

# NHS SCOTLAND NATIONAL HAI PREVALENCE SURVEY

## Frequently Asked Questions

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*Prepared for Scottish Executive HAI Task Force  
By Health Protection Scotland*

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# 1 OVERVIEW

## 1.1 *What is a Healthcare Associated Infection (HAI)?*

A Healthcare Associated Infection (HAI) is any infection that occurs after a patient has been admitted to a hospital. In this survey a Healthcare Associated Infection (HAI) was defined as any infection that occurs two days or more after a patient has been admitted to hospital. A prevalent HAI is one where the patient has symptoms of a HAI or is being treated for a HAI on the day of the survey.

## 1.2 *What is a prevalence survey?*

A prevalence survey is a count of the number of patients with HAI at a particular time as a proportion of the total number of patients who were being treated in hospital. This survey gives a snap-shot picture of the number of patients with HAI in Scottish hospitals. The report contains information on the prevalence of HAI for individual hospitals at the time of survey only, and not for all times.

## 1.3 *Why was this survey undertaken?*

It is important to know the prevalence of HAI in Scottish hospitals to allow the government and local hospitals to plan effective ways to reduce HAI. The survey also estimated the cost of HAI in Scottish hospitals. With this information both national and local infection control plans can be targeted most effectively.

Health Protection Scotland has also developed a way to monitor prevalence of HAI on an on-going basis allowing the impact of HAI reduction plans to be measured in the future.

## 1.4 *Who undertook the survey?*

Health Protection Scotland (HPS) undertook the survey on behalf of the Scottish Executive Health Department. The HAI prevalence survey team, including a team of data collectors trained in the diagnosis of HAI, was employed by HPS.

Within each hospital an infection control nurse acted as a local point of contact for the survey team. The team is indebted to the local Infection Control Teams (ICTs) and ward staff in all of the participating hospitals. Their collaboration is gratefully acknowledged.

## 1.5 *When was the survey undertaken?*

The survey was part of a two year project which included the development of the method, a pilot survey, the main survey and the production of the final report. Hospitals were surveyed between October 2005 and October 2006.

## 1.6 *Where was the survey undertaken?*

The survey was undertaken in every NHS Board in Scotland including all Scottish acute hospitals (45 hospitals) and a sample of Scottish non-acute hospitals (22 hospitals).

## **1.7 Which patients were surveyed?**

The data collectors visited all adult inpatients over the age of 16 years in the surveyed hospitals. Day patients who did not stay overnight were not included in the survey.

## **1.8 What were the objectives of the survey?**

The objectives defined at the initiation of the study were to address the key questions:

1. What is the overall prevalence of HAI and what types of HAI are found in Scottish hospitals?
2. How much longer does a patient with HAI stay in hospital and what impact does this have on NHS activity?
3. How much does HAI cost hospitals and how much can be saved if HAI can be reduced?
4. Can the prescription of antibiotics 48 hours after admission to hospital be used as an indicator of HAI prevalence?
5. How do the results from the prevalence survey compare to the results from ongoing incidence surveillance programmes?
6. What are the priority areas for targeted surveillance of HAI?
7. What are the priority areas for interventions to prevent and control HAI?
8. What is the acceptability, feasibility and cost of undertaking prevalence surveys in Scottish hospitals?
9. What is a suitable methodology for repeated prevalence surveys that will give comparable information?

## **1.9 Were these objectives met?**

Yes, the report contains detailed discussion on each of these topics, however only the key messages are detailed in this document.

## **1.10 What does the report tell us?**

The final report contains information on how many patients in Scottish hospitals have a HAI on any one day in Scotland, what type of HAI those patients have and what specialty they are being treated in is also included. It also reports how many invasive devices, such as catheters, patients are being treated with and which antibiotics they were prescribed on the day of survey. Some additional work was included which measured how much longer a patient would stay in hospital if they acquired a HAI in order to estimate the burden of HAI.

## **1.11 What does the report not tell us?**

The report does not provide details of how the patient acquired their HAI and does not report on the cleanliness of the hospitals or the clinical practices of healthcare staff within the hospitals.

## 2 METHODOLOGY OF SURVEY

### 2.1 *How many patients were included in the survey?*

The survey included 13754 inpatients. Of those 11608 were in acute hospitals and 2146 were in non-acute hospitals.

### 2.2 *How is prevalence calculated?*

HAI prevalence was calculated by dividing the total number of inpatients diagnosed with a HAI by the total number of inpatients.

