Borders NHS Board

NHS BORDERS HEALTHCARE ASSOCIATED INFECTION 2008/09 ANNUAL REPORT & INFECTION CONTROL PROGRAMME 2009/10

Aim

The aim of the Healthcare Acquired Infection (HAI) Annual Report is to provide a summary of the activities of the Infection Control Team (ICT) throughout 2008/09. The Report also acknowledges the ongoing contributions made by all healthcare staff in NHS Borders in the prevention, management and control of HAI. The Infection Control Programme 09/10 intends to inform the Board of the planned activities and developments of the ICT for the current financial year.

Background

For the last few years, the ICT has produced an Annual Report focusing on key progress, activity, surveillance programmes and other areas of infection control work undertaken in NHS Borders. For 2008/09, this Report aims to report on performance against HEAT targets and whether infection rates have improved or become worse when compared with 2007/08. Production of this Report complies NHS QIS HAI Infection Control Standards March 2008. There has been a delay in the completion of this Report due to the capacity issues of the ICT arising from post vacancies of the Infection Control Development Manager, the Senior Infection Control Nurse and a permanent Consultant Microbiologist. The HAI 2008/09 Annual Report is found at Appendix 1.

The NHS Borders Infection Control Programme is updated on an annual basis by the Infection Control Team (ICT) to reflect the ongoing work of the ICT and other staff and is informed by new or updated national guidelines and work generated from the HAI taskforce and Health Protection Scotland (HPS). The 2009/10 Programme is found at Appendix 2.

Summary

The Annual Report and Programme are presented to the NHS Borders Infection Control Committee (ICC) for approval and thereafter to NHS Borders Risk Management Board (RMB). Throughout the year it is the responsibility of the ICT to inform the ICC and RMB of any concerns or lack of progress with any element of the programme or where the work documented cannot be undertaken, due to unforeseen circumstances. The programme for April 2009- 2010 has been approved by the ICT and RMB.

Recommendation

The Board is asked to:

- **Note** the HAI 2008/09 Annual Report
- **Note** the Infection Control Programme 2009/10

Policy/Strategy Implications	The 2008/09 HAI Annual Report forms a part of the overall reporting strategy for NHS Borders
Consultation	These documents have been approved by the NHS Borders Infection Control Committee and NHS Borders Risk Management Board
Consultation with Professional Committees	N/A
Risk Assessment	No risks have been identified in this Report
Compliance with Board Policy requirements on Equality and Diversity	Production of the Annual Report has been fully compliant
Resource/Staffing Implications	There are no associated resources or staffing implications

Approved by

Name	**Designation**	**Name**	**Designation**
Leonie Smith	Associate Director of Nursing		

Author(s)

Name	**Designation**	**Name**	**Designation**
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HEALTHCARE ASSOCIATED INFECTION

2008/09 Annual Report

NHS Borders
Infection Control Team

Summary of Key Highlights During 2008/09

Appointment of Anti-microbial Pharmacist and Anti-microbial Nurse

Establishing an E-Group with 8 members of the public

Surveillance activities became firmly embedded within NHS Borders and all mandatory surveillance requirements were met; Surgical Site Infection (SSI) Rates for NHS Borders have consistently remained well within the nationally recognised limits of tolerance.

Continued effective collaboration between the Infection Control Team and the laboratory service

Further development of education and training programmes

Reduced levels of needlestick/ contamination incidents

Early development of more pro active infection control service. The service has been extended to provide coverage within the community including care homes. There has also been promotion of the hand hygiene campaign within the community

Strengthened collaboration between Estates department and the Infection Control Team, with HAI SCRIBE now being utilised routinely

Continued involvement and progression with the Scottish Patient Safety Programme

Hand hygiene:

- Increasing levels of hand hygiene compliance recorded during quarterly audits, consistently maintaining >90% compliance for NHS Borders
- Continued support with the hand hygiene campaign evident from all tiers and disciplines of staff
- Increased Public involvement

Production of this report, complies with Standard 3.b.1, NHS Quality Improvement Scotland HAI Infection Control Standards March 2008.

Workplan & Activity During 08/09

During 08/09 the main focus of the Infection Control Team (ICT) was in the following areas:

- Surveillance
- Development and review of policies
- Infection control audits
- Training & education.

Key Developments

- 2008/09 saw key appointments within the ICT. Issues relating to the use of anti-microbials within NHS Borders now have a focus due to the appointment of +an Anti-microbial Pharmacist and Anti-microbial Nurse.

- A priority has been to strengthen links with Estates to ensure that the requirements of HAI SCRIBE are fully implemented across NHS Borders. During 2008/09, closer working relationships have enabled this to be progressed.

- An E-group was established to help the ICT to deliver a service suitable and useful to patients, visitors and staff. The group has 9 members of the public and is an innovative method of engaging directly with the public. It is anticipated that this will deliver real benefits for the Team.

