Annual Report of The Director of Infection Prevention & Control for 2011/12

Dr Patricia O’Neill and the Infection Prevention and Control Team
Overview 2011/12

- Another successful year in combating MRSA and C difficile with further reductions
- Continued improvement in compliance with Hand Hygiene and other care bundles
- New challenges with focus on MSSA and E coli bacteraemia
- Teaching and audit key with another well attended annual conference
### MRSA Bacteraemia 2001-11

All cases MRSA Bacteraemia diagnosed by SaTH

<table>
<thead>
<tr>
<th>Year</th>
<th>Case Count</th>
<th>Post 48</th>
<th>Total or pre 48 (2006-07 onwards)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001-02</td>
<td>28</td>
<td></td>
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<tr>
<td>2002-03</td>
<td>33</td>
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<tr>
<td>2003-04</td>
<td>58</td>
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<tr>
<td>2004-05</td>
<td>47</td>
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<tr>
<td>2005-06</td>
<td>39</td>
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<td>2006-07</td>
<td>30</td>
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<td>2007-08</td>
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<tr>
<td>2008-09</td>
<td>5</td>
<td>8</td>
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<tr>
<td>2009-10</td>
<td>6</td>
<td>7</td>
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<tr>
<td>2010-11</td>
<td>2</td>
<td>7</td>
<td></td>
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<tr>
<td>2011-12</td>
<td>1</td>
<td>3</td>
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</table>
• MRSA Bacteraemia cases dropped again to one case in 2011/12 vs target of 2
• This is a 93% drop since the peak in 2003/04
• The case was thought to be due to contamination while taking the sample
• We have also seen a significant drop in non bacteraemia cases of MRSA
• 2012/13 target also not more than 2
Compliance with emergency admission screening for MRSA was over 95% for the whole year.
Putting Patients First

Honesty and Integrity

Being a Clinically-Led Organisation

Working and Collaborating Together

Encouraging Individual Ability and Creativity

Taking Pride in our Work and our Organisation

C difficile SaTH Apportioned Cases

Annual cases apportioned to SaTH to end Mar 11


208

94

80

68

41

250

200

150

100

50

0
C difficile

- In 2011/12 – we had 41 SATH responsible cases (post 72 hrs) vs target of 54
- This is a drop of 80% since peak in 2008/09
- All cases were typed and no cross infection was found
- The commonest cause was antibiotic use – not usually avoidable
- 2012/13 target is 45 – new lab methods may cause artificial rise in numbers
Sustained improvement in hand hygiene compliance – above 95% target for whole year
MSSA Bacteraemia – new target

- MSSA is methicillin sensitive strain of Staphylococcus aureus ie the “normal” strain
- Very common in community and 25% of us are colonised in the nose – mostly harmlessly
- A lot of infection will come in from community but can also be HCAI
- Nationally one third HCAI, two thirds community acquired
- HCAI cases - similar issues to MRSA ie lines, augmented care
Figure 1: Trend in *Staphylococcus aureus* bacteraemia laboratory reports and meticillin susceptibility (voluntary reporting scheme): England, Wales and Northern Ireland 2001-2010
Putting Patients First
Honesty And Integrity
Being a Clinically-Led Organisation
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MSSA vs MRSA bacteraemia SaTH – pre AND post 48
MSSA SaTH cases 2011/12

MSSA Bacteraemia cases diagnosed in SaTH 2011/12

24 post 48 hrs: 48 pre 48hrs – one third: two thirds
So two thirds community acquired
Conclusion

• Probably correct that only about one third of MSSA bacteraemias are health care acquired so more difficult to prevent
• Total numbers have halved but HCAI numbers still significant – 24 last year
• Health care infections – similar sources to MRSA ie lines and other devices
• Control? – can’t screen and clear (except perhaps in specialist units eg renal dialysis)
• Care of lines and hand hygiene, wound care, and other care bundles critical
• High quality care essential
E coli Bacteraemia