### 2.3 *What definitions of HAI were used?*

A Healthcare Associated Infection (HAI) was defined as any infection that occurs 48 hours or more after a patient has been admitted to hospital. A prevalent HAI is one where the patient has signs and symptoms of a HAI or is being treated for a HAI on the day of the survey.

The Centers for Disease Control and Prevention (CDC) in the United States have defined specific types of infection for use in surveillance. These definitions have been internationally recognised as standard definitions for HAI types. The CDC definitions of HAI were used in this survey.

### 2.4 *What types of HAI were included in the survey?*

This survey included every type of HAI defined by the CDC in adult patients. Therefore the full range of HAI types found in adult hospital inpatients which met the survey definitions were examined. HAI are grouped into 13 broad categories by the CDC based on the main physiological systems and surgical interventions.

These are:

- Urinary Tract Infections,
  - Systemic Infections,
  - Skin and Soft Tissue Infections,
  - Surgical Site Infections,
  - Reproductive System Infections,
  - Pneumonia,
  - Lower Respiratory Tract Infections other than Pneumonia,
  - Gastrointestinal Infections,
  - Eye, Ear, Nose, Throat and Mouth Infections,
  - Cardiovascular System Infections,
  - Bloodstream Infections,
  - Bone and Joint Infections,
  - Central Nervous System Infections.
- Many other studies only focussed on four types of HAI.

## **2.5 How was the study designed?**

Every adult inpatient in hospital on the day of survey was included in the prevalence analysis. More detailed data were collected for a sample of wards in each hospital to allow calculation of the additional length of hospital stay for inpatients with HAI.

## **2.6 How were the data collected?**

A team of data collectors were trained to diagnose HAI in inpatients and record their information on specifically designed software on handheld computers. After a short introduction to ward staff, data collectors visited each inpatient, reviewing information provided in case notes, prescription charts, nursing notes, temperature charts and from staff and patients directly. Data were then collated and validated by the data manager at HPS.

Permission was sought from the local Caldicott Guardian for each hospital to allow HPS to access patients notes. The data were anonymised before analysis was undertaken. Patient information was protected according to Data Protection Act.

## **2.7 What is the difference between number of infections and number of patients with HAI?**

Some patients were found to have more than one HAI. Prevalence is calculated using the number of inpatients with infections compared to the total number of inpatients.

In some instances within the report the total number of infections is reported, this number is always greater than the total number of patients who have HAI. It is important to consider the total number of infections because this gives a clearer picture of what type of HAI patients have.

## **2.8 What is the difference between colonisation and infection and what implications did this have for the survey?**

A patient may have an organism living on or in their body without any clinical signs or symptoms of disease. These patients are colonised with the organism. An example of this is the presence of MRSA in a patient's nasal passage which is detected by screening. An infection occurs when the organism enters the body and causes disease.

The survey collected information on patients that showed clinical signs and symptoms of infection and not those that were colonised with an organism.

## **2.9 What is the difference between acute and non-acute hospitals?**

Acute hospitals are hospitals that provide a wide range of specialist care and treatment for patients. They include consultation with specialist clinicians, emergency treatment following accidents, routine, complex and life saving surgery, specialist diagnostic procedures and close observation and short-term care of patients with health symptoms of concern.

Non-acute hospitals are hospitals which offer long term care for psychiatric, elderly or community patients. The majority of their inpatients are cared for within the specialties of Care of the Elderly and Psychiatry.

## 3 RESULTS

### 3.1 *What is the overall prevalence of HAI in Scottish hospitals?*

The overall prevalence of HAI in acute hospitals was 9.5% (8.8% – 10.2% 95% CI). Non-acute hospitals had an overall HAI prevalence of 7.3% (6.0% – 8.6% 95% CI). It is not appropriate to compare the prevalence within the two hospital types because they represent distinct case mixes, patient populations and specialties.

### 3.2 *Does a prevalence of 9.5% mean that if I go in to hospital I have a one in ten chance of getting a HAI?*

No. This means that at any time one in ten inpatients in hospital will have a HAI. A prevalence survey counts the number of patients with HAI at any point in time. People with HAI tend to stay in hospital longer and those patients who stay in hospital for longer periods of treatment tend to be more seriously ill and therefore more at risk of contracting HAI. The large majority of patients are successfully treated in hospital and go home without acquiring a HAI.