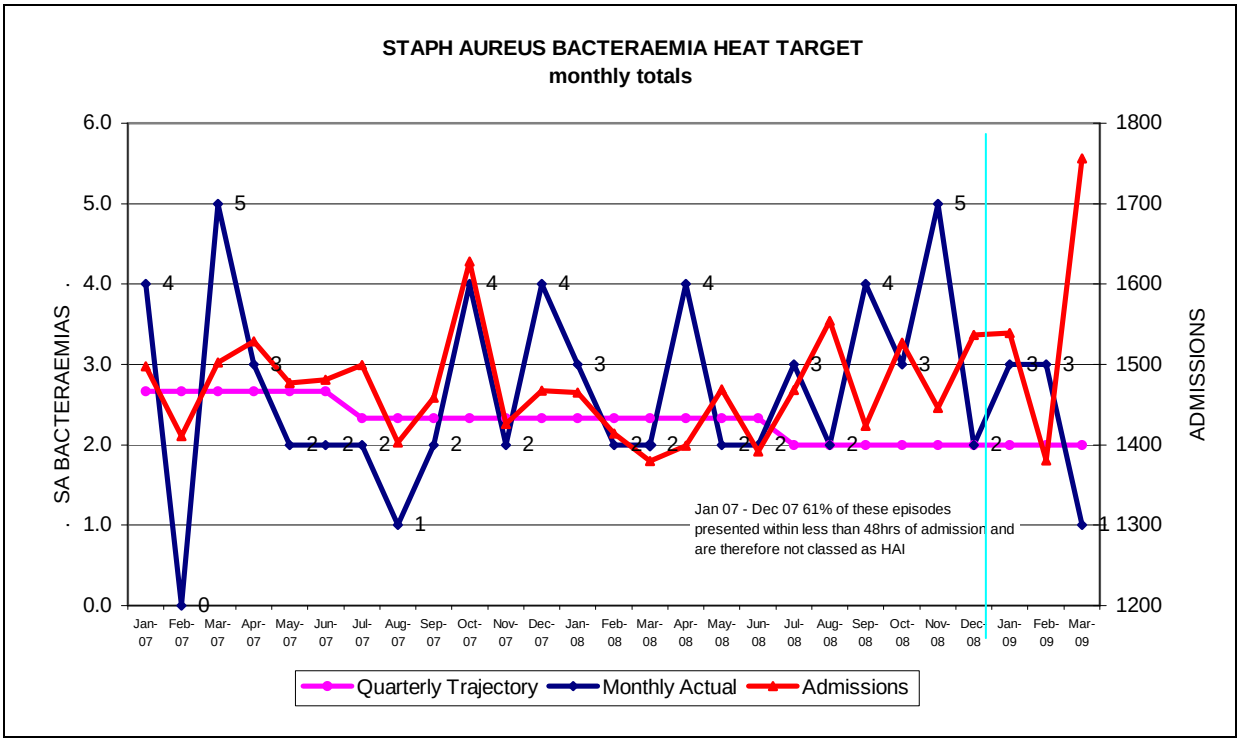
Challenges Experienced

Due to sick leave, the ICT has experienced reduced capacity during the year. Efforts have been maintained to ensure that the workplan has been delivered although there has been periods when pressures have been at high levels. This in itself has led to the delay in completion of the 08/09 Annual Report. Additional challenges have been faced as there has been no Consultant Microbiologist in place since the Summer of 2008.

Performance Against HEAT Targets

The ICT has monitored performance against HEAT target T5 - To reduce all *staphylococcus aureus* bacteraemia (including MRSA) by 25% by 2010. This target is measured against a quarterly trajectory. During the quarter ending March 2009 there were 7 *staphylococcus aureus* bacteraemia which is 1 bacteraemia above the trajectory target. This is a decrease of 3 isolates from the quarter to December 2008 where there were 10 *staph. aureus* bacteraemias. Across 2008/09, the rate of staphylococcus aureus was generally above the trajectory. The chart overleaf shows the recording rate from January 2007 to March 2009.

Figure 1 Staph. aureus Bacteriaemia HEAT Target



Hand Hygiene Activity

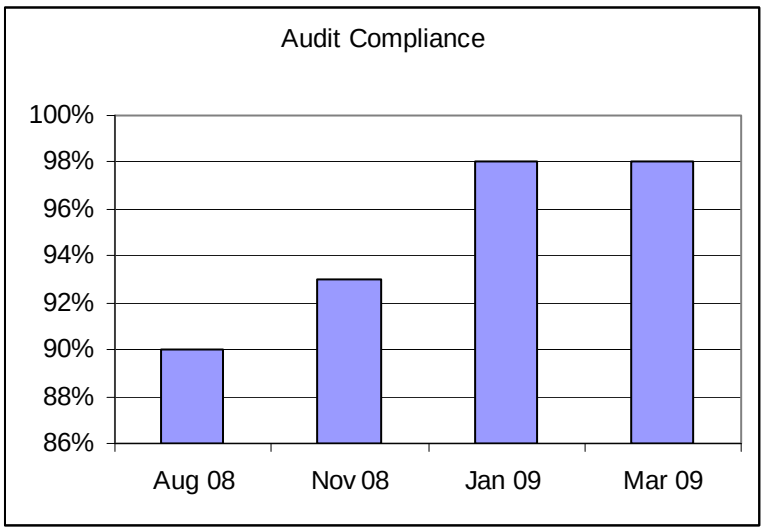
Hand hygiene continues to be given a high priority and is well supported by clinical staff, senior managers and consultants. Work has continued across NHS Borders to improve compliance. Wall mounted dispensers have increased within the clinical and non clinical areas and all clinical staff including medical staff have been encouraged to wear the small personal bottles of hand gel. Hand hygiene champions have been identified and they work closely with the Hand Hygiene Co-ordinator.

A public representative continues to work with the Hand Hygiene Co-ordinator and has also undertaken work by speaking to members of the public. A hand hygiene stand, by the reception area at the front door to the Borders General Hospital, has been in use several times and has proven to be well received by both visitors and members of staff.

National Hand Hygiene Audit Results

From November 2008, hand hygiene audits have been conducted every 2 months. The chart below shows compliance levels during 2008/09

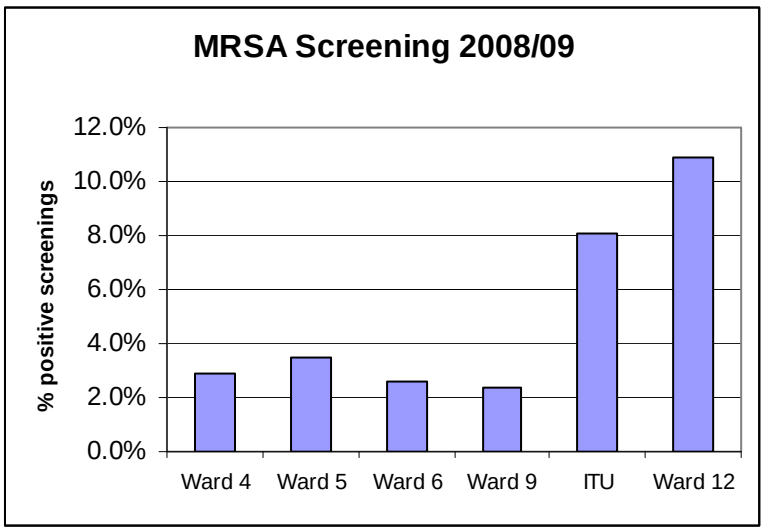
Figure 2 Hand Hygiene Audit Compliance



Extended MRSA Screening

Screening of all patients on admission to Wards 4,5,6,9,12, ITU and the Orthopaedics pre-admission clinic commenced in February 2008. This was put in place following consultation to prepare staff for the extended screening programme proposed at that time by the Scottish Government. This has now become a routine part of the admission procedure.

