Prepared for the Scottish Government Health Directorate HAI Task Force
by Health Protection Scotland

National Hand Hygiene NHS Campaign

Compliance with Hand Hygiene - Audit Report

Germs. Wash your hands of them

Prepared for the Scottish Government Health Directorate HAI Task Force by Health Protection Scotland

NHS Hand Hygiene Campaign 1st Bi-monthly Audit Report- May 2009
Acknowledgements

This report would not have been completed within schedule without the cooperation and support of Local Health Board Co-ordinators and other staff within NHS Boards who participated in hand hygiene audits. Their collaboration is gratefully acknowledged. In addition, this report would not have been completed without the help and support of the project team and others within HPS. Support from the Scottish Government Health Directorate (SGHD) Healthcare Associated Infection (HAI) Policy Unit is also gratefully acknowledged.

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http://www.scotland.gov.uk/Topics/Health/NHS-Scotland/19529/2005
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**Acronyms**

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHP</td>
<td>Allied Health Professional</td>
</tr>
<tr>
<td>HAI</td>
<td>Healthcare Associated Infection</td>
</tr>
<tr>
<td>HPS</td>
<td>Health Protection Scotland</td>
</tr>
<tr>
<td>ICM</td>
<td>Infection Control Manager</td>
</tr>
<tr>
<td>ICNA</td>
<td>Infection Control Nurses Association (now known as the Infection Prevention Society)</td>
</tr>
<tr>
<td>LHBC</td>
<td>Local Health Board Co-ordinator</td>
</tr>
<tr>
<td>NPSA</td>
<td>National Patient Safety Agency</td>
</tr>
<tr>
<td>SGHD</td>
<td>Scottish Government Health Directorate</td>
</tr>
<tr>
<td>SHAIPP</td>
<td>Scottish Surveillance of Healthcare Associated Infection Programme</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>

For the purposes of this report the term hand hygiene refers to the process of cleaning hands by performing hand washing or using alcohol hand rub solutions.
1. Executive Summary

The Scottish Government Health Directorate (SGHD) Healthcare Associated Infection (HAI) Task Force requested that a Hand Hygiene Campaign be implemented across NHSScotland. Health Protection Scotland (HPS) was asked to lead on this work and there was a requirement that NHS Boards would take part in Campaign activities.

Scotland’s Hand Hygiene Campaign, ‘Germs. Wash your hands of them’ was officially launched in January 2007. As part of the NHS element of this Campaign, monitoring of hand hygiene compliance within NHS Boards was deemed appropriate in helping to achieve the Campaign’s aim of reducing avoidable illness amongst patients and staff.

Hand hygiene is considered one of the most effective measures in reducing and preventing the incidence of avoidable illness, in particular healthcare associated infections (HAI). All staff within healthcare settings should be aware of this and perform hand hygiene effectively and in a timely fashion. Audit is one of a number of effective approaches, identified by the World Health Organization (WHO), in promoting compliance with hand hygiene in healthcare settings. On 26 November 2007, the Cabinet Secretary for Health and Well Being stipulated that each NHS Board should reach a target of at least 90% hand hygiene compliance by November 2008. This target was met by NHSScotland. The Cabinet Secretary for Health and Wellbeing announced on 26 January 2009 that all NHS Boards must now adopt a zero tolerance approach to non-compliance with hand hygiene. In addition, the HAI Action Plan published by SGHD in August 2008 stipulated that HPS must produce bi-monthly national hand hygiene compliance audit reports. This approach was confirmed in a Chief Executive Letter.

This Report as with previous National Audit Reports, describes occasions when NHS staff have taken the opportunity to carry out hand hygiene at the points in delivering clinical care described in the WHO published guidance on ‘Your 5 moments for hand hygiene’. Compliance with taking the opportunity for hand hygiene has increased from 68% in the first audit period to 92% in this report.

An audit tool and supporting protocol developed by HPS are used by all NHS Boards to facilitate a standardised approach across Scotland. Since the last audit period three significant changes have been made to the audit process and tool. The data in this report reflect these changes.

- NHS Boards are now required to submit exactly 300 opportunities for inclusion in the national audit report; previously a minimum of 300 was requested.
- The clinical areas identified as a priority for hand hygiene compliance monitoring have been increased from six to seventeen. This may be of particular significance for larger NHS Boards that are more likely to have all or most of the additional clinical areas within their composition and less so for smaller NHS Boards who may not. This report therefore contains data from clinical areas that have previously not been audited before as part of the mandatory National Audit periods.
- National Audit Reports will now be published bi-monthly where previously this occurred quarterly.

Further work will be undertaken by HPS to explore the options for auditing actual hand hygiene technique at local and national levels.

On 25 March 2009 the Cabinet Secretary for Health and Wellbeing launched a new range of materials for NHSScotland to continue to promote the importance of carrying out hand hygiene. These materials build upon those from the previous phase of the campaign and are intended to support NHS Boards to sustain improvement in hand hygiene as they implement a zero tolerance approach to noncompliance. They can be viewed at;

http://www.washyourhandsofthem.com/campaign/nhspostersphase2.html
NHS Boards submit the results of their hand hygiene compliance audits to HPS following mandatory bi-monthly audit periods. Results for the 1st bi-monthly audit period are summarised below.