### 3.3 *Can you tell me what my chance is of contracting HAI during my hospital stay?*

No. This is not shown by the current prevalence survey. In order to calculate how likely a person is to get a HAI an incidence study would be required. This would look at all patients who were treated within the hospital on a regular basis over a defined time period.

### 3.4 *What are the most common types of infections?*

The most common types of HAI in acute hospital inpatients were: Urinary Tract Infections (17.9% of all HAI, but only 1.9% of hospital population), Surgical Site Infections (15.9% of all HAI, but only 1.7% of hospital population) and Gastrointestinal Infections (15.4% of all HAI, but only 1.6% of all hospital population).

In non-acute hospital patients Urinary Tract Infections were frequent (28.1% of all HAI, but only 2.1% of hospital population), but as frequent were Skin and Soft Tissue Infection; (26.8% of all HAI, but only 2.0% of hospital population).

### 3.5 *What are the most serious types of infection?*

HAI is a term for a group of conditions. Some can be treated easily and while they can be unpleasant they do not have a lasting impact on a patient's health. Some of these infections, if they remain untreated can progress to more serious conditions. Other types of HAI initially have a very serious effect on a patient's health, increasing their hospital stay, requiring further surgery, prolonged treatment with antibiotics and considerable distress to the patient e.g. Surgical site infections.

### 3.6 Which specialty has the highest prevalence and why?

The highest prevalence of HAI in acute hospital inpatients was found in the specialties of Care of the Elderly (11.9%), Surgery (11.2%), Medicine (9.6%) and Orthopaedics (9.2%). Patients who are over 65 years have a higher prevalence of HAI, these patients often have other illnesses and conditions which predispose them to risk of acquiring a HAI.

The highest prevalence of HAI in non-acute hospital inpatients was found in the specialties of Medicine (11.4%) and Care of the Elderly (7.8%). One in twenty inpatients in the Psychiatry specialty (5.0%) was found to have a HAI. Psychiatric patients do not undergo as many invasive procedures as other specialties, are not prescribed antibiotics as part of their treatment routinely nor do they undergo surgical procedures routinely.

Prevalence estimates for specialties are not comparable. It is very important to consider the following points when interpreting specialty prevalence;

- The precision of prevalence estimates is determined by sample size. The precision of the estimate for smaller specialties will be less.
- Individual specialty prevalence should not be compared because of week to week variability as well as differences in case mix, length of stay and bed occupancy.

### 3.7 Why do some hospitals have higher prevalence than others?

Some hospitals will have a higher prevalence of HAI due to a number of factors including inpatient age, case severity and specialty mix, reflecting differing patient vulnerability to infection.

Comparing unadjusted hospital prevalence is not scientifically correct as the hospital in question may have an extraordinary number of high risk patients within its care.

- Estimates of prevalence for a hospital are *at the time the survey was carried out* and not for *all times*.
- The precision of prevalence estimates is determined by sample size. The precision of the estimate for smaller hospitals will be less.
- Individual hospital prevalence should not be compared because of week to week variability as well as differences in case mix, specialty distribution, length of stay and bed occupancy.

### 3.8 How much does HAI cost per year in Scotland?

Costs of HAI in Scotland were estimated to be £183 million per year. The cost of HAI in individual specialties ranges from £2 million per year (Obstetrics and Urology) to £49 million (Medicine).

If a 30% reduction in HAI could be achieved an overall annual cost reduction of £55 million could be made in acute hospitals in Scotland.

### 3.9 *What does this cost mean in real terms?*

These data were used to attach a monetary value to the increased length of stay for patients with HAI. The term value is more appropriate than cost because the nature of hospital costs is that they are largely fixed irrespective of patient numbers, at least in the short term.

For example, a fully staffed 24-bed ward might have 20 occupied beds and the staffing requirements are estimated accordingly. If a HAI is prevented and a patient goes home early, there will not be fewer staff required as a result of there only being 19 patients. Another patient might be admitted to fill the vacant place – if they are more ill than the patient who went home the total amount of work might even have gone up but staff numbers are still likely to be unaffected. Similar arguments apply to numbers of medical staff, laboratories, porters, laundry staff, catering costs, and so on. The true value of preventing a HAI (aside from the health of the patient) is to allow someone else to be admitted who otherwise might not have been. This is valuable and we attach a figure to recognise that, but it is not akin to a financial cost that can be saved.

If a 25% reduction of HAI could be made within surgical, orthopaedics, gynaecology and urology specialties an estimated 8093 additional patients could be treated within these specialities each year or staff time can be freed to pursue excellence in care.