Figure 3 MRSA Screening - % of Positive Screenings During 2008/09



Monitoring Outbreaks of HAI

Clusters of Gastro–intestinal illness 08/09

- 10 wards affected
- 53 patients affected
- 23 staff affected, although this may not be an accurate number as ICT not always informed
- Norovirus confirmed in two of the incidents
- No other organisms implicated.

The table below shows the incidence of gastro-intestinal illness.

Table 2 Clusters of Gastro-intestinal Illness 08/09

	Duration / Closures	No of patients with symptoms	No of staff	Norovirus confirmed?
The Knoll, Duns	24/3/08 – 3/4/08 10days *admissions deferred*	11	6	No
Ward 6, BGH	3/4/08 – 7/4/08 4 days *1bay closed*	5	0	No
Ward 10, BGH	1/4/08 – 10/4/08 9 days *Bay closed only as a precaution*	9	3	No
Ward 6, BGH	1/5/08 – 5/5/08 5 days *Bay closed as a precaution*	4	0	Yes
Ward 16, BGH	16/5/08 – 20/5/08 4 days *Patients, isolated*	2	1	No
Ward 6, BGH	18/5/08 – 20/5/08 2 days Bay closed only as a precaution	5	0	No
Ward 11 BGH	01/08/08 – 04/08/08 4 days *2 bays closed as a precaution*	3	0	No
Hawick Community Hospital	12/12/08 – 15/12/08 4 days *No closure, patients isolated*	2	0	No
Ward 10 BGH	13/12/08 – 16/10/08 4 days *Bay closed*	6	0	No
Haylodge Ward 2, Peebles	16/01/09 – 25/01/09 10 days *Ward closed*	16	13	Yes

Monitoring of Isolation Facilities in Borders General Hospital

From 1st May- 31st October 2008 data was collected for the fourth consecutive year to identify the adequacy of single room facilities necessary for the management of some infection control 'alert' conditions (e.g. diarrhoea and vomiting) or 'alert' organisms (e.g. MRSA). The table below shows the data collected

Table 2 Availability of Isolation Facilities in BGH – 1st May- 31st October 2008

Alert' Condition/ Organism	Total Number [2007]	Facilities Available on Wards	Patient not requiring Isolation as in 'low risk area'	Facilities Available by transfer when single room available	Facilities not Available
MRSA	143 [133]	91 [63]	15 [53]	0 [1]	37 [16]
Clostridium difficile (C.diff)	39 [28]	33 [13]	n/a	0 [4]	6 [11]
Others - GI (excluding C diff) Strep A/ Mumps/ Shingles	25 [24]	25 [24]	n/a	0 [0]	0 [0]
TOTAL NUMBERS	207 [185]	149 [100]	15 [53]	0 [5]	43 [27]
2006 TOTAL NUMBERS	172	114	35	0	23

In addition to collected data during a specified time period, Bed Managers now email the ICT with weekly figures of single room occupancy and diagnoses of patients in the single room facility. This will enable a more complete assessment of the availability of single rooms to be made over time. Through teaching sessions, staff are reminded of the need to inform ICT of patients with a known or suspected infection to ensure that the appropriate action is taken to minimise the spread of infection.

If isolation facilities are unavailable, patients who have known or suspected alert organism carriage or infection are risk assessed on an individual basis and a joint decision is made between the clinical teams and the ICT on the management of each patient. This is done to ensure minimal risk to that patient, other patients in that ward and the staff caring for that patient. This may take different formats of approach dependant on organism, condition of patient, risk groups and locale.

Patient Movement

During 1st May and 31st October 2008 data was collected to identify the number of times that patients were moved between wards during their stay. As well as limited isolation facilities, frequent movement of patients during in patient stay has been associated with the spread of HAI**.**

Table 3 Bed movement of 'IC' patients within BGH and Community Hospitals

		Movement of patients				
Alert' Condition/ Organism		**Total Number**	**Medical Unit**	**DME Unit**	**Surgical Unit**	**Within Community Hospitals**
MRSA	Patients	143	77	22	29	15
	Total moves	202	126	22	54	0
	Av moves/ patient	1.41 (0-7)	1.63 (0-7)	1 (0-6)	1.82 (0-4)	0
	2007 move/ patient		2.8 (0-8)	2.6 (0-7)	2.08(0-7)	0.7
Clostridium difficile (C.diff)	Patients	42	23	8	8	3
	Total moves	99	49	31	18	1
	Av moves/ patient	2.35 (0-7)	2.13 (1-10)	3.87 (0-7)	2.25 (0-6)	1
	2007 move/ patient		2.75 (1-7)	2.6(1-5)	1.7(1-3)	0
Others - GI (excluding C diff) Strep A/ Mumps/ Shingles	Patients	27	13	5	7	2
	Total moves	13	6	1	6	0
	Av moves/ patient	2.07	2.16 (0-2)	5 (0-1)	1.16 (0-2)	0
	2007 move/ patient		1 (0-3)	2 (0-4)	0.75 (0-2)	0

It is generally agreed that frequent patient movement during an inpatient stay is associated with an increased incidence of HAI. Some improvements can be demonstrated in the highlighted areas in table 4. The data in this table has also allowed the ICT to identify key areas to target education and training on this specific issue. Stronger collaboration with the bed management team has further supported this.

Mandatory National Surveillance Programme & Surveillance Activity

Mandatory Surveillance

From 2007, all NHS Boards were required to implement mandatory surveillance of in-patient surgical site infections (SSI) for hip arthroplasty's and caesarean sections. The denominator for the SSI surveillance programme is procedures and all patients undergoing any procedure within the mandatory operation categories are included in the surveillance. 30 day post discharge surveillance must also be undertaken. This is done using prospective readmissions data, following operations on all orthopaedic surgical cases under inpatient surveillance. 30 day Post Discharge Surveillance on caesarean sections is also mandatory.