- E coli is normal bowel flora
- Common cause of UTI and gut sepsis
- Nationally 2,600 cases of E coli bacteraemia per month cf 800 MSSA and 70 MRSA
- Nationally and internationally bacteraemia cases have been increasing for last few years - 43% in E,W&NI 2004 to 2010
- ?Related to increasing resistance
Figure 1. *E. coli* bacteraemia reports, England, Wales and Northern Ireland: 2007 to 2011*
E coli Bacteraemia Cases per year SaTH

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases</th>
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<tr>
<td>2006/07</td>
<td>186</td>
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<td>2007/08</td>
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<td>2008/09</td>
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<td>218</td>
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<tr>
<td>2010/11</td>
<td>227</td>
</tr>
<tr>
<td>2011/12</td>
<td>261</td>
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Causes SaTH

• Mandatory surveillance started June 11
• 01/06/11 to 31/03/12 we had 211 cases
• 168 (80%) were diagnosed within 48 hour of admission – probably community acquired
• 43 cases (20%) post 48 hours so probably hospital acquired
• No comparable national data yet
• Study Barking 2007 to 2010 29% hospital acquired (53% urine infections as in SaTH)
Conclusions from RCA

- Most E. coli bacteraemia cases are NOT health care acquired
- Overall urine infections commonest cause 108 out of 211 (51%) - mostly NOT health care acquired
- But 34 of the 211 patients (16%) had a urinary catheter either from hospital (16) or community (18)
- Low percentage but still quite high numbers
- Catheter care and avoidance of catheters both in hospital and in the community is the most important factor in preventing health care acquired E. coli bacteraemia
- Multiply resistant E. coli also a problem – antibiotic control required in hospital and community
Cephalosporin multi-resistant E. coli in health economy (urine samples).
Conferences – Sustaining Quality Improvement in Infection Control

• 117 delegates attended
• Topics included:
  – Change management
  – IV access
  – Care bundles
  – Aseptic catheterisation
  – Pressure sore prevention
• Also huge amount of teaching outside this
## Compliance with Care bundles

<table>
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<tr>
<th>Peripheral Intravenous Cannula care</th>
<th>Urinary Catheter Care</th>
<th>Ventilator associated pneumonia</th>
<th>Renal Haemo-dialysis</th>
<th>Central Venous Catheters</th>
<th>Hand Hygiene</th>
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<tr>
<td>Insertion</td>
<td>Ongoing</td>
<td>Insertion</td>
<td>Ongoing</td>
<td>Continuous</td>
<td>All Wards</td>
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<td>91.9%</td>
<td>99.4%</td>
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<td>Regular obs</td>
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<table>
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<tr>
<th>Month</th>
<th>Peripheral Cannula care %</th>
<th>Peripheral Cannula insertion %</th>
<th>Urinary Catheter care %</th>
<th>Urinary Catheter insertion %</th>
<th>Care of ventilated patients - continuing care %</th>
<th>Care of ventilated patients - regular obs %</th>
<th>Central venous catheter insertion care %</th>
<th>Central venous catheter ongoing care %</th>
<th>Renal dialysis catheter insertion care %</th>
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**Key:** No results submitted for this month/audit wasn’t due
Cleanliness Scores

Sath Cleanliness Scores for 2011-2012

- Putting Patients First
- Honesty and Integrity
- Being a Clinically-Led Organisation
- Working and Collaborating Together
- Encouraging Individual Ability and Creativity
- Taking Pride in our Work and our Organisation
Challenges for 2012/13

• Aims
  – Improve on already impressive reductions in HCAI
  – Increase compliance with elective admission screening for MRSA
  – Use new methods to detect carriers of C difficile
  – Focus on antibiotic usage
  – Improve compliance with care bundles
  – Monitor and reduce urinary catheter related infections
  – Improve feedback on performance to Centres

• Challenges
  – Cohort ward now closed – victim of it’s own success
  – Reduced bed base also effects isolation
  – Need to make most effective use of siderooms – daily liaison between IPC and site managers
  – Reduced IPC team
  – Difficult times for NHS – maintaining commitment