



Healthcare Associated Infection Board Report

**Infection Control Team
April 2009**

1.0 INTRODUCTION

This is the 2nd Healthcare Associated Infection (HAI) Board Report. The themes contained in these reports have been established by the Scottish Government Health Department (SGHD) who established a minimum dataset. These are:

- *Clostridium difficile* Associated Diarrhoea (CDAD) cases
- *Staphylococcus aureus* Bacteraemias
- Hand Hygiene Compliance
- Compliance with national Cleaning Specifications

NHS Ayrshire & Arran Infection Control Team (ICT) has been exploring ways of maximising the information presented to the Board beyond that required by the national dataset. The previous version of this reports included information presented in the form of Statistical Process Control (SPC) Charts. These are graphical ways of presenting data to show periods of natural monthly variation and when significant improvements or deteriorations are identified. SPC charts establish a mean over a 2 year period and then displays lower & upper warning limits at 2 standard deviations from the mean and upper and lower control limits at 3 standards deviations from the mean. Any monthly figure between the upper and lower control limits is considered to be natural variation and in statistical control. Any figure above the upper control limit is considered to be abnormal and requires further investigation as to the cause. Likewise any figure below the lower control limit is considered to be a significant improvement. Figures between the upper warning and control limits whilst considered normal variation can be used as trigger levels for early investigation and intervention.

The inclusion of SPC Charts in the previous HAI Board Report made them extremely detailed and it ran to approximately 25 pages. For the purposes of this report the SPC Chart data has been converted into a Red, Amber & Green (RAG) report. This has the benefit of shortening the report considerably and allowing the CDAD & SAB data to be presented graphically in one page. The following thresholds have been set:

- Red = any figure above the Upper Warning Limit. This is a lower warning threshold than the Upper Control Limit
- Amber = any figure from the mean to the upper warning limit
- Green = any figure below the mean.

The HAI Board Report format will be continually reviewed in light of feedback from Board members and other key stakeholders as well any increase in the national minimum dataset established for the reports.

Clostridium difficile Associated Diarrhoea (CDAD)

	Mar 09	Feb 09	Jan 09	Dec 08	Nov 08	Oct 08	Sept 08	Aug 08	Jul 08	Jun 08	May 08	Apr 08
1. NHS A&A cases of CDAD identified in inpatients	44	48	35	45	44	42	44	44	61	51	60	46
2. NHS A&A cases of hospital acquired CDADs in inpatients	37	39	25	30	26	27	29	27	45	41	40	33
3. ACH - Cases of CDAD identified in inpatients	1	5	1	3	5	3	3	3	3	3	4	4
4. ACH - Cases of hospital acquired CDADs in inpatients	1	5	0	4	5	3	4	2	4	3	3	3
5. Ayr - Cases of CDAD identified in inpatients	14	16	18	15	15	15	14	17	19	14	9	19
6. Ayr – Cases of hospital acquired CDADs in inpatients	11	12	14	7	7	7	8	9	15	13	4	14
7. Biggart - Cases of CDAD identified in inpatients	7	6	2	7	1	5	3	6	6	4	10	2
8. Biggart – Cases hospital acquired CDADs in inpatients	6	6	2	5	3	5	3	6	4	4	9	2
9. Crosshouse - Cases of CDAD identified in inpatients	20	18	12	19	21	17	21	13	30	25	31	18
10. Crosshouse – Cases hospital acquired CDADs in inpatients	18	14	8	13	10	10	12	5	18	16	22	11
11. IC & ES - Cases of CDAD identified in inpatients	34	39	36	37	35	34	34	32	48	42	47	32
12. IC & ES – Cases hospital acquired CDADs in inpatients	29	32	23	24	22	22	23	22	34	34	32	21
13. IC & PS - Cases of CDAD identified in inpatients	9	9	5	9	9	8	8	12	13	7	13	14
14. IC & PS – Cases hospital acquired CDADs in inpatients	7	7	2	6	3	5	4	5	10	5	8	11
15. Mental Health - Cases of CDAD identified in inpatients	1	0	0	0	0	0	2	0	0	2	0	0
16. Mental Health – Cases hospital acquired CDADs in inpatients	1	0	0	0	0	0	2	0	0	2	0	0