NHS Borders have now undertaken two full year of SSI Surveillance for hip arthroplasty and caesarean sections, including the mandatory 30 days post discharge surveillance.

Findings from Mandatory Surveillance During 08/09

Hip Arthroplasty & Hemi-arthroplasty SSI Surveillance

228 hip arthroplasty & hemi-arthroplasty operations were undertaken with 3 surgical site infections (1.3%) recorded. All 3 surgical site infections occurred during inpatients stays and there were 2 deep incisional SSIs and 1 superficial SSI.

Caesarean Section SSI Surveillance

233 caesarean sections were undertaken, with 9 superficial infections (3.9%) recorded. 1 SSI was detected during an inpatient stay (0.5%) and 8 infections (3.5%) were detected post discharge, using the Clinisys Lab centre in conjunction with our surveillance system. Our figures support the theory that over 80% of all c-section SSI's develop post discharge, with only 10% of our infections developing whilst inpatients. There were no deep incisional or organ space SSIs detected.

Clostridium Difficile Surveillance

Increasing rates of *Clostridium difficile* in healthcare settings prompted the introduction of a mandatory national surveillance programme for Scotland in 2006. All NHS laboratories are required to report all cases of *Clostridium difficile* Associated Disease (CDAD), from mild diarrhoea to severe cases in patients aged 65 and over. The definition of CDAD is "someone in whose stool *C.difficile* toxin (CDT) has been identified at the same time as they have experienced diarrhoea not attributable to any other cause, or from cases of whose stool *C. difficile* has been cultured at the same time as they have been diagnosed with pseudomembranous colitis".

During 2008/09, there was a total of 129 CDAD patients. 31 deaths recorded within the 30 days post diagnosis period, of which all patients had co-morbidities. 17 of these patients had *Clostridium difficile* infection, colitis, or CDAD recorded on their Death certificate.

The BGH had a total of 104 CDAD patients of which 94 patients were 65 years or older and 10 patients younger than 65 years. In the >65 years old group, 28 deaths occurred

within 30 days post diagnosis of CDAD. In the <65 years old group 2 deaths occurred within the 30 days post diagnosis period. In the Community, which includes Community hospitals, nursing homes and GP's, 25 CDAD patients were diagnosed with 23 patients aged 65 years or older and 2 patients aged less than 64 years old. In the >65 years old group there was one recorded death within the 30 days following diagnosis of CDAD. There were no recorded deaths in the under 65's.

The Death Certificates recorded 2 cases of CDAD where the "disease led directly to death", 5 cases where CDAD was an "intermediate cause of death" and 1 case where CDAD was an "underlying cause of death". Nine cases of CDAD where recorded as "condition contributing to death"

Point of Scottish National Prevalence Survey

Point of Prevalence Survey Phase II

In November and December 2008, the Point of Prevalence Survey Phase II was undertaken in the BGH by a Health Protection Scotland Specialist and the local HAI Surveillance Co-ordinator. This provides the national HAI taskforce with baseline information on the total prevalence of HAI in Scottish hospitals and its burden in terms of health service utilisation and costs. Prevalence was calculated as the total number of inpatients with HAI divided by the total number of inpatients in the BGH. For 2008/9 the HAI prevalence for Borders General Hospital was 1.9%, which compares favourably to the previously recorded national prevalence of 9.5%.

Local Surveillance Findings

The total number of blood cultures taken during 08/09 was 4135 and the total number found to be positive was 546. The table below shows the breakdown of positive findings. A reduction of 25% in staph. aureus bacteraemias is indicated from 2007/08 to 2008/09. This is very positive as it is inline with HEAT target requirements. Ongoing work is however needed particularly regarding MRSA bacteraemias.

Table 4 Breakdown of Positive Blood Cultures

Organism	Number (%) 2008/9	2007/8
Staphylococcus aureus		
MSSA	22 (4.2)	34 (6.5)
MRSA	14 (2.6)	14 (2.6)
Coagulase negative staphylococcus	225 (42)	213 (41)
Enterobacteriaceae:		
E.coli	103 (19)	69 (13.2)
Klebsiella sp.	19 (3.5)	17 (3.2)
Others	23 (4.2)	40 (7.6)
Pseudomonas sp.	27 (5.0)	13 (2.5)
Enterococcus sp.	19 (3.5)	14 (2.6)
Beta haemolytic streptococci	15 (3.0)	14 (2.6)
Non haemolytic streptococci	26 (5)	55 (10.5)

Candida spp	6 (1.0)	5 (1.0)
Others	37 (7.0)	35 (6.7)

Table 5 Urinary Tract Pathogens and Antibiotic Resistance 2008/9 - In-patients and (Community)

Figures are for laboratory tests and hence may include duplicates and repeat Isolates. They do not represent "patient episodes".

Organism	% Resistance (Community figure)				
	Amoxicillin	Cephalexin	Nitrofurantoin	Ciprofloxacin	Trimethoprim
E.coli	52 (44)	7 (5)	1 (1)	5 (5)	18 (17)
Klebsiella	100 (100)	6 (18)	18 (18)	4 (2)	15 (18)
Other "coliform"	60 (50)	23 (24)	40 (45)	18 (6)	22 (35)
Pseudomonas	100 (100)	100 (100)	100 (100)	9 (7)	100 (100)
Staphylococci	90 (67)	61 (11)	0 (0)	56 (25)	15 (28)
Enterococci	0 (0)	100 (100)	1 (0)	73 (60)	94 (97)
Streptococci	0 (0)	0 (0)	0 (9)	12 (22)	26 (16)

Table 6 Urinary Tract Pathogens and Antibiotic Resistance 2007/8

Organism	% Resistance (Community figure)				
	Amoxicillin	Cephalexin	Nitrofurantoin	Ciprofloxacin	Trimethoprim
E.coli	51 (42)	5 (3)	1 (1)	6 (6)	23 (23)
Klebsiella	100 (0)	9 (7)	11 (11)	6 (4)	17 (13)
Other "coliform"	48 (37)	28 (22)	82 (73)	6 (6)	30 (37)
Pseudomona	100 (100)	100 (100)	100 (100)	5 (8)	100 (100)
Staphylococci	76 (73)	44 (29)	0 (0)	52 (35)	11 (23)
Enterococci	0 (2)	100 (100)	0 (1)	72 (65)	100 (100)
Streptococci	0 (0)	0 (0)	0 (0)	42 (34)	42 (24)

Comparing tables 5 and 6 indicates that for most clinically important antibiotics there have been no significant changes in resistance pattern between 2007/08 and 2008/09. Ciprofloxacin while though numbers are currently too small to give any categorical statements regarding resistance, there is a suggestion of an increase in resistance. The laboratory is keeping a close watch on this.

