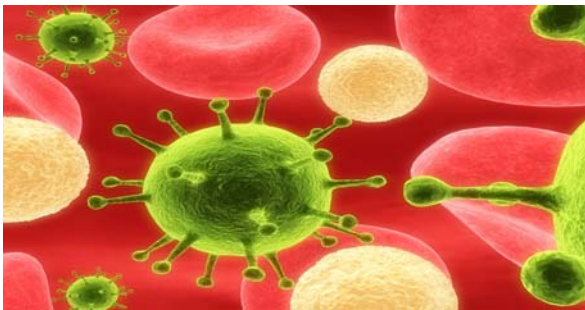




NHS Forth Valley Healthcare Associated Infection Reporting Template (HAIRT) July 09



HEALTHCARE ASSOCIATED INFECTION REPORTING TEMPLATE (HAIRT)

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HEALTHCARE ASSOCIATED INFECTION REPORTING TEMPLATE (HAIRT)

1.0 PURPOSE OF REPORT

The purpose of this report is to ensure regular and clear reporting to the public on Healthcare Associated Infection (HAI) within NHS Forth Valley. The Cabinet Secretary for Health and Community Care wants to make sure all NHS Boards report in public on a bi-monthly basis on key aspects of HAI. NHS Forth Valley has taken time to develop a report that is user friendly for the public which will help to answer questions as well as providing key information.

The report includes information on:

- *Clostridium difficile* associated disease (CDAD)
- *Staphylococcus aureus* bacteraemias (SABs)
- Hand Hygiene programme
- Cleaning Services Specification Compliance
- Any significant HAI incidents/outbreaks and emerging threats
- Progress on compliance with the national HAI Programme – that is the ‘RAG’ report (Red Amber, Green score according to the level of compliance achieved by a health board)
- Additional activities that reduce HAI- and what can the public do to help?

2.0 WHAT IS HEALTHCARE ASSOCIATED INFECTION?

This is an infection that may affect people when they are receiving healthcare. Most healthcare associated infections are caused by germs that live normally on or in our bodies and usually do us no harm. Being ill or receiving treatment can make your natural defence system (immune system) weaker than usual.

You can catch an infection when at home or in the community, in hospitals, care homes or in doctor’s surgery.

The most well known healthcare associated infections are caused by MRSA, *C.Difficile* and Norovirus which are each described below.

2.1 What happens if you catch an HAI?

This depends on the type of infection that you get and your general health. The health and social care staff looking after you will talk to you about the care and treatment you need. In hospital you may:- be put into a single room to prevent the infection from spreading to other people; need extra medicine, for example, antibiotics; receive advice about what you can do to stop the infection spreading.

3.0 SURVEILLANCE WITHIN NHS FORTH VALLEY

The Infection Control Team has surveillance systems in place to continually monitor and record all healthcare associated infections. These systems allow us to show whether we are meeting the nationally set targets to reduce certain types of healthcare associated infections; they also allow us to monitor how effective our procedures and processes are in helping reducing infections.

Enhanced surveillance is where more information is collected to improve understanding of the cause of infections. True healthcare associated infections are sometimes quite difficult to define and require us to investigate each patient to see if he or she has actually acquired an infection. *Clostridium difficile* (see below) is particularly difficult, because this bug can live in normal healthy individuals, so the presence of it does not necessarily mean the patient is actually infected with it. Only after reviewing the individual patient can we conclude if the patient was actually infected.

We also have other surveillance systems in place including surgical wound infections, antibiotic resistance and hand hygiene of healthcare workers.

All these surveillance systems mean NHS Forth Valley can keep a close eye on any problems that may arise during your stay in hospital and act quickly if necessary.

4.0 C. DIFFICILE

4.1 *C. difficile*– what is it?

Clostridium difficile (*C.diff*) is a germ (bacterium) that many people have naturally in their bowel. *C. diff* doesn't normally cause any problems in healthy people. Studies in hospitals show that 2 out of 10 people will normally have this in their gut and be fine.

