Infection Control
Board to Ward

Sandra McNamee
Assistant Director of Nursing Infection Control
NHS Greater Glasgow & Clyde
HOSPITAL SQUALOR KILLS 90 PATIENTS

Criminal neglect of old people

McCanns warn: We’ll sue over claims we drugged our children
Backling for public inquiry into C-diff

Families: ‘We are not looking for retribution’

By NICK FARRIS
noff@mac.com

STAFF at the Vale are ‘too scared’ to speak out publicly about the superbug outbreak at the hospital, for fear of losing their jobs.

An author of the health board’s internal report into the outbreak said he was aware of the fear.

In the first days of the outbreak, a helpline was set up to provide support for staff and patients.

The helpline was closed down by the health board in the first days of the outbreak, although a source inside the hospital said it was still operating.

The author of the report said he had been unable to get a copy of the report.

He said he had been told the report was too sensitive to be released.

The health board hasyet to respond.

Health staff shatted by superbug outbreak

By NICK FARRIS

The superbug outbreak at the Vale Hospital has left staff feeling ‘shattered’.

The outbreak has led to several deaths.

Staff members have been left feeling ‘traumatised’.

The health board has been criticised for its handling of the outbreak.

A series of meetings have been held to discuss the outbreak.

The health board has been accused of being slow to act.

The superbug outbreak has led to several deaths.

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HAI - The Drivers

- Scottish Government
- Public
- Scottish Patient Safety Programme
- Media – MRSA & C. difficile
- Prevalence Study 2007 (repeat 2010)
- HEAT Targets
- Care Environment Inspectorate
Although data may be required at all levels – it is local data Feedback that is thought to be most important for effective feedback

Creating an infection control information rich environment
SPSP/Mandatory Surveillance

Ward
Directorate
Unit
Hospital
Acute Div
NHS Board
Scottish Government

Board to Ward/Accountability Framework
The most immediate impact of “Delivering for Health” was the change in the way NHS Boards account for performance. The Performance Assessment Framework (PAF) was replaced with Local Delivery Plans (LDPs) focusing on delivering the national Health, Efficiency, Access and Treatment (HEAT) Targets.

<table>
<thead>
<tr>
<th>A.12T</th>
<th>By the end of 2007 patients will wait no more than nine weeks for any MRI or CT scans and other key diagnostic tests</th>
<th>Target unchanged but measure will include: MRI, CT, Barium studies, non-obstetric ultrasound, gastroscopy, sigmoidoscopy, colposcopy, cystoscopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.14T</td>
<td>To respond to 75% of Category A calls within 8 minutes in Quarter 4 of 2007/08. (mainland Health Boards only)</td>
<td>No change</td>
</tr>
</tbody>
</table>

**SUMMARY OF REvised TARGETS FOR HEAT 2007/8**

<table>
<thead>
<tr>
<th>T.01T</th>
<th>The number of people waiting more than 6 weeks to be discharged from hospital into a more appropriate care setting will be reduced by 50% from April 2006 to April 2007 and to zero by April 2008. Additionally, the number of patients delayed in short-stay beds will be reduced by 50% from April 2006 to April 2007, and to zero in April 2008.</th>
<th>Wording of target amended but actual target is unchanged</th>
</tr>
</thead>
<tbody>
<tr>
<td>T.02T</td>
<td>By 2008-09, we will reduce the proportion of older people (aged 65+) who are admitted as an emergency inpatient 2 or more times in a single year by 20% compared with 2004/05 and reduce, by 10%, emergency inpatient bed days for people aged 65 and over by 2008</td>
<td>Wording enhanced to include reduction in emerg bed days</td>
</tr>
<tr>
<td>T.03T</td>
<td>Cervical screening target 80%, ongoing</td>
<td>No change</td>
</tr>
<tr>
<td>T.04T</td>
<td>QIS clinical governance and risk management standards improving</td>
<td>No change</td>
</tr>
<tr>
<td>T.05T</td>
<td>Reduce the annual rate of increase of defined daily dose per capita of anti-depressants to zero by 2000/10.</td>
<td><strong>new</strong></td>
</tr>
<tr>
<td>T.06T</td>
<td>Reduce the number of readmissions (with the exception of South of Scotland) that have had a psychiatric hospital admission of over 7 days by 10% by the end of December 2009.</td>
<td><strong>new</strong></td>
</tr>
<tr>
<td>T.07T</td>
<td>To reduce all staphylococcus aureus bacteraemia (including MRSA) by 30% by 2010</td>
<td><strong>new</strong></td>
</tr>
</tbody>
</table>
Number of MRSA and MSSA bacteraemia in Scotland 2003-2006

Source: HPS quarterly MRSA surveillance bacteraemia (June 2006)

MRSA average = 239
MSSA average = 251
The figures below demonstrate that *Staph. aureus* bacteraemias are a significant drain on resource in Scottish hospitals.