Table 7 Multi-Drug Resistant or "Alert" Organism

Organism	2008/09 No New Isolates	2007/8
MRSA	228	221
VRE (Vancomycin Resistant Enterococci)	3	0
Gentamicin Resistant Enterobacteriaceae	92	6
Quinolone resistant Enterobacteriaceae	296	217
ESBL Enterobacteriaceae	43	40
Streptococcus pneumoniae Penicillin Resistance	4	3
Streptococcus pneumoniae Erythromycin Resistance	4	1

In March/April 2008 a new system of working was fully implemented in the laboratory, (in line with a Scotland wide national procurement). This meant that a large number of enterobacteriaceae that previously had only limited sensitivity testing (not including gentamicin) began to be tested routinely for sensitivity to gentamicin. This therefore accounts for the apparent rise in gentamicin resistance seen in table 7 overleaf.
Clinically having this information is very useful as it allows more timely use of appropriate antibiotics.

Table 8 Chlamydia prevalence by Polymerase Chain Reaction test (PCR)

2008/9 Total number tested: 4246; 370 positive			
Sexual Health Clinic (1530)		**All other sources (2716)**	
Prevalence			
Male	**Female**	**Male (Total 14.2%)**	**Female (Total 7.2%)**
13.5%	10.2%	15.7%	6.1%
2007/8 Total number tested: 3535; 308 positive			
Sexual Health Clinic (1312)		**All other sources (2223)**	
Prevalence			
Male	**Female**	**Male (Total 14.6%)**	**Female (total 7.0%)**
14.9%	11.2%	13.6%	5.5%

Audit, Policies and Procedures

Several audits have been carried out during 2008/09 in the following areas:

- Infection control care plans
- Cadaver policy
- Blood and body fluids policy
- Sharps boxes
- Single room availability – patients with an infection control alert
- Environmental cleanliness
- Food hygiene.

Most of the audits were satisfactory. Some key findings are detailed below.

Audit of Infection Control Care Plans

Infection Control (IC) Care Plans are now included within the unitary notes and are now in widespread use.

Table 9 Infection Control Care Plan Compliance

Area	IC Care Plan Compliance March 2009	IC Care Plan Compliance July 2008
BGH	77%	72%
Mental Health	** no audit necessary	100%
Community Hospitals	Still to be completed for 2009	82%

** Due to 100% compliance, Mental Health re-audit is now annual.

Audit of Environmental Cleanliness

The table overleaf shows the results of audits carried out by General Services and the ICT. Borders performed well, recording an annual score of 97.2%. This was above the national average figure of 95.9.

Table 10 Audit of Environmental Cleanliness

Health Board	1st quarter April-June 2008/2009	2nd quarter July-Sept 2008/2009	3rd quarter Oct-Dec 2008/2009	4th quarter Jan-Mar 2008/2009	Annual April 2008 – April 2009
	Total % Pass	Total % Pass	Total % Pass	Total % Pass	Total % Pass
SCOTLAND	96.1	96.0	95.5	95.7	95.9
Ayrshire and Arran	96.4	95.9	95.9	95.6	95.9
Borders	97.8	97.2	96.9	96.9	97.2
Dumfries and Galloway	97.3	97.4	97.2	96.7	97.2
Fife	96.5	97.0	97.2	97.2	97.0
Forth Valley	95.5	94.7	92.9	93.4	94.1
Grampian	97.2	97.1	96.2	95.7	96.5
Greater Glasgow and Clyde	96.2	96.4	96.4	96.1	96.3
Highland	95.1	95.3	95.5	95.6	95.4
Lanarkshire	95.5	94.8	95.0	95.2	95.1
Lothian	94.7	94.5	94.9	94.7	94.7
Orkney	92.8	96.1	93.0	87.6	92.1
Shetland	97.8	97.1	98.0	97.2	97.5
Tayside	96.1	95.9	95.7	95.2	95.7
Western Isles	95.9	95.6	95.7	96.4	95.9
The State Hospitals Board for Scotland	93.8	94.0	92.7	93.2	93.4
Golden Jubilee National Hospital	93.4	93.4	92.2	92.0	92.8
NSS Blood Transfusion Services		98.6	98.8	95.1	98.0
Scottish Ambulance Service	94.3	93.3	94.8	96.1	94.6

New Policies

New policies were developed during 2008/09:

- Policy for use of Central Equipment Store at Borders General Hospital
- Policy for Microbiology Specimen Collection NHS Borders.

Policy Updates

The following sections of the Infection Control Manual were updated and approved:

Section 2 - Hand Hygiene and Standard Precautions
Section 4 – Policies and Guidelines
Section 8 – Sharps and Clinical Waste
Section 9 – Cadavers

Education & Training

Throughout the year, the following training & education programmes have been ongoing:

- Induction for all disciplines and grades of staff
- Induction for medical staff
- CME sessions for medical and other disciplines of staff
- Clinical update for all disciplines of staff.

Work is being taken forward to record the numbers of staff who undergo training with the ICT each year and information should be available in the 209/10 report.

In addition, members of the Infection Control Team regularly input into education sessions with the following groups:

- Student Nurses
- Dental Staff
- Physiotherapy Staff.

A Cleanliness champions programme has been running with monthly dates for staff to access the programme at the education centre/learning resource centre.

