

HEALTHCARE ASSOCIATED INFECTION

2009/10 Annual Report

> NHS Borders Infection Prevention and Control Team

Summary of Key Highlights During 2009/10

Introduced national MRSA Screening programme

Pandemic flu - planning/ coordination/ specific ward based management

Delivery of education to support staff with their knowledge and awareness of H1N1

Management of Norovirus outbreak:

- strengthened collaborative approach with hospital management ward staff
- improved communication networks including patient and public
- maintained low incidence of clostridium difficile during outbreak period

Surveillance activities continued to be 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.

Enhanced testing & surveillance of Clostridium difficile

Introduced the national enhanced standardised antimicrobial resistance monitoring

Further development of education and training programmes, including the production of NHS Borders HAI Education strategy

Secured investment to increase capacity of the Infection Control Team to progress the HAI agenda across NHS Borders and the independent sector.

Supporting the Board in preparation for first Healthcare Environment Inspectorate visit

Completion of the HAI Task Force action plan

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

Workplan & Activity During 2009/10

During 2009/10 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.

The final status report of performance against the Work Plan is attached at Appendix A. All actions detailed in the Work Plan were completed by 31st march 2010.

Challenges Experienced

Due to long-term sick leave and delays in recruiting to staff vacancies, the ICT has experienced reduced capacity during the year. There have been periods when pressures have been at high levels due to this reduced capacity together with increased workload associated with Norovirus outbreaks and H1N1.

Performance Against HEAT Targets

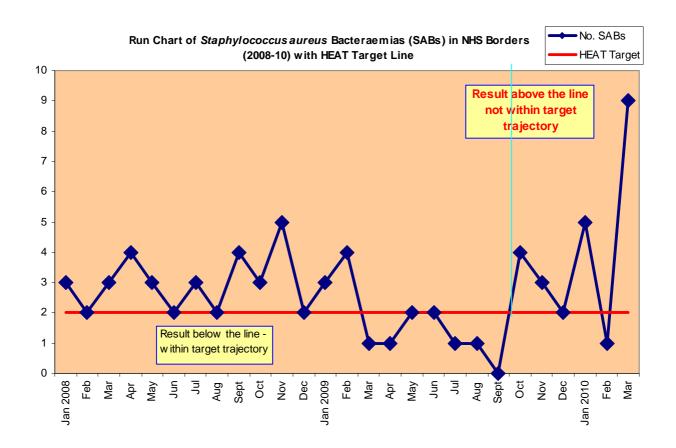
The ICT has monitored performance against HEAT target T5 - To reduce all *Staphylococcus aureus* bacteraemia (including MRSA) by 25% by March 2010. This target is measured against a quarterly trajectory. The HEAT Target baseline is taken from the number of cases of *Staph aureus* bacteraemia's from 1st April 2005 – 31st March 2006. The number of SAB's recorded in that period was **30** cases. Thus maximum number of cases in the period 1st April 2009 – 31st March 2010 was **22** SAB's.

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For the quarter Apr – Jun 09 there were 5 SAB's (all MSSA).
For the quarter Jul – Sept 09 there were 2 SAB's (1 MSSA & 1 MRSA)
For the quarter Oct – Dec 09 there were 9 SAB's (8 MSSA & 1 MRSA)
For the quarter Jan – Mar 10 there were 15 SAB's (6 MSSA & 9 MRSA)
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As our HEAT Target required us to reduce our number of SAB's by 25%, we did not achieved this target in the last 4 quarters April 09 – Mar 2010, as we had **31** cases of SAB's. (11 MRSA & 20 MSSA).

The chart below shows the recording rate from January 2008 to March 2010.

Figure 1 Staph. aureus Bacteraemia HEAT Target



Hand Hygiene Activity

Good hand hygiene is still being treated as a priority in reducing the potential risk of HAI across NHS Borders.

As the table below (produced by Health Protection Scotland) shows, in the final hand hygiene audit conducted during 2009/10, NHS Borders achieved an overall compliance of 93%.

During 2009/10, an audit tool developed by NHS Lothian, was adapted for use in NHS Borders to provide a clear and concise overview of hand hygiene compliance and technique.

Staff from all disciplines are conducting audits of hand hygiene activity in all clinical areas to assess the overall compliance within the Board. The information is collated by Clinical Governance. Any drop in compliance is recorded and the Infection Control Nurse Specialist, Hand Hygiene Coordinator and relevant Manager are informed.

Hand hygiene training sessions for Scottish Borders Council Care Home Managers has been provided. This was asked for during the early stages of the H1N1 outbreak. Further training will be facilitated when requested by the Care Home Managers.