<table>
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<tr>
<th>(Extrapolated from Plowman et al 2001)</th>
<th>Cases</th>
<th>£</th>
<th>Bed days</th>
</tr>
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<tr>
<td>Per case</td>
<td>1</td>
<td>£6,000</td>
<td>4</td>
</tr>
<tr>
<td>Scotland pa</td>
<td>1,960</td>
<td>£11,760,000</td>
<td>7840</td>
</tr>
</tbody>
</table>

SAB has a significant mortality

median MRSA = 34%; MSSA 25% Collignon 2005
Even a small reduction in cases could have significant patient and financial benefits

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<td>Scotland pa</td>
<td>1960</td>
<td>£11,760,000</td>
<td>7840</td>
</tr>
<tr>
<td>10% reduction</td>
<td>196</td>
<td>£1,760,000</td>
<td>784</td>
</tr>
<tr>
<td>20% reduction</td>
<td>392</td>
<td>£2,352,000</td>
<td>1580</td>
</tr>
<tr>
<td>30% reduction</td>
<td>588</td>
<td>£3,528,000</td>
<td>2352</td>
</tr>
<tr>
<td>50% reduction</td>
<td>980</td>
<td>£5,880,000</td>
<td>3920</td>
</tr>
</tbody>
</table>
SAB NHSGGC

Run chart of quarterly number of S. aureus bacteraemia in NHS Greater Glasgow and Clyde, 1st April 2005 to 31st March 2009 with HEAT target trajectory to 31st March 2010.

CNO October 2009 – Additional 15% reduction 2011
Clostridium difficile to be reduced by 30% in two years
NHSGGC CDI Target - CEL 11 (2009)

Cases of CDAD NHSGGC & NHSScotland

Cases per 1000 OBD >65yrs

- NHSGGC
- NHSScotland
- Trajectory NHSGGC

Oct- Dec 07  Jan- Mar 08  Apr- Jun 08  Jul- Sep 08  Oct- Dec 08  Jan- Mar 09  Apr- Jun 09
Clinical Incident/RCA

• Clinical Team required to complete a RCA on severe cases of *C. difficile*
• Linked to NHSGGC Policy on the Management of Significant Clinical Incidents (datix)
Understanding Statistical Process Control Charts

• Developed by industry
• Accept that variation is natural
• Requires at least 25 points of data to be statistically robust.
• Upper and lower control limits set (+/- 3 \times \text{square root of the mean})
• Must agree definitions, e.g. HAI
“All improvement requires change but not all change results in improvement…the key is measurement.”

Berwick (1996)
SPCs

• is a chronological chart of past events to predict with some degree of certainty where future events should fall.
• has 3 lines that define where results should fall if the system is stable and in control.
• the 3 lines are: the mean or centre line, the upper and lower control limits.
SPC - “Out of Statistical Control”

[Graph showing data points for cases per month from 1997 to 1999, with lines indicating control limits (CL) and upper control limit (UCL).]
SPCs – Quality Improvement

• Effective for local surveillance and monitoring (ward)
• Tell us when we have a problem but not what it is
• Quality Improvement Tool – 8 results on or below the mean is considered to be a statistically significant improvement.
Interval Charts

Hospital Acquired C.diff's BWTH Total 2007 - 2009

This chart is stable and in control indicating stable infection control systems. There have been no isolates of C-Diff for 13 months.

Time between cases

- 4 mths
- 0 mths
- 8 mths
- 3 mths
- 13 mths
Stobhill Hospital Acquired -
C. difficle in Stobhill 2007-2009

This chart is currently within normal control limits.
RAH

Hospital Acquired -
C-Diff, 2007 - 2009, RAH

Chart comment - This chart is currently within normal control limits.

C-diff cases per month

Jan-08  Feb-08  Mar-08  Apr-08  May-08  Jun-08  Jul-08  Aug-08  Sep-08  Oct-08  Nov-08  Dec-08
Jan-09  Feb-09  Mar-09  Apr-09  May-09  Jun-09  Jul-09  Aug-09  Sep-09  Oct-09  Nov-09  Dec-09
Jan-10  Feb-10  Mar-10  Apr-10  May-10  Jun-10  Jul-10  Aug-10  Sep-10  Oct-10  Nov-10  Dec-10
Jan-12  Feb-12  Mar-12  Apr-12  May-12  Jun-12  Jul-12  Aug-12  Sep-12  Oct-12  Nov-12  Dec-12
Jan-14  Feb-14  Mar-14  Apr-14  May-14  Jun-14  Jul-14  Aug-14  Sep-14  Oct-14  Nov-14  Dec-14
This chart is currently within normal control limits. Number of CDAD cases have reduced on this site and the CL has been reduced to reflect this.
Victoria Hospital Acquired -
C. difficile Victoria Infirmary - All Directorates 2007-2009

Chart comment - This chart is currently within normal control limits.
SGH

Hospital Acquired - C. difficile Southern General Hospital - All Directorates 2007-2009

Chart comment - This chart is currently within normal control limits.
Western

Hospital Acquired MRSA's - WIG Total 2007 - 2009

Chart comment: This chart is currently within normal control limits.
This chart is within normal control limits.
Questions?

HOW TO AVOID PANIC...

SWINE FLU!
NEWS

SWINE FLU!

SURGICAL MASK

SWINE FLU!

SWINE FLU!