4.2 CDAD what is it?

This stands for *Clostridium Difficile* Associated Disease and is what happens when the germ causes problems. *C. diff* is passed out in the faeces of people who are infected and spreads to the environment. *C. diff* can survive a long time in the surroundings. People in the community, health care workers, visitors and patients can spread the infection to themselves and others by not washing their hands. You can have the infection more than once. The symptoms include mild to severe diarrhoea and stomach pains. In many cases the infection is mild and will only last a few days and not require treatment. In a few cases the effects are more serious, lasting for several weeks and it will be necessary to treat the infection.

4.3 What are the main causes of CDAD?

Alterations of natural bugs in the gut make it possible for the *C. diff* bug to cause problems. 90% of cases are thought to be related to the use of antibiotics as these alter the natural bugs in the gut. Certain antibiotics kill many of the 'good' bugs in the gut and therefore allow *C. diff* to cause an infection. It is, of course, important that patients are treated with antibiotics when they need them, and an unwanted effect of this is that the patient may then get CDAD. However, NHS Forth Valley has an Antibiotic Policy to make sure that the best antibiotics are used to treat the patient and lessen the risk of CDAD. Being elderly (85% of all cases are in the elderly) or very unwell can also alter the natural bugs in the gut, and unfortunately these are the individuals who often require antibiotics.

4.4 How do you test for it?

A sample of faeces (bowel movement) is sent to a laboratory to be tested for the presence of a poison (toxin) the germ can produce. Results from these investigations together with individual patient assessment involving various healthcare workers, we can then diagnose CDAD. This is part of our ongoing enhanced surveillance for CDAD.

4.5 How are we doing in NHS Forth Valley?

In previous reports we have reported on all *C diff* toxin positive results even if the patients were not ill from *C diff*. To give a more accurate picture of what is happening in Forth Valley, we are now reporting when *C diff* is actually causing disease, that is when patients have *Clostridium Difficile* Associated Disease (CDAD).

The average number of CDAD positive patients in NHS Forth Valley in 2008 was 21 per month. We have managed to reduce the number of CDAD to an average of 9 per month. In July the number of patients with CDAD in Forth Valley was 4.

Figure 1: Chart showing the total number of CDAD positive samples in NHS FV from Aug 08 – July 09

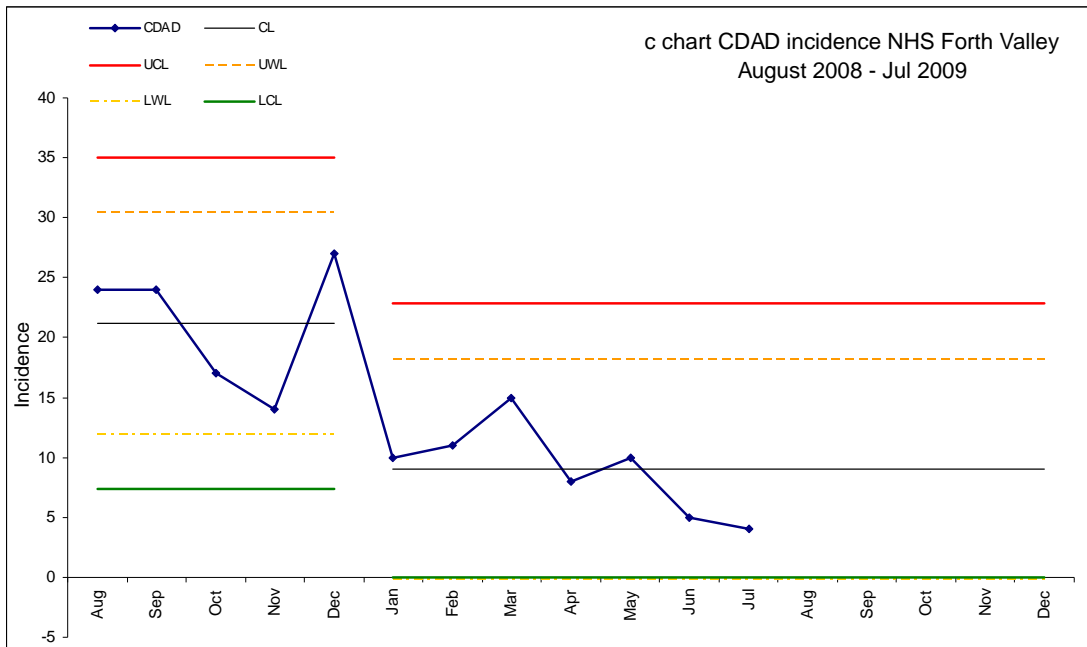


Chart code:

UCL = Upper control limit. LCL = Lower control limit. Crossing these lines indicates that something has happened within the system which is not due to chance and needs to be carefully looked at.

Infections come from the community as well as hospitals and other healthcare facilities. As part of the ongoing development of the report, we have detailed where the number of CDAD cases per month were isolated. These include:

- The Surgical and Cancer Care Unit
- The Women and Children’s Unit
- The Medical, Emergency Care and Rehabilitation Unit
- Community Hospitals

We have broken down this information for the last nine months – November 2008 to Jul 2009. The numbers are in Table 1 below.

Table 1. CDAD positive samples across NHS Forth Valley

	Nov 08	Dec 08	Jan 09	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09
Board Total	14	27	12	12	17	7	10	5	4
MEC&R	8	16	11	10	8	4	8	3	3
Sur & Can Care	2	2	0	2	5	3	2	2	1
Women & Children	0	0	0	0	0	0	0	0	0
Community Hospitals	2	9	1	0	5	0	0	0	0

4.6 What are we aiming for?

Our target in Forth Valley is to reduce problems from *C.Diff* to as low a level as possible. It will be impossible to completely stop them as we cannot remove the bug from all the environments in which we live. However we do have a target to reduce our CDAD by at least 30% by December 2009 which is part of the national target.

4.7 Antibiotic prescribing policy

We are working within NHS FV to make sure that patients only get antibiotics when they are needed and that they get the best one for the bug they have. A new policy on antibiotic prescribing was started at the end of March 2009. A second antimicrobial pharmacist has started working in NHS FV to help guide doctors on the best antibiotics to prescribe to help further reduce the number of CDAD cases.

5.0 STAPHYLOCOCCUS AUREUS BACTERAEMIA (SABS)

5.1 SAB - What is it?

Staphylococcus aureus bacteraemias (SABs) are infections of the blood stream caused by the *Staphylococcus aureus* (SA) bug. SA lives on the skin, nose, or mouth of 3 out of 10 healthy people. SA only becomes a problem to people who are vulnerable to infection (for example, the elderly, the very young and those with conditions such as diabetes or kidney disease). The germ is more likely to cause infection if it is able to enter the body, such as through wounds, or tubes (for example, catheters) placed in the body for treatment.

5.2 What is MRSA?

MRSA describes the *Staphylococcus aureus* germ which cannot be killed by certain antibiotics. MRSA stands for Meticillin Resistant *Staphylococcus aureus* it can only be killed by some antibiotics. MRSA is one of the bugs often referred to in the papers as a “Super Bug”

5.3 What is MSSA?

MSSA also describes the *Staphylococcus aureus* germ, but the difference is it can be killed by many antibiotics. MSSA stands for Meticillin Sensitive Staphylococcus aureus.

5.4 How are we doing in NHS Forth Valley?

The average number of SABs in NHS Forth Valley from September 2006 to July 2008 was 10 per month. Looking at the graph (Figure 2) below, since August 2008 we now have an average SAB rate of 7. In July, the number of patients with a SAB infection was 6.