	4th B	i-monthly	Audit Period (%)	5th Bi	i-monthl	y Audit Period (%)	6th E	3i-month	ly Audit Period (%)	7th B	i-monthly	y Audit Period (%)
NHS board	21 Sept-2 Oct 2009		23 Nov-2 Dec 2009		25 Jan-5 Feb 2010		22 Mar-2 Apr 2010					
	Opps Obs*	Opps Taken**	% (CI)	Opps Obs	Opps Taken	% (CI)	Opps Obs	Opps Taken	% (CI)	Opps Obs	Opps Taken	% (CI)
Scottish Ambulance Service	300	277	92% (89%, 95%)	300	287	96% (94%, 98%)	300	290	97% (95%, 99%)	300	290	97% (95%, 99%)
NHS Western Isles	300	289	96% (94%, 98%)	300	293	98% (96%, 100%)	300	290	97% (95%, 99%)	300	291	97% (95%, 99%)
NHS Tayside	300	268	89% (86%, 92%)	300	275	92% (89%, 95%)	300	276	92% (89%, 95%)	300	273	91% (88%, 94%)
NHS Shetland	300	283	94% (91%, 97%)	300	289	96% (94%, 98%)	300	294	98% (96%, 100%)	300	294	98% (96%, 100%)
NHS Orkney	300	285	95% (93%, 97%)	300	289	96% (94%, 98%)	300	287	96% (94%, 98%)	300	280	93% (90%, 96%)
NHS Lothian	300	261	87% (83%, 91%)	300	282	94% (91%, 97%)	300	283	94% (91%, 97%)	300	276	92% (89%, 95%)
NHS Lanarkshire	300	286	95% (93%, 97%)	300	273	91% (88%, 94%)	300	284	95% (92%, 98%)	300	283	94% (91%, 97%)
NHS Highland	300	288	96% (94%, 98%)	300	279	93% (90%, 96%)	300	281	94% (91%, 97%)	300	289	96% (94%, 98%)
NHS Greater Glasgow & Clyde	300	279	93% (90%, 96%)	300	276	92% (89%, 95%)	300	273	91% (88%, 94%)	300	276	92% (89%, 95%)
NHS Grampian	300	254	85% (81%, 89%)	300	282	94% (91%, 97%)	300	291	97% (95%, 99%)	300	288	96% (94%, 98%)
NHS Forth Valley	300	296	99% (98%, 100%)	300	293	98% (96%, 100%)	300	295	98% (97%, 99%)	300	294	98% (96%, 100%)
NHS Fife	300	295	98% (97%, 99%)	300	289	96% (94%, 98%)	300	289	96% (94%, 98%)	300	288	96% (94%, 98%)
NHS Dumfries & Galloway	300	288	96% (94%, 98%)	300	288	96% (94%, 98%)	300	287	96% (94%, 98%)	300	286	95% (93%, 97%)
NHS Borders	300	286	95% (93%, 97%)	300	290	97% (95%, 99%)	300	280	93% (90%, 96%)	300	280	93% (90%, 96%)
NHS Ayrshire & Arran	300	290	97% (95%, 99%)	300	286	95% (93%, 97%)	300	288	96% (94%, 98%)	300	289	96% (94%, 98%)
National Waiting Times Centre	300	285	95% (93%, 97%)	300	287	96% (94%, 98%)	300	287	96% (94%, 98%)	300	287	96% (94%, 98%)

^{*}Opps Obs = opportunities observed

MRSA Screening

In April 2009 the Scottish Government Health Directorate (SGHD) announced a National MRSA Screening Programme in Scotland based on the interim report of an MRSA Screening Pathfinder Programme. All Scottish Boards would fully implement the national roll out by January 2010.

The aim of the programme is "to identify patients that are colonised or infected with MRSA. These patients can then be managed appropriately to reduce the risk of self-infection and transmitting the organism to other patients. These measures aim to reduce the negative impact that MRSA has on patients and the additional burden on healthcare resources."

From 31st Jan 2010, all admission to the Borders General Hospital (BGH), whether elective or emergency (excluding pre-natal, paediatrics and psychiatry) are screened for MRSA. Elective admissions are screened at pre-assessment clinic. Emergency admissions are screened on admission to the ward.

^{*}Opps Taken = opportunities taken

Compliance with screening is monitored by Ward and the results of the Audit in Feb-Mar 2010 is shown ion the table below:

Audit of Admissions Screened for MRSA Colonisation					
Wards	Feb-10	Mar-10			
4	56%	80%			
5	81%	83%			
6	100%	62%			
7	38%	49%			
8	75%	70%			
9	66%	100%			
10	100%	0%			
11	37%	64%			
12	56%	50%			
14	50%	80%			
16	25%	68%			
ITU	13%	33%			
ВМС	50%	100%			
Total	57%	69%			

Monitoring Outbreaks

During 2009/10 there were two outbreaks of confirmed Norovirus in NHS Borders. From 7th June 2009 to 14th June 2009 a total of 6 patients were affected by an outbreak of Norovirus on Ward 11 in Borders General Hospital.