## 4 DISCUSSION

### 4.1 *Is there any evidence to show that HAI is rising or falling?*

Since this was the first survey of its kind in Scotland there is no baseline against which to measure whether HAI is rising or falling. When considering HAI prevalence comparisons over time it is important to consider a number of factors before making any comparisons.

- The complexity of high-risk procedures increases with time
- The underlying health of the population is not constant
- The specialty mix will alter over time
- New therapies will increase the life expectancy of very ill patients who are more susceptible to infection
- The age of patients is increasing with time since people are living for longer
- Many procedures that were undertaken in hospital are now day procedures and therefore the hospital population are undergoing more complex procedures.

### 4.2 *Can the results be directly compared to the rest of Europe and the UK?*

Comparisons of the results of prevalence surveys undertaken in different locations or in the same location at different times are difficult. In the published literature, case definitions vary. Additionally, the prevalence of HAI is dependent on a number of factors that reflect differing patient vulnerability to infection and differences in admission policies and inpatient management policies and practices at the time of the survey. The Length of Stay (LOS) of hospital inpatients

will also affect the likelihood of diagnosing HAI and/or the risk of HAI in inpatients. Hospital size is an important factor known to affect prevalence and probably reflects variation in some or all of the factors listed above.

Comparison of the results of the large number of HAI prevalence surveys that have been published is therefore difficult. These studies have been undertaken in different countries, at different times, using different case definitions and data collection methods. Often important details of the methods used are unavailable. Personnel collecting the data can vary between surveys and it is often not clear how well data collectors have been trained. In addition, age and gender distribution, length of stay, case mix and underlying health of the population vary greatly across Europe. This limits the comparability of results from different surveys.

It is inevitable that countries will want to compare their HAI prevalence estimates with the results from this study but extreme caution must be exercised.

### ***4.3 How do the results compare to the last prevalence Survey by Emmerson (undertaken in 1993-1994) (1) et al?***

It is difficult to compare prevalence surveys with those in the past as many changes in health services have occurred over 10 years.

Bed occupancy has increased; there have been considerable advances in treatments, interventions and surgery. Higher volumes of cases are operated on and patients tend not to stay in hospital for as long.

The population found in hospitals has changed within the last 10 years and while Emmerson found only 30% of inpatients over 75 years in 1996, this survey found 44% of inpatients to be over 75 years.

Emmerson also used different case definitions for HAIs to the current survey.

Emmerson reported a mean hospital acquired infection (HAI) prevalence rate of 9.0% (range 2-29%). Four major types of infections urinary tract infections (23.2%), surgical-wound infections (10.7%), lower-respiratory tract (22.9%) and skin infections (9.6%) accounted for 66.5% (2559 of 3848) of the total infections identified.

In the current study the top four types of HAI in descending order were urinary tract infections (17.9%) surgical site infections (15.9%), gastrointestinal infections (15.4%) and eye, ear nose throat or mouth infections (12.5%). Lower respiratory tract was (11.2%) and skin and soft tissue was (11.0%).

### ***4.4 How do the results compare to recent studies in the UK and Europe?***

The report contains a full review of recently published Prevalence surveys undertaken within Europe in the last 10 years.

From February to May 2006 the Hospital Infection Society (HIS) in collaboration with the Infection Control Nurse Association (ICNA) undertook a prevalence survey within England, Northern Ireland, Wales and the Republic of Ireland. The HIS survey was initiated after the Scottish survey

had begun. The definitions used in the HIS study were the same as the Scottish study, however the methodology was different. Not all hospitals volunteered to be included and local hospital staff collected data. The HIS survey results were made public in October 2006.

The HIS survey found an overall prevalence of 7.6% for the four nations. There was considerable variation in individual hospital prevalence within the four nations and different prevalence of HAI was found in each country. The Scottish survey found that there was seasonal variation and therefore the Scottish Prevalence over the same period has been included below.

It is important to note that the data presented here are not adjusted for the age and gender of the hospital population, specialty they are being treated under have not been taken into account.

Scotland over same period 9.0%

Overall UK 7.6%

England 8.2%

Northern Ireland 5.4%

Wales 6.3%

Republic of Ireland 4.9%

The HIS survey data collection protocol focused on four infection types Blood stream infections, Pneumonia, Urinary Tract Infections and Surgical Site Infections. When the prevalence data of these infection types is compared, less variation is seen between the countries.