Below the mean	Mean – Upper warning Limit	Above upper warning limits
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NB Not all hospitals have their data reported individually SPC format due to relatively low numbers and are therefore are not included in the RAG table. Please see below

Hospital	Identified cases of CDAD	Acquired cases of CDAD
Ailsa Hospital	1	1
East Ayrshire Community Hospital	1	0

March 2009

Comment:

- In March identified cases of CDAD fell back below the mean following rise in February
- Acquired cases of CDAD remain above mean for 2nd consecutive month
- Related to increase in acquired cases in Crosshouse. Combined Norovirus/Clostridium difficile outbreak in 5E accounted for 1/3rd of acquired cases in Crosshouse in March. Outbreak declared over on 30/3/09
- Elevated number of acquisitions in Ayr & Biggart again partly associated with increased Norovirus activity.
- Intervention by ICT at ward level targeted each month at those areas with increased incidence of CDAD acquisition
- Protocol for Intervention during Periods of Increased Incidence of CDAD acquisition currently being developed by ICT
- ICT, Clinical Improvement and Practice Development Unit collaborating over implementation of CDAD Care bundles

Staphylococcus aureus Bacteraemias (SABs)

	Mar 09*	Feb 09	Jan 09	Dec 08	Nov 08	Oct 08	Sept 08	Aug 08	Jul 08	Jun 08	May 08	Apr 08
1. NHS A&A cases of SAB	7	8	12	12	8	9	12	6	9	10	12	12
2. NHS A&A cases of hospital/healthcare acquired SABs	3	3	7	3	3	7	8	3	5	8	9	8
3. ACH - Cases of SAB	0	0	0	1	0	0	0	1	1	0	0	0
4. ACH - Cases of hospital/healthcare acquired SABs	0	0	0	1	0	0	1	1	1	0	0	0
5. Ayr - Cases of SAB	3	1	8	2	1	4	4	3	2	3	4	7
6. Ayr – Cases of hospital/healthcare acquired SABs	1	0	3	0	0	2	2	1	1	3	4	5
7. AMU - Cases of SABs	1	0	1	1	0	0	0	0	0	0	0	0
8. AMU – Cases hospital/healthcare acquired SABs	1	0	1	1	0	0	0	0	0	0	0	0
8. Biggart - Cases of SABs	0	0	0	1	0	1	0	0	0	1	0	0
9. Biggart – Cases hospital/healthcare acquired SABs	0	0	0	0	0	1	0	0	0	0	0	0
10. Crosshouse - Cases of SABs	3	7	3	7	7	4	8	2	6	6	8	5
11. Crosshouse – Cases hospital/healthcare acquired SABs	0	2	3	1	3	4	5	0	2	4	5	2
12. IC & ES - Cases of SABs	4	7	7	10	6	6	11	5	6	8	8	9
13. IC & ES – Cases hospital/healthcare acquired SABs	1	0	1	1	1	3	7	1	2	6	7	6
14. IC & PS - Cases of SAB	3	1	5	2	2	3	1	1	3	2	4	3
15. IC & PS – Cases hospital/healthcare acquired SABs	2	2	6	2	2	4	1	1	2	1	2	1

* March data is provisional

Below the mean	Mean – Upper warning Limit	Above upper warning limits
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NB Not all hospitals have their data reported individually SPC format due to relatively low numbers and are therefore are not included in the RAG table. Please see below

Hospital	Identified cases of SAB	Acquired cases of SAB
Kirklandside Hospital	0	1

March 2009

Exception Report

- 1 SAB identified and acquired in the Neonatal Unit in Ayrshire Maternity Unit in January. Investigations undertaken into this and the acquisitions in January & December have indicated that all these organisms are genetically different and are therefore not related. No common cause for the SABs was identified. It should be noted that the threshold for SABs in the AMU is so low that a single case is above the upper warning limit.