A second protracted outbreak period ran from 17th January 2010 to 9th April 2010, during which there were 145 days of total ward closure. In total, 6 Wards were affected with 271 patients meeting the case definition. During this period, there was also significant incidence of Norovirus in the community.

During these outbreaks, no significant adverse clinical affects were either reported to the Infection Control Team, or found by the Infection Control Team.

Mandatory National Surveillance Programme & Surveillance Activity

Mandatory Surveillance

From 2007, all NHS Boards were required to implement mandatory surveillance of inpatient 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. 10 day Post Discharge Surveillance on caesarean sections is also mandatory.

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

Findings from Mandatory Surveillance during 2009/10

Hip Arthroplasty & Hemi-arthroplasty SSI Surveillance

218 hip arthroplasty & hemi-arthroplasty operations were undertaken with **1** surgical site infections (0.5%) recorded. The superficial surgical site infection occurred post discharge with the patient being readmitted due to the SSI.

Caesarean Section SSI Surveillance

228 caesarean sections were undertaken, with **1** superficial infection (0.5%) recorded, which was 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. 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* infection (CDI), from mild diarrhoea to severe cases in patients aged 15 and over. The national definition of CDI adopted by Health protection Scotland 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 2009/10, there were a total of **67** CDI patients. **7** patients died with *Clostridium difficile* infection, colitis, or CDI recorded on their Death certificate.

The BGH had a total of **48** CDI patients of which **37** patients were 65 years or older and **11** patients younger than 65 years. In the Community, which includes Community hospitals, nursing homes and GP's, **19** CDI patients were diagnosed with **16** patients aged 65 years or older and **3** patients aged less than 64 years old.

Audit, Policies and Procedures

In addition to regular environmental cleanliness monitoring by an Infection Control Nurse with the General Services Manager, the Infection Control Team also conducted an audit of NHS Borders overall compliance with the sharps policy and an audit focussed on practice and facilities within the Laundry Department.

The initial Laundry audit was conducted in June 2009 and followed-up in October 2009. A range of improvements facilitated higher standards of infection control in the Laundry, including:

- a reworking of the dry cleaning area to address issues around the segregation of clean and dirty laundry.
- the air vents in the male toilets have now been cleaned.
- bins which had been found to be in poor condition were replaced
- the Needlestick / Sharps Injury Policy is now displayed in the department for staff
- · The domestic cleaning hours allocated to Laundry were increased

Cleaning Monitoring Results

The Monitoring Framework for NHS Scotland National Cleaning Services Specification and Estates HAI Issues was published January 2010 and replaces the Monitoring Framework for NHS Scotland National Cleaning Specifications Version 2 April 2009. The performance target within the Framework is to achieve 90% in all areas. Health Facilities Scotland issue quarterly reports on monitoring results for Scotland as a whole. The local NHS Borders monitoring results for hospitals are detailed below.

Hospital	Value items	Value of items	Percentage
	monitored	passed	_
BGH	156760	152171	97.1%
Haylodge	8861	8760	98.9%
Knoll	4822	4685	97.2%
Kelso	9155	8989	98.2%
Hawick	8612	8558	99.4%
Crumhaugh	7390	7329	99.2%

The overall figures are robust however minor slippages in specific areas can be disguised. To ensure transparency, results for individual areas are published on the General Services site of the intranet and in 2010/11 it is planned for these to be posted on notice boards outside clinical areas with other HAI information.

Peer/Public reviews took place throughout the year in line with the Framework criteria.

New Policies

New policies were developed during 2009/10:

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

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

- Student Nurses
- Dental Staff
- Physiotherapy Staff

Public Involvement

A number of initiatives have been undertaken in the last year with Public Involvement Volunteers.

Women's Royal Voluntary Service (WRVS) Manager, Elaine Thornton has been given hand hygiene training and instruction and she has provided cascade training for all her staff. Free Hand Rub, hand hygiene posters and the WHO "5 key moment" cards have been provided for use by the WRVS volunteers visiting the wards.

Macmillan Centre volunteers have also received training on hand washing and technique. This is an ongoing project and all new volunteers are asked to attend a session which incorporates hand hygiene training.