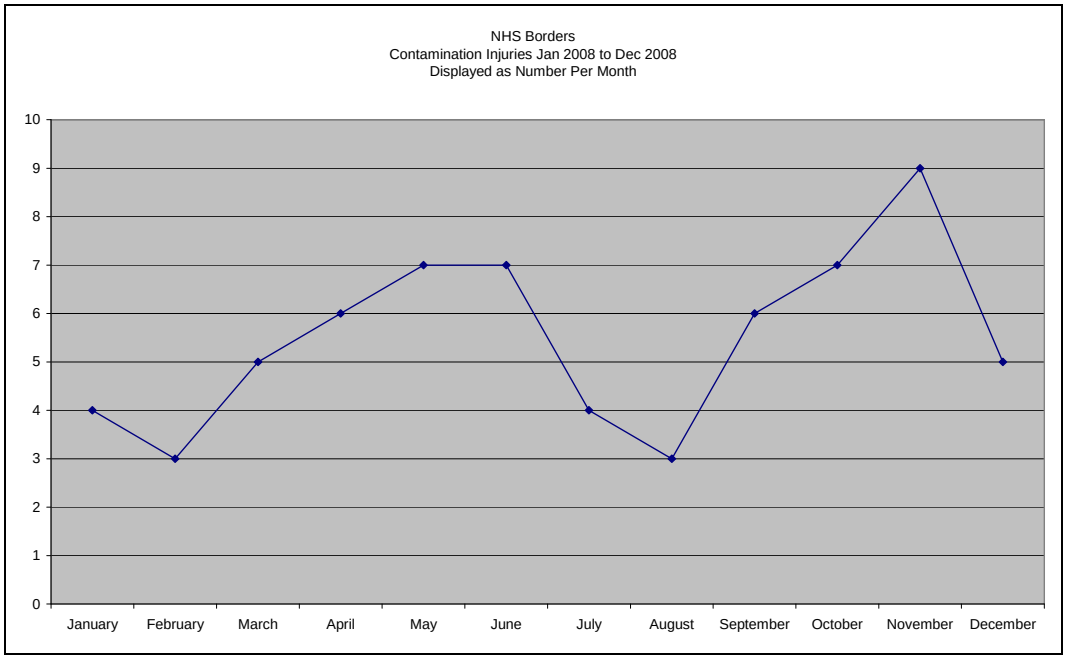
In addition, ad hoc teaching sessions are delivered when requested and an the Infection Control Team aim to hold an annual study day and the next one is planned for October 2009.

Occupational Health

Needlestick/Contamination Incidents

Needlestick / contamination injuries remain a risk to staff health. Although they account for only 2% of staff injuries which occur, the risk of transmission of blood borne viruses with potentially devastating impact on individual careers and lifestyle must not be underestimated. Recording the make-up and number of the needlestick / contamination injuries allows NHS Borders Occupational Health Service (OHS) to identify priorities and escalate and specific trends so that any problems can be managed appropriately. During 2007 there was a 12% drop in the number of contamination incidents and this downwards trend continued throughout 2008 with reported incidents down a further 25%. The chart below shows the incidence of needlestick/contamination injuries displayed by month. As in previous years, there would appear to be no obvious reason why there should be such a range of differences from month to month other than chance.

Figure 4 Needlestick/Contamination Injuries by Month

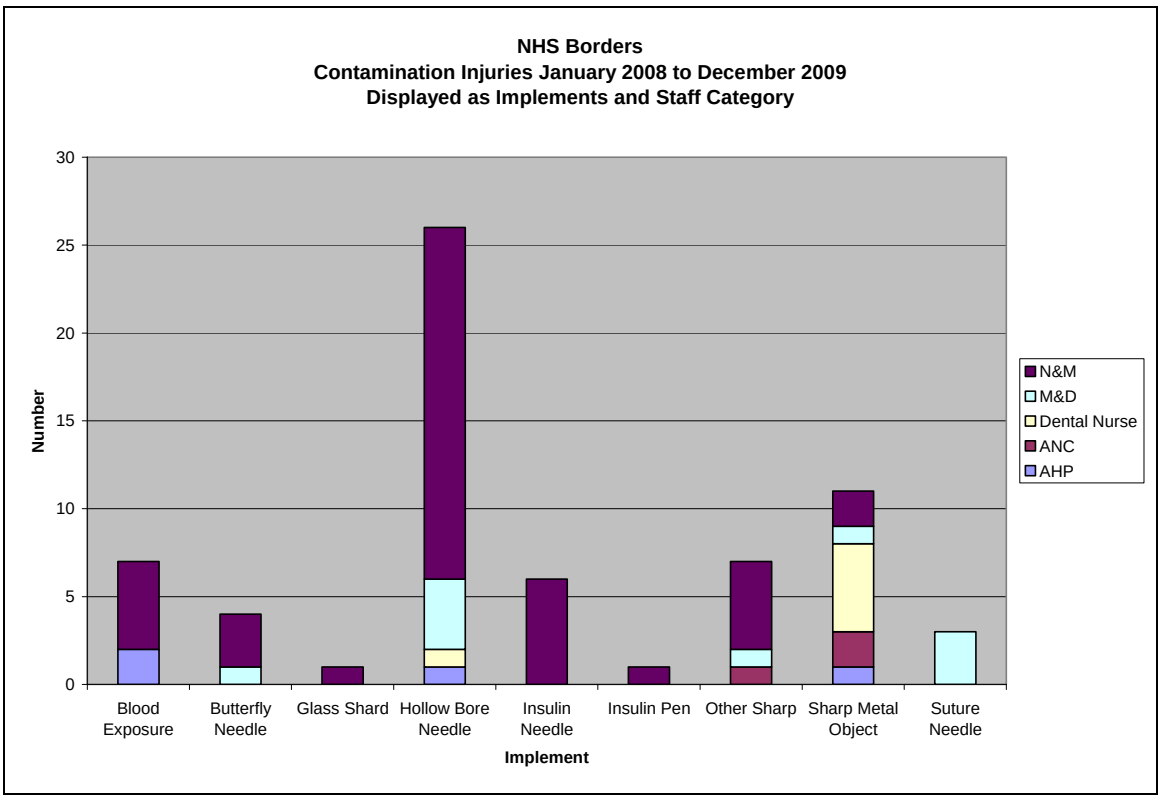


Specific needlestick/contamination injury awareness training sessions continue to be offered on an ad hoc basis to all staff in addition to delivery of training as part of induction, clinical update sessions, and Doctors Online Training System.