Table 1: Summary of Results

<table>
<thead>
<tr>
<th></th>
<th>1st Bi-monthly Audit Period 9-20 March 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Compliance</td>
<td>92%</td>
</tr>
<tr>
<td>National Compliance: Nurse</td>
<td>92%</td>
</tr>
<tr>
<td>National Compliance: Medical</td>
<td>86%</td>
</tr>
<tr>
<td>National Compliance: Ancillary/Others</td>
<td>93%</td>
</tr>
<tr>
<td>National Compliance: AHP</td>
<td>96%</td>
</tr>
</tbody>
</table>

Details of each NHS Board’s hand hygiene compliance are featured within this report. There are a number of limitations to this type of data collection which are also described (Section 6).
2. Introduction

“Hand hygiene is the entrance door to better infection control and safer patient care”

This 1st bi-monthly report on hand hygiene compliance across NHSScotland was prepared for the SGHD HAI Task Force. It forms part of the zero tolerance approach to hand hygiene launched by the Cabinet Secretary for Health and Wellbeing on 26 January 2009. The report presents graphical data by NHS Board and by staff group and tables featuring the results can also be found in the appendices. Scotland’s fourteen territorial NHS Boards are represented; as is one special NHS Board (NHS National Waiting Times Centre Board, Golden Jubilee National Hospital).

Hand hygiene is considered one of the most effective measures in reducing and preventing the incidence of healthcare associated infections (HAI) in healthcare settings

Results showing compliance with hand hygiene opportunities are often reported in the published literature. For example, hand hygiene compliance data from various countries, published by WHO, describe results ranging from 5% to 76% before interventions and 30% to 92% after interventions. Seminal work conducted in Geneva found a baseline compliance rate of 48% rising to 66% after interventions. Similarly, the introduction of a hand hygiene culture-change program in Australia reported a base-line compliance level of 20% increasing to 53%, 12 months after the introduction of interventions.

Pilot work conducted in two wards within six Trusts across England between June 2003 and January 2004, as part of the ‘cleanyourhands’ campaign, found results ranging from 39% to 70% across the six Trusts that took part. The success of the pilot campaign led to its introduction across an entire Trust with individual ward compliance levels ranging from 29% to 66%. Such results tend to be based on single clinical areas, hospitals or at times groups of hospitals, and compliance rates are dependant on definitions and methods employed for audit, which do differ.

The national approach to compliance monitoring being undertaken across Scotland is different from other methods reported in the literature which monitor compliance with hand hygiene at hospital or hospital grouping level.
3. Methodology

3.1 Approach at NHS Board level

3.1.1 Setting and sample

This is the 1st bi-monthly report on hand hygiene compliance across NHSScotland as part of the zero tolerance approach.

The method at NHS Board level across NHSScotland included all Local Health Board Co-ordinators (LHBCs) performing audits in a range of clinical settings. Modifications were made to the tool in March 2009 for this 1st bi-monthly report whereby the number of clinical areas required to be audited increased. Training for LHBCs in the use of the audit tool was undertaken by HPS.

An audit is defined as monitoring conducted in one physical location, for example, an observation of hand hygiene practice undertaken within one ward. LHBCs are required to conduct exactly 15 audits during the mandatory bi-monthly audit period which equates to 300 opportunities per NHS Board. This differs from the sample size in the original audit tool as NHS Boards were not required to submit exactly 15 audits.

3.1.2 Development of audit tool

The HPS audit tool is based on the Infection Control Nurses Association tool (ICNA, now known as the Infection Prevention Society)\(^1\),\(^2\),\(^3\). For bi-monthly auditing, modifications were made to the tool in March 2009 whereby the number of clinical settings to be audited increased and the number of audits to be conducted by each LHBC was set at 15. The electronic tool was developed and installed onto tablet PCs that were provided to all LHBCs for use when auditing throughout each NHS Board.

Training days were held to provide LHBCs, and other associated infection prevention and control staff, with guidance on using the tool to ensure a standardised approach for collection of audit data. In addition, the tool was tested during this training. The HPS National Minimum Audit Dataset Protocol and Resource Pack was produced to complement the audit tool and contains detailed information on correct usage of the tool. Following modifications to the audit tool for bi-monthly reporting the HPS National Minimum Audit Dataset Protocol and Resource Pack was updated\(^4\). Other elements of the audit tool and associated protocol, for example, hand hygiene technique, were included to support further monitoring and regular feedback to staff at a local level only and are not detailed as part of this report. The WHO’s published guidance on ‘Your 5 moments for hand hygiene’\(^5\),\(^6\) was approved by Scotland’s National Hand Hygiene Campaign Steering Board as appropriate for use in monitoring the opportunities taken for hand hygiene (see Appendix I). It was not the aim of this national bi-monthly report to describe any other aspects of hand hygiene performance aside from compliance with opportunities.

In order to ensure that NHS Boards can have confidence in the hand hygiene compliance data being presented at a national level, the data was gathered using a standardised approach, including the use of a common set of definitions for staff groups (see Table 2 in Appendix II). Four groups of staff were defined; nurses, medical, allied health professionals (AHPs) and ancillary/others as described in the Scottish Government Workforce Planning information\(^7\).

3.1.3 Audit of hand hygiene compliance

Audit of hand hygiene compliance was carried out across