Figure 2: Chart showing total number of SABs in Forth Valley from Sept 2006 – Jul 2009

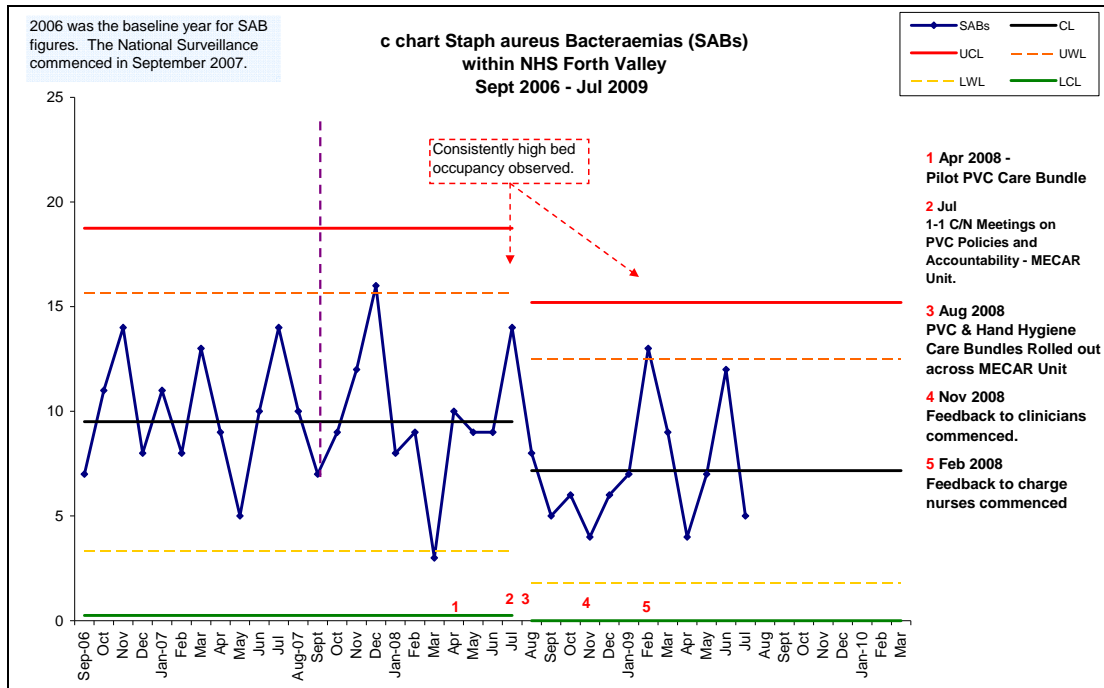


Chart code:

UCL = Upper control limit. LCL = Lower control limit. Crossing these lines indicates that something has happened within the system which is not due to chance and needs to be carefully looked at.

5.5 What are the main causes of SABs?

In hospitals the main cause is the necessary use of intravenous devices (tubes that enter into veins from outside the body) although infection through wounds and broken skin are also major causes. In the community the more common causes are intravenous drug use, septic arthritis and healthcare practises which break the skin or enter a body cavity.

The infection control team involving the nurse specialists and the infection control doctor meet to review individual patient cases to identify the root cause of the infection or source of the SAB and identify whether the infection is making the patient unwell. SABs are then divided into 2 categories, significant and non-significant, depending on how affected the patient is by the infection. The category non significant is used when the patient is not unwell from the bug. These SABs are probably a result of contamination of the blood sample when it was taken rather than a true infection in the blood stream of the patient.

Infections start in different places, in the community or in healthcare premises or in hospitals and we count them depending on where they started. We have broken this information down for the last seven months – January to 1st July 2009, they are in Table 2 below.

Table 2. Type of SABs- Significant or Non Significant

Source	Jan 09	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09
Community*	3	5	2	1	2	4	1
Healthcare**	2	2	4	1	1	3	4
Hospital***	2	6	3	3	4	5	1
Type							
MRSA	1	7	4	1	3	3	2
MSSA	6	6	5	4	4	9	4
Significance							
Significant	7	13	7	3	5	12	6
Non-significant	0	0	2	2	2	0	0

*community – blood culture was taken within 48 hours of admission to the hospital and the patient has had no contact with any part of the healthcare system within the last month

**healthcare – blood culture is taken <48 hours after admission or has been transferred from another hospital and receives regular community care services/hospital services/regular care at an outpatient department

***hospital – blood culture was taken >48 hours after admission to hospital

As part of the on-going development of the report, we have detailed the number of SABs per month per Units of the Acute hospitals in Table 3 Below.