Movement towards safer devices remains a priority. This is the first full reporting period where the use of safety cannulae has been monitored. During this period 2 contamination injuries were reported when using these instruments. Enquiries into the background of these incidents indicated the cause of one was attributable to incorrect use. The other may have been due to a faulty cannula.. Since that time no other reports of similar incidents have been received.

The chart below shows needlestick/contamination incidents displayed by implement /staff category. The largest proportion of staff is from Nursing and Midwifery and this is also the largest staff group within NHS Borders.

Figure 5 Needlestick/Contamination Injuries by Staff Group/Implement



Hollow bore needles were the single most common piece of equipment involved in needlestick injuries. This is due to their widespread use throughout NHS Borders and this was broadly consistent with what was experienced nationally. There was a drop in the number of incidents relating to hollow bore needles and in particular diabetic equipment which fell to only 8% of the total reflects continued training and awareness sessions provided by the OHS. Unfortunately, the number of contamination injuries caused by poor disposal practice rose from 24% to 27% of the total. Whilst this is a relatively small increase, it illustrates the need for continuing training within the organisation.

During 2008/09, 98 needlestick incidents were reported to Risk, Health & Safety via incident forms with 66 incidents reported to the OHS. These variations are a particular source of concern as they indicate that staff are failing to report needlestick Contamination incidents in line with our current policy.

Recommendations

- Improve awareness raising by focusing on topic and creative use of techniques
- In line with anticipated legislative changes the need to move to safety devices should now be considered as a priority
- Investigate discrepancies between reporting to OHS and Risk and Safety and devise action plan to address issue.

Public Involvement

In order to raise awareness about the important part that the public have to play in infection control within the hospital environment, the ICT have been keen to secure public involvement into the work of the team. One public representative now works closely with the Hand Hygiene Co-ordinator and has shadowed her in the workplace. The public representative has also undertaken audits with patients and visitors on their own and has attended the Infection Control Committee to outline her role.

There are 2 public representatives involved in environmental monitoring and they undertake a audits along with the General Services Manager and the Infection Control Nurse. They are a very useful resource and they speak to patients and visitors with any concerns they may have about cleanliness within Hospital and Community settings.

A virtual e-group has recently been set up with 8 members of the public. This is an exciting project but it is too soon to be able to assess its impact.

The Changing ICT

There is a proposal to restructure the Infection Control Team. These changes were instigated due to short term capacity issues in the team resulting from the retiral of the Senior Infection Control Nurse Specialist (SICNS), and the unfilled vacancy of the Infection Control Development Manager (ICDM).

Meetings were held with representatives from Public Health, hospital infection control team where it was also agreed that NHS Borders required a proactive infection control service within the wider community, including the independent sector. A new Community Infection Control Nurse post was required and this would be for a fixed term of 3 years in the first instance. The proposals included the development of a new single post that would merge the duties of the ICDM and the SICN with the support of an Infection Control Administrator, also a new post. We are awaiting confirmation from the Scottish Government that the changes for ICT can be put into place.

Looking Forward

The ICT will continue to support and enhance the hand hygiene campaign further, including the organisation's zero tolerance approach to poor hand hygiene practice.

The ICT will continue to develop and improve their communication strategies

The ICT will extend the MRSA screening for NHS Borders

The ICT will develop public involvement in the service, including hand hygiene

The ICT will continue to provide Education and Training: access to training or information will be improved, applicable to all disciplines of staff.

The ICT will continue to provide and enhance support to ward staff with the prevention and management of *Clostridium difficile* Associated Disease [CDAD]. This will include the introduction of prevention and management care bundles to be utilised at ward level; antimicrobial stewardship and surveillance.

Acknowledgements

This report was compiled with contributions from:

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NHS BORDERS INFECTION CONTROL PROGRAMME
APRIL 2009– APRIL 2010

AIM: The overall aim is to support staff with all Infection Control related matters and to provide an environment to minimise the spread of infection.

OBJECTIVE	RATIONALE	ACTIONS REQUIRED	OUTCOMES/ SUCCESS CRITERIA	PROGRESS TO DATE
1. Infection Control Policy Review To ensure Borders Infection Control Manual contains policies as per CSBS HAI & Infection Control standards, which are regularly reviewed. **Policies for review** Section 3 November 2008 Section 11 December 2008 Section 5 March 2009 Section 7 January 2009 Section 12 and 13	To ensure healthcare staff in NHS Borders have access to written and/or intranet Infection Control Guidance/ Occupational Health and Safety guidelines and Public Health which is in line with current research, evidence and good practice.	NHS Borders • Chief Executive, Risk Management Board (RMB) and Clinical Board/s to ensure all policies are implemented within 3 months of approval. • Senior Management with responsibility for IC to action funding, printing and distribution of hard copy policies and placement on Clinical Intranet. Services/Departments • To support implementation of updated or new policies and the associated Infection Control education and training. A Wood to lead on all updates with input from relevant persons Section 12 and 13, C Faldon	• Achievement of Policy Review programme. • Summary of policy review to be included in Annual Report of Infection Control.	Part of Section 4 requires Microbiologist input, therefore deferred until Consultant Microbiologist in place. No changes noted from consultation of policies from Section 3, 5, 7 and 11. ICC asked to approve the policies prior to RMB approval

OBJECTIVE	RATIONALE	ACTIONS REQUIRED	OUTCOMES/ SUCCESS CRITERIA	PROGRESS TO DATE
Updated and new polices for placement in the NHS Borders Infection Control Manual within 3 months of approval	To ensure availability of updated/new policies across NHS Borders within 3 months of approval	• Once policies approved by ICC and RMB, ICT to contact Supplies department to progress printing with local firm • IC secretary to contact person re Clinical intranet support to ensure updating of Borders Infection Control Manual within 3 months of approval of a policy. • Infection Control Team to implement Policy Review programme with relevant personnel • Some audits to include checking that clinical areas have updated policies	Policies printed and returned t o IC secretary within 3 months of approval by RMB. IC secretary distributes policies to IC Manual holders within 1 month. Policies on NHS Borders clinical intranet within 1 month of approval by RMB	There have been difficulties in maintaining the policy review programme to schedule, due to reduced capacity of the ICT. This a short term issue.

OBJECTIVE	RATIONALE	ACTIONS REQUIRED	OUTCOMES/ SUCCESS CRITERIA	PROGRESS TO DATE
1. (a) Surveillance To develop a Borders wide surveillance programme for healthcare associated infection (HAI) and controls to minimise HAI.	Surveillance is an effective process in decreasing the frequency of HAI.	NHS Borders • Chief Executive and RMB to receive and consider results of the surveillance programme as part of the Infection Control Report. Services and Departments • Surgical specialities to undertake surveillance of surgical site (wound) infections in conjunction with HPS using the agreed definitions of infection. 2009-10 Hip arthroplasty and caesarean days pot operative Surveillance of Clostridium difficile (Cdiff) ICT, Services and Ward Managers Support Surveillnce co-ordinator. • Microbiology Department to provide details on Hospital acquired MRSA bacteraemia. *Microbiology Department to provide surveillance data for *C.difficile* associated diarrhoea in screening faeces in >65 years *Microbiology department to forward *E. coli O157* negative stools for national investigation of non O157 causes of HUS/bloody diarrhoea	• Infection Control Annual Report to include a summary of surveillance activities. • Surgical Site Infection Surveillance programme will have been implemented and contributions included in Health Protection Scotland (HPS) reports for Scotland. • Surveillance data will contribute to local Public Health and Health Protection Newsletters. • Surveillance co-ordinator is responsible for above actions	SSI surveillance ongoing Additional data now being collected for CDAD

OBJECTIVE	RATIONALE	ACTIONS REQUIRED	OUTCOMES/ SUCCESS CRITERIA	PROGRESS TO DATE
3. <u>Infection Control Audits</u> To ensure that staff are aware of targeted Borders Infection Control Policies and are able to apply them Audit of Section 7 Cleaning and Disinfection Policy Audit of section 8, Sharps and clinical waste policy (as sharps are audited yearly, concentration will be on clinical waste audit) Hand Hygiene audits IC Care plans ongoing on a yearly basis by C/N's	To minimise the risk of HAI to patients, staff and visitors. ICT audit protocol in place with 5 year rolling programme	ICC to support the ICT in planning audits in response to findings of Internal Audit Report. ICT audit and tool agreed for Blood and Body Fluid policy (section 3) audit 2008/9 ICT Audit and tool agreed for Cadaver Policy audit (section79 audit 2008/9 ICT audit of Bioburdens in single rooms agreed Audit of the NHS Borders Pandemic flu plan to be audited after it is finalised. <u>NHS Borders</u> • To receive and consider results of IC audits as part of Annual IC report. <u>Services/Department</u> • Clinical Services/Departments to assist the **ICT** in conducting the following clinical audits: Audit aspects of Cleaning and Disinfection and Clinical Waste and hand hygiene approved by ICC Clinical Services/Departments have a responsibility to ensure that any action plans are implemented. • Infection Control and Clinical Services/Departments to **support the Ward/Departmental Managers** in conducting the following clinical audits with remedial actions as necessary 1) Hand Hygiene 2) IC Care plans 3) Environmental as per Watt report. • Clinical Services/Department implement any actions required that arise from the audits. • Clinical Audit Department/s to assist in the analysis of data and publication of timely feedback to the ICC, Services and	• Relevant Charge Nurses, CSM's/CDM's, Lead Nurses, Director of Nursing and Midwifery, Associate Director of Nursing to receive documented results within 14 days of audit • Charge Nurses, CSM/CDM's to act on unsatisfactory results. • Consultant Microbiologist to oversee audit of Bioburdens of single rooms • Associate Di feedback to I	Ward based hand hygiene auditing ongoing and national audits as per HPS requirements. Awaiting audit results for July 2009

OBJECTIVE	RATIONALE	ACTIONS REQUIRED	OUTCOMES/ SUCCESS CRITERIA	PROGRESS TO DATE
		• To include a summary of audit results for the ICC to be included in the Annual Report.		
4. <u>Education and Training</u> To ensure appropriate staff induction/ Mandatory training and training in infection control through a formal infection control education programme, for clinical and non clinical staff. The continuation of Infection Control Liaison Groups (Champions) via the NES programme. The introduction of the stand alone hand hygiene NES programme for un trained staff. To put in place automatic enrolment of staff onto NES programme at induction if staff have not previously undertaken this course	Improving infection control practice by all healthcare workers across NHS Borders will minimise risk of healthcare associated infections (HAI) to patients' staff or visitors. Formalising education programme for infection control will help to meet Standard 12 Capability : Education in HAI Infection Control. To comply with NES Mandatory training, review options for modular system to incorporate chain of infection, via e learning. Completion would be incorporated into staff appraisal system.	<u>NHS Borders</u> • To support the designated Training Officer with responsibility for the administration of IC Liaison personnel • To support induction and mandatory infection control training and formal infection control training programmes for all healthcare workers. • To facilitate and implement bi-annual Infection Control Study day. <u>Services/Departments</u> Ward/Departmental Managers will help their Infection Control Liaison Personnel (Champions) to designate a Mentor to assist the Champion whilst they undertaking the course. • To assist and support the ICT in the Development and implementation of a formal IC programme, Infection Control liaison groups (Champions) and training of all healthcare workers. Training department to facilitate operational details of mandatory training to ensure that all healthcare staff are taught the chain of infection Managers ensure that training is documented in the individual Healthcare worker s appraisal. IT Department to facilitate the availability of the computer assisted learning package for all Healthcare staff across NHS Borders <u>Infection Control Team</u> • To facilitate and implement an bi annual Infection Control Study day. • To facilitate study afternoon for IC liaison groups	• Evaluation of one infection Control study days will form part of the Annual IC report to the Chief Executive and RMB • Designated Mentor for IC Liaison (Champions) and those undertaking the stand alone hand hygiene package will be designated with the help of their Ward/Departmental Manager	Education ongoing for Induction, Clinical Updates and ad hoc teaching sessions. One IC Study day in October 2009 Cleanliness champions programme now a baseline mandatory requirement for trained staff in their PDP Monthly days set aside within the Education centre for staff to undertake the Cleanliness Champions programme