Comment

- The data for March is provisional.
- Overall identified and hospital/healthcare acquired SABs remain below the mean for the 2nd consecutive month
- Two hospital/healthcare acquired cases in IC & PS directorate acquired in different hospitals
- Amended Peripheral Vascular Catheter nursing documentation chart being rolled out in April. This will allow measurement of PVC care bundles to commence in May.
- Repeat Infection Control audit of PVCs scheduled for August.
- Blood culture policy awaiting ratification. Implementation of policy will lead to a reduction of positive blood culture results that arise as a result of contamination of the sample when it is being taken.
- Discussions taking place with Health Protection Scotland to provide support for more detailed epidemiological analysis of SAB blood cultures especially those that are assessed as having an unknown cause. These account for approximately 1/3rd of all SABs. Identification of causes essential to develop control measures aimed at reducing overall numbers.

Average Hand Hygiene Compliance with Opportunities Taken - Local Audit Results February 2009

Hospital	Nursing (%)	Medical (%)	AHP (%)	Ancillary (%)	Total (%)
ACH	95	91	87	90	93
Ailsa	100	100	N/A	100	95
AMU	100	100	100	100	100
Arran	100	100	100	N/A	100
Ayr	98	87	91	83	94
Biggart	99	94	100	84	96
Crosshouse	92	81	94	85	90
Davidson	100	67	50	100	87
EACH	100	95	100	97	98
Kirklandside	95	79	90	61	93
Ayrshire and Arran	97	86	93	85	92

Comments:

- In February 143 local audits of hand hygiene compliance were undertaken in 55 separate clinical areas by nursing staff
- The number of audits in each area ranged from 1 – 5 per month
- Hand Hygiene training targeted at those areas with lowest scores.
- The Infection Control Clinical Trainer has been acting up to cover vacant Local Health Board Hand Hygiene Co-ordinator post. This has resulted in a reduced training schedule as priority given to completing mandatory 2 monthly national hand hygiene audits
- New Local Health Board Hand Hygiene Co-ordinator takes up post on 20/4/09
- This will allow Clinical Trainer to re-establish and increase training in areas requiring support
- Hand Hygiene Co-ordinator will continue programme of rolling out local audit programme to all clinical areas as well as undertaking 2 monthly national hand hygiene audits

National Cleaning Specification Compliance

Hospital	Mar 09	Feb 09	Jan 09	Dec 08	Nov 08	Oct 08	Sept 08	Aug 08	Jul 08	Jun 08	May 08	Apr 08	Yearly
Ailsa	97.6	96.8	96.4	97.0	97.3	96.3	96.5	97.2	97.5	97.3	96.3	95.1	96.7
Arran	97.0	96.6	95.6	95.7	97.3	96.5	94.2	98.5	98.5	98.1	97.3	100	97.1
Arrol Park	96.6	96.0	96.0	96.1	96.4	98.8	95.9	95.6	95.9	96.2	96.2	95.3	96.3
Ayr	95.5	94.3	94.4	94.0	96.9	96.4	96.5	96.4	96.1	95.8	95.6	96.0	95.6
Ayrshire Central	96.2	96.3	95.5	91.5	96.3	93.6	95.8	89.8	94.7	95.0	97.1	95.2	94.6
Biggart	95.9	98.1	98.0	98.3	98.0	96.3	96.6	97.7	97.8	96.5	97.3	99.1	97.4
Crosshouse	95.0	94.9	94.2	94.2	95.5	95.0	95.3	94.2	94.6	95.7	96.2	95.4	95.0
Davidson	95.7	97.2	96.8	97.3	98.6	98.5	92.8	99.5	97.1	98.4	98.7	99.0	97.8
EACH	99.5	99.5	99.7	99.7	99.4	98.2	99.7	99.4	99.1	99.3	99.3	99.0	99.3
Kirklandside	94.8	97.1	91.8	99.1	96.5	97.4	97.9	97.8	96.5	97.0	95.4	99.0	96.4
Lady Margaret	97.6	95.7	97.7	95.8	97.1	96.4	96.6	93.6	96.9	93.5	95.9	96.9	96.2
All	96.49	96.59	96.01	96.25	97.21	96.67	96.16	96.34	96.79	96.62	96.85	97.27	95.9



Comment

All Hospitals achieved green status for compliance with the National Cleaning Specifications in March and for the year as a whole