These include:-

- The Medical, Emergency Care and Rehabilitation Unit
- The Surgical and Cancer Care Unit
- The Women and Children’s Unit

Table 3. SABs across NHS Forth Valley

	Nov 08	Dec 08	Jan 09	Feb 09	Mar 09	Apr 09	May 09	Jun 09	Jul 09
Board Total	4	6	7	12	9	4	7	12	6
MEC&R	3	5	6	8	5	2	5	10	5
Surgical & Cancer care	0	1	1	4	2	2	1	2	0
Women & Children	1	0	0	1	0	0	1	0	1

5.6 What are we aiming for?

Our target in Forth Valley is to reduce infections as far as possible. We have a government set target to reduce all SABs to 7 per month by December 2009 (that is reducing by 30% from 2007 to 2010) but in FV we aim to reduce SABs still further.

5.7 Surveillance

As noted previously, surveillance is an important part of the control and management of infection, SAB surveillance involves the monitoring of the number of SABs each month alongside the collection of information on each patient. Analysing this information and discussing it with health care workers allows them to see if the actions they are taking to reduce infections are being effective.

Enhanced surveillance is where more information is collected to improve understanding of the cause of infections. Enhanced surveillance was started for SABs in August 2007.

6.0 SIGNIFICANT HAI INCIDENTS / OUTBREAKS

During the months of May to July 2009 there was one incident of Norovirus. The outbreak management plan was fully implemented and control measures were successfully applied. A weekly update from Health Protection Scotland can be found at: <http://www.hps.scot.nhs.uk/>.

6.1 What are noroviruses?

Noroviruses are a group of viruses that cause gastroenteritis (a tummy bug). They are commonly called winter vomiting virus.

6.2 What are the symptoms of illness caused by noroviruses?

The symptoms of norovirus illness usually include nausea, vomiting, diarrhea, and some stomach cramping. In most people the illness is self-limiting with symptoms lasting for about 1 or 2 days. Problems with dehydration are usually only seen among the very young, the elderly, and persons with weakened immune systems.

6.3 How do you get noroviruses?

Noroviruses are found in the stool or vomit of infected people. People can become infected with the virus in several ways, including:

- eating food or drinking liquids that are contaminated with norovirus;
- touching surfaces or objects contaminated with norovirus, and then placing their hand in their mouth;
- having direct contact with another person who is infected and showing symptoms.

This virus is very contagious and can spread rapidly throughout environments.

People infected with norovirus are contagious from the moment they begin feeling ill to at least 3 days after recovery. Some people may be contagious for as long as 2 weeks after recovery. Therefore, it is particularly important for people to use good hand washing and other hygienic practices to prevent spread.

6.4 What treatment is available for people with norovirus infection?

There is no specific treatment at present, except supportive care.

7.0 HAND HYGIENE (HH) PROGRAMME

HAND HYGIENE IS ESSENTIAL FOR BOTH STAFF AND PATIENTS TO PREVENT SPREAD OF INFECTION.

Audits

In May 15 audits were submitted from the new clinical settings and a compliance rate of 98% was reported in the July national report. We have continued to roll out the covert auditing and results are improving over time. The SPSP programme is reviewing a local new electronic audit tool and we will look at how these can be linked together in the future.

Hand Hygiene Related to Influenza H1N1 (Swine Flu)

Review of all the entrances and exits to the Acute Hospitals highlighted the need for some additional alcohol hand rub dispensers and signs.

Staff training in hand hygiene technique continues and has been well received in the awareness raising sessions following the admission of the first possible cases of influenza to NHS Forth Valley.



8.0 CLEANING SERVICES SPECIFICATION COMPLIANCE

There are national cleaning specifications on how to clean different areas in healthcare establishments effectively. There is a compliance target of 95%. Local results for the cleaning monitoring tool in March to June 2009 are for 3 separate areas across NHS FV: (1) Falkirk Royal Infirmary, (2) Stirling Royal Infirmary (3) Primary Care : health centres and community hospitals. These are in table 4 below

Table 4 Cleaning services specification compliance in NHS FV

	Percentage pass in March 2009	Percentage pass in April 2009	Percentage pass in May 2009	Percentage pass in June 2009
Falkirk Royal Infirmary	94.5	95.7	94	94.9
Stirling Royal Infirmary	91.4	93.2	91.5	90.5
Health centres and community hospitals	91.9	92.9	95.1	95.2

National table for acute hospitals in Health Boards

A national table for cleaning compliance in acute hospitals can be seen in table 5.

