

<u>Organism</u>	<u>Numbers</u>
No specimen	5
No growth	1
S. Aureus	3
Strep group A	4
Strep group B	3
Strep group C	2
Strep milleri	1
Pseudomonas	2
Coliforms, anaerobes	8

Cost of Surgical Site Infections

January – April 2008
 29 colorectal patients with SSIs

Exact figures – not averages, estimates or modelling

Additional cost (on top of basic package)

Resource	In patient	Post disch.	Total cost
Extra in patient days £398	247,954		247,954
District nurse cost £64		35,392	35,392
Practice nurse cost £29		58	58
GP costs £58		116	116
Clinic/OPD £100	100		100
Vac dressing total	7,000	7,290	14,290
Dressings £6	917	1,855	2,772
Antibiotics £41		533	533
Swabs £7		56	56
Tests (ultrasound) £38		38	38
Re- admission costs £322	3,864		3,864
Total (for 29 patients)	259,835 (Acute 85%)	45,338 (PCT 15%)	305,173
Cost per SSI	8,959.8	1,563	£10,523 \$16,953

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1 year projected additional cost

	Acute	PCT	Total cost
29 SSIs (4 months)	259,835	45,338	£305,173 \$491,659
1 year projection (12 months)	779,505	136,014	£915,519 \$1,474,978

**Cost of surveillance programme
- colorectal 5 months**

- Surveillance nurse Band 5 18.5 hrs
- Travel costs (visit 9 patients)- £36
- 187 phone calls - £47
- Statistician - £300
- Access data base – £0
- **Total cost £5,200 / \$8,377**

Findings – Breast SSI

- 200 patients – mastectomy, WLE
- 23 lost to follow up
- 18 further surgery

- 159 included in surveillance

Findings – Breast SSI

- 200 patients – mastectomy, WLE
- 23 lost to follow up
- 18 further surgery

- 159 included in surveillance
- 16 (10.1%) SSIs

Findings – breast surgery

- Presenting infection - 13 days average
- SSIs detected - 2 in-patient
- 14 post discharge (includes five re-admissions)
- SSI risk factors - smoking
- BMI
- duration of surgery

Specimen results

<u>Organism</u>	<u>Numbers</u>
No spec. taken	3
No sig. growth	1
Strep B	1
Staph aureus	9
Coliforms	2

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Cost of Breast SSIs

- 16 breast surgery patients January – April 2008
- Exact figures – not average, estimates or modelling
- Additional cost (on top of basic package)

Resources	In patient	Post discharge	Total costs
Extra in pt. days	8,756		8,756
District nurse cost		2,352	2,352
Pract. nurse cost		2,450	2,450
GP costs		276	276
Clinic/OPA	100		100
Silver dressings	106	153	259
Cosm. dressings		70	70
Sorbisan packing		686	686
Swabs		28	28
Antibiotics		612	612
Re-admission	5,970		5,970
Total	15,832	6,627	22,459
Cost per SSI	989.5 (71%)	414 (29%)	£1,403 \$2,260

1 Year projection additional cost

- Breast SSIs £67,377 \$108,550

Implications for practice

- Continue and expand surveillance programme
- Implement rapid feedback system
- Care bundle for all surgical patients (plus audit)
- Clinical practice protocols
- Address risk factors – BMI, smoking
- Acute / PCT divide continuity: VAC dressings

SSI Care Bundle

- Smoking
- Nutrition
- Body wash
- Antibiotics
- Prep solution
- Temperature
- Dressings – no peeking

Publication

Tanner J, Khan D, Ball J, Aplin C, Thomas M, Bankart J. Post discharge surveillance to identify colorectal surgical site infection rates and related costs. Journal of Hospital Infection 2009;72:243-250

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