Infection Type	England (2) %	NI (3) %	Wales (4) %	Eire(5) %	Scotland (%)
BSI	0.6	0.4	0.6	0.5	0.5
PNEU	1.3	1.3	0.7	0.9	0.9
UTI	1.8	1.8	1.1	1.1	1.9
SSI	1.3	0.8	1.3	1.1	1.7
<b>Total</b>	<b>5.0</b>	<b>4.3</b>	<b>3.7</b>	<b>3.6</b>	<b>5.0</b>

Norway (6) undertook 4 repeated prevalence surveys in 2002 and 2003 which only collected data on urinary tract infections, lower respiratory tract infections, surgical sites infection and blood stream infections. Norway found an overall prevalence of 5.1% for their last survey in October 2003. In this Scottish survey the prevalence of the same infection types was 5.3%.

The Norwegian study found that of the four nosocomial infections surveyed were located most frequently in the urinary tract (prevalence of 1.7%), followed by the lower respiratory tract (prevalence of 1.6%), surgical sites (prevalence of 1.4%), and blood stream infections (prevalence of 0.4%). The definitions of used in the Norwegian study were similar but simplified versions of the definitions used by the Scottish survey.

In the current study the top four type of HAI in descending order were urinary tract infections (prevalence of 1.9%) surgical site infections (prevalence of 1.7%) lower respiratory tract was

(prevalence of 1.2%) and blood stream infections were (0.5%). From this it is clear that the Scottish survey found many other infections of concern in addition to the four that were included in the Norwegian study, allowing a fuller picture of the prevalence of HAI in Scotland.

## References

1. Emmerson AM, Enstone JE, Griffin M, Kelsey MC, Smyth ET. The second national prevalence survey of infection in hospitals--overview of the results. *J Hosp Infect* 1996;32(3):175-90.
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6. Eriksen HM, Iversen BG, Aavitsland P. Prevalence of nosocomial infections in hospitals in Norway, 2002 and 2003. *J Hosp Infect* 2005;60(1):40-5.

### 4.5 What does the survey tell us about MRSA and *C.difficile*?

Not every HAI identified in the survey had microbiology results available. Often the results from samples sent to microbiology were not available at the time of survey. The percentages of organisms reported are therefore based on a subset of infections where the microbiology test results were available. This survey did not collect any information on the prevalence of microorganisms colonising patients who did not have a HAI.

In acute hospitals, the most frequently occurring organisms responsible for HAI, where these data were available, were *Staphylococcus aureus* (n=141) (of which Meticillin Resistant *Staphylococcus aureus* (MRSA) made 93 cases and Meticillin Sensitive *Staphylococcus aureus* (MSSA) (n=48)) and *Clostridium difficile* (n=95).

In non-acute hospitals, the most frequently occurring organism responsible for HAI, where these data were available, was *Staphylococcus aureus* (n=15), of which approximately a third were MRSA (n=6). Almost all of the *Clostridium difficile* (n=13) (92%) infections were found in patients in the Care of the Elderly and General Medicine specialties.

### 4.6 Where does the work go from here?

This survey has developed a standardised prevalence surveillance method allowing the collection of robust data for this survey. This can be used in the future for HAI surveillance at international, national and local level. There are two key aspects to future prevalence surveillance. The first is continued surveillance of HAI at a national level. The second is to use prevalence surveillance to undertake smaller local investigations more frequently as part of local hospitals infection control programmes of work.

## 5 HAI PREVENTION

### 5.1 *What is currently being done in Scotland by the Scottish Executive Health Department (SEHD), HPS and hospitals to reduce HAI?*

In January 2003 the Scottish Executive set up the HAI Task Force in order to monitor levels of HAI in Scotland and coordinate a national action plan.

The National HAI Prevalence Survey is part of the HAI Task Force work programme. A strategic framework was developed for reduction of HAI in Scotland. This framework concentrated on

1. Promoting good infection control, infection prevention and hygiene practice in wards, other clinical settings and support services
2. Ensuring that good infection control and prevention practice is in place and working throughout healthcare organisations
3. Ensuring that the performance of healthcare organisations in Scotland is of sufficient quality and effectiveness to reduce the incidence of HAI

The Task Force completed the majority of its first programme of work in December 2005. The outputs of the HAI Task Force have allowed them to tackle several HAI issues as diverse as the decontamination of medical instruments, antibiotic prescribing, clarification of management structures, staffing and cleaning. Moreover, initiatives such as the promotion of the use of alcohol-based hand rubs, the National Cleaning Services Specification, the Cleanliness Champions programme and other educational initiatives, risk management methodologies, model infection control policies, and the ground-breaking Code of Practice for the Local Management of Hygiene and HAI, are all vital steps taken towards achieving the goals of improved prevention and control of infection and clean healthcare settings.

Reducing infection is everybody's business - staff, managers, patients and visitors. There are no quick fixes for HAI. The existing programme of work is focused on the implementation and monitoring of compliance with the HAI Task Force outputs and Scottish Executive requirements to ensure these recommendations are firmly embedded into everyday practice in healthcare settings.

### 5.2 *What other surveillance programmes are undertaken in Scotland?*

The Scottish Surveillance of Healthcare Associated Infection Programme (SSHAIP) team were established to facilitate national surveillance of HAI. The SSHAIP team is based at HPS.

In Scotland, HDL(2006)38 requires all NHS boards to undertake three mandatory HAI surveillance programmes including:

- Staphylococcus aureus* bacteraemia
- Surveillance of surgical site infection
- Surveillance of *Clostridium difficile* associated disease

Further information is available at <http://www.hps.scot.nhs.uk/haic/index.aspx>

### **5.3 How will the results of this survey be used to reduce HAI?**

The results of this survey will allow the Scottish Executive HAI Task Force to prioritise the development of national strategy and policy on HAI reduction. The methodology developed during this survey can be used repeatedly at intervals to allow the impact of measures taken nationally to reduce the burden of HAI to be evaluated through an analysis of trends. Hospital prevalence results will allow local Infection Control teams to develop local policies on HAI reduction.

### **5.4 Can the methodology be used by local staff to measure HAI on an ongoing basis?**

Yes, the methods developed by the HAI prevalence survey team will be made available to local infection control teams. This will provide a surveillance tool that can be used to monitor the prevalence of HAI and assess interventions and strategies implemented to reduce HAI. Further information can be obtained by emailing [sshaip@hps.scot.nhs.uk](mailto:sshaip@hps.scot.nhs.uk).

### **5.5 What can I do as a patient or visitor to prevent HAI?**

These are Top Tips from the Chief Medical Officer on preventing HAI:

- Think about keeping patients safe before you visit someone in hospital. If you, or someone you live with has a cold or diarrhoea, or if you feel unwell, try to stay away until you're better.
- Wash and dry your hands before visiting a hospital ward, particularly after going to the toilet. If there is alcohol hand gel provided at the ward door or at the bedside, use it.
- 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 and 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/Charge Nurse know. If you think a healthcare worker has forgotten to wash their hands, remind them about this.

## 5.6 Where can I get more information on HAI?

Further information on HAI and HAI prevention can be obtained from:

### Health Protection Scotland

Telephone: 0141 300 1100

Website: <http://www.hps.scot.nhs.uk>

### NHS Education for Scotland

Telephone: 0141 223 1436

Website: <http://www.nes.scot.nhs.uk/hai>

For current literature on HAI the NHS electronic library can be searched from (<http://www.elib.scot.nhs.uk/portal/hai/Pages/index.aspx>.)

Scottish Executive web site can be searched from (<http://www.scotland.gov.uk>).

### Specifically

Details of the programme of Scottish Executive HAI Task Force work resulting from the action plan are detailed at (<http://www.scotland.gov.uk/Topics/Health/NHS-Scotland/19529/19322>)

Details of the outputs of the Scottish Executive HAI Task Force can be found at (<http://www.scotland.gov.uk/Topics/Health/NHS-Scotland/19529/Publications>)

The role of NHS Quality Improvement Scotland (QIS) is to lead on improving quality of care and treatment delivered by NHS Scotland. (<http://www.nhshealthquality.org>).

## 5.7 Acronyms List

CDC	Centre for Disease Control
GP	General Practitioner
HAI	Healthcare Associated Infection
HAITF	Healthcare Associated Infection Task Force
HIS	Hospital Infection Society
ICT	Infection Control Teams
ICNA	Infection Control Nurse Association
LOS	Length of Stay
MRSA	Meticillin resistant <i>Staphylococcus aureus</i>
MSSA	Meticillin sensitive <i>Staphylococcus aureus</i>
NHS	National Health Service
QIS	Quality Improvement Scotland
SEHD	Scottish Executive Health Department
SSHAIP	Scottish Surveillance of Healthcare Associated Infection Programme