Table 5 Compliance with cleaning specification by board

<i>Health Board</i>	<i>3rd quarter Oct-Dec 2007/2008 Total % Pass</i>	<i>4th quarter Jan-March 2007/2008 Total % Pass</i>	<i>1st quarter April-June 2008/2009 Total % Pass</i>	<i>2nd quarter July-Sept 2008/2009 Total % Pass</i>
SCOTLAND	96.0	96.1	96.1	96.0
Ayrshire and Arran	96.1	96.4	96.4	95.9
Borders	97.6	97.1	97.8	97.2
Dumfries and Galloway	97.7	97.3	97.3	97.4
Fife	96.4	96.5	96.5	97.0
Forth Valley	95.0	95.3	95.5	94.7
Grampian	97.6	97.3	97.2	97.1
Greater Glasgow and Clyde	96.0	96.3	96.2	96.4
Highland	95.1	95.3	95.1	95.3
Lanarkshire	95.6	96.0	95.5	94.8
Lothian	94.8	94.6	94.7	94.5
Orkney	97.7	95.2	92.8	96.1
Shetland	98.3	97.8	97.8	97.1
Tayside	95.5	95.8	96.1	95.9
Western Isles	96.0	95.6	95.9	95.6
The State Hospitals Board for Scotland	91.8	93.6	93.8	94.0
Golden Jubilee National Hospital	93.2	93.6	93.4	93.4
Blood Transfusion Services				98.6

9.0 PROGRESS ON COMPLIANCE WITH A NATIONAL HAI PROGRAMME **(THE RAG REPORT)**

In November 2008 the government asked each health board for a monthly report back on how they are meeting several targets concerning reducing HAI. There are 24 targets in total. Progress is marked by a colour code against the target:-

- Purple - achieved
- Green - on track, to be completed as expected
- Amber - nearly complete but a few issues outstanding
- Red - not reached

Table 6 Progress on compliance with a national HAI programme

Code	Progress
Purple	22
Green	1
Amber	1
Red	0

10.0 SCOTTISH PATIENT SAFETY PROGRAMME(SPSP)

10.1 What is the Scottish Patient Safety Programme?

The Scottish Patient Safety Programme (SPSP) has been developed in partnership with Scotland's NHS professionals. Its approach is very practical involving frontline staff. The methods to be used are tried and tested and change how patients are cared for. We are continually measuring the impact of the changes that are made.

There are programme of goals between 2008 and 2011. The programme is being started within acute hospitals but as the programme develops it will start in other service areas and involve community settings and Primary care services too.

10.2 How is the SPSP working in Forth Valley?

A Patient Safety Steering Group Chaired by the Chief Executive is in place to oversee the delivery of the programme. NHS Forth Valley has successfully achieved each milestone so far.

A number of areas in the programme focus specifically on reducing healthcare associated infection in theatres, general wards and in critical care units and work is currently underway in pilot areas within in both Stirling and Falkirk hospitals with a timetable to roll this out to all areas of the acute hospitals by January 2011. The work of the SPSP is integrated with all of the other actions described in this report that are being taken forward in NHS Forth Valley to reduce HAI.

Three examples of the work to reduce healthcare associated infection are:- preventing ventilator associated pneumonia and catheter related blood stream infections in critical care and increasing hand hygiene in wards.

10.3 Ventilator associated pneumonia (VAP)

Ventilator associated pneumonia (VAP) is a known risk for patients being cared for in critical care units who need the support of a ventilator to support their breathing. Staff in the critical care unit have been working to reduce the risk of VAP for a number of years and the Scottish Patient Safety Programme is building on the success of this previous work. The target for the SPSP is to reduce VAPs to 0% or 300 days between infections occurring. The numbers of VAPs have been significantly reduced to only 2 cases in the first 6 months of 2009.