Rebecca Dadge of Volunteer Development Scotland, spent a day with the Hand Hygiene Coordinator, Judith Purves and Judith Ramsay, the Public Involvement volunteer attached to the Infection Control Team. A hand hygiene awareness stand was set up at the front entrance of the Borders General Hospital and the morning was spent answering questions from members of public about hand hygiene and also training them, with the help of the "glow-box", to wash their hands correctly. This was followed by an interview by Miss Dadge of Judith Purves and Judith Ramsay based on the benefits of having volunteers come into a health care environment to support healthcare staff. The morning's activities were filmed and a transcript of the afternoon's interview was published in the Volunteering Development Scotland magazine. This was a very positive day for all concerned.

Following a training morning and a session at Galashiels Health Centre with Alasdair Pattinson and Judith Purves, Judith Ramsay and George Anderson of the Patient

Partnership Forum have started a programme to visit local GP Practices to raise the profile and importance of hand hygiene with the public.

Cleanliness monitoring audits continue to include public representatives who 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 forum enables these members to have direct access to the Infection Control Team to answer questions or concerns and for the Infection control Team to benefit from public feedback on patient leaflets and policy proposals.

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 continue to support the extended MRSA screening programme 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* Infection [CDI]. 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:

Infection Control: General Services: Mr Sam Whiting Mrs Jane Gething Mr Adam Wood

Mrs Judith Machell Mrs Judith Purves

Mrs Susan Taylor

NHS BORDERS INFECTION CONTROL PROGRAMME APRIL 2009- APRIL 2010

STATUS UPDATE AT MARCH 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
Infection Control Policy Review To ensure Borders Infection Control Manual contains policies as per NQIS HAI & Infection Control standards, which are regularly reviewed.	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. 	Achievement of Policy Review programme. Summary of policy review to be included in Annual Report of Infection Control.	All sections have been updated to schedule; new hard copies distributed and intranet version updated
Policies for review, 2010 Section 6 MRSA: May 2010 Section 4.1Gastro- intestinal outbreak policy: October 2010 Section 4.2 Gastro- intestinal outbreak: ward closure: October 2010 Section 4.10 Transmissible		 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 		

ACTIONS REQUIRED	OUTCOMES/ SUCCESS CRITERIA	PROGRESS TO DATE
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	Completed
	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	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

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 Surveillance co-ordinator. Microbiology Department to provide details on Hospital acquired MRSA bacteraemia. *Microbiology Department to provide surveillance data for <i>C. difficile</i> associated diarrhoea in screening faeces in >65 years *Microbiology department to forward <i>E. coli O 157</i> 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 coordinator is responsible for above actions 	SSI surveillance ongoing Additional data now being collected for CDAD

OBJECTIVE	RATIONALE	ACTIONS REQUIRED	OUTCOMES/	PROGRESS TO
			SUCCESS CRITERIA	DATE
		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		
		Departments.		
		Infection Control Team		
		To re audit with Internal Auditor the IC		
		Care Plans per guidelines from Internal		
		Audit report.		
		To include a summary of audit results		
		for the ICC to be included in the Annual		
		Report.		
4. Education and	Improving infection control	NHS Borders	Evaluation of one infantian Operated attacks	Education ongoing
Training	practice by all healthcare	To support the designated Training Officer with record with the second and it like that the	infection Control study	for Induction, Clinical
To oncure appropriate staff	workers across NHS Borders will minimise risk of	Officer with responsibility for the	days will form part of	Updates and ad hoc
To ensure appropriate staff induction/	healthcare associated	administration of IC Liaison personnel	the Annual IC report to	teaching sessions. IC Study days in
Mandatory training and	infections (HAI) to patients'	To support induction and mandatory infaction control training and formal	the Chief Executive and RMB	2010 scheduled for
training in infection control	staff or visitors.	infection control training and formal	aliu Nivid	April and October
through a formal infection	Stair of visitors.	infection control training programmes for all healthcare workers.		April and October
control education	Formalising education			Cleanliness
programme, for clinical and	programme for infection	To facilitate and implement bi-annual Infection Central Study day	Designated Mentor for	champions
non clinical staff.	control will help to meet	Infection Control Study day.	IC Liaison	programme or stand
			10 Liaisoi1	13g.s

OBJECTIVE	RATIONALE	ACTIONS REQUIRED	OUTCOMES/ SUCCESS CRITERIA	PROGRESS TO DATE
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	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.	 Services/Departments 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 Infection Control Team To facilitate and implement an biannual Infection Control Study day. To facilitate study afternoon for IC liaison groups 	(Champions) and those undertaking the stand alone hand hygiene package will be designated with the help of their Ward/Departmental Manager	alone hand hygiene programme now a baseline mandatory requirement for trained and untrained staff respectfully) in their PDP HAI education strategy being developed with T&PD. Now ready for consultation Clinical placement Within ICT now being approved for Napier University Nursing students