10.4 Catheter related blood stream infection

Catheter related blood stream infection is a known risk for patients being cared for in critical care units who need to have a central line (or drip) inserted into a large blood vessel as part of their care. Staff in the critical care unit have been working to reduce the risk of these infections. The target for the SPSP is to reduce CBSI to 0% or 300 days between infections occurring. There has been outstanding success in this part of the programme and staff have been able to achieve as of the end of July that there has not been a CSBI infection for 596 days.

10.5 Hand hygiene

The hand hygiene part of the programme involves staff in the ward checking staff hand hygiene all of the time rather than only as part of an audit. Information on how well they are doing is fed back to them. These checks are in addition to the National hand hygiene audits.

10.6 Next steps with reporting the SPSP

This report only highlights some of the areas of work being undertaken by staff. Further HAI elements of the Scottish patient Safety Programme will be included in future reports.

11.0 WHAT ELSE ARE WE DOING TO PREVENT INFECTION IN NHS FORTH VALLEY?

NHS FV has an Area Prevention of Infection Control team which oversees all that is going on. Our infection control policies include hospital and community healthcare. In NHS Forth Valley we comply with statutory government requirements including the:

- Government HAI Task Force Action Plan
- Quality Improvement Scotland's standards for HAI 2008
- Scottish Patient Safety Programme
www.patientsafetyalliance.scot.nhs.uk/programme
- National Hand Hygiene Campaign
www.hps.scot.nhs.uk/haic/ic/nationalhandhygienecampaign.aspx
<http://www.washyourhandsofthem.com/>
- National Cleaning Services Specification

Local Infection Control Team

NHS FV has an Infection Control Team which:

- Advises and trains staff in how to prevent infection and to ensure no transfer of infection occurs.
- Develop infection control programmes, e.g. hand hygiene.

Public and Patient Involvement

Forth Valley is fortunate to have a committed patient and public involvement through the Patient Public Forums in the 3 Community Health Partnerships and the Public Patient Panel who are actively engaged in improving healthcare services including preventing HAI and monitoring domestic services.

Horizon Scanning

At the moment 3 Health Boards are piloting MRSA Screening some groups of patients coming into hospital. By January 2010, NHS Forth Valley will be undertaking a MRSA screening programme in specific patient groups

Risk Management

The risks around managing HAI are considered at every clinical level and included in Risk Registers held in departments. HAI also features in two different sections of the Corporate Risk Register (CRR). The CRR is reviewed every month to make sure all actions to manage any risks are being taken.

12.0 WHAT CAN THE PUBLIC DO TO HELP REDUCE AND CONTROL INFECTION?

There is a lot that members of the public friends and relatives can do to prevent HAI, such as:-

- Think about keeping patients safe before you visit someone in hospital or a Carehome - If you, or someone you live with has a cold or diarrhoea, or if you feel unwell, try not to visit friends or relatives in hospital until you're better.
- Wash and dry your hands before visiting a hospital or care home. Always wash your hands after going to the toilet. If there is alcohol hand gel provided at the ward door or at the bedside, use it. Please also wash your hands when directed by ward staff.
- Ask ward staff for advice before you bring in food or drink for someone you are visiting in hospital.
- If you visit someone in hospital,
 - don't sit on their bed
 - keep the number of visitors to a minimum at any one time.
 - never touch dressings, drips, or other equipment around the bed.
- If you think NHS premises are not as clean as they should be, let the sister or charge nurse know.
- If you think a healthcare worker has forgotten to wash their hands, remind them about this.

Specifics about laundry. The risk of infection from laundry is low but staff will put clothes in a plastic bag that they will secure. At home remove items from bag and put them directly into the washing machine at the highest temperature suitable for the garment. More advice is available from <http://www.documents.hps.scot.nhs.uk/hai/infection-control/publications/washing-clothes-home.pdf>

Advice leaflets are available in ward areas and provided by staff along with advice given as to whether the item is soiled or not.

For further information please contact:

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www.show.scot.nhs.uk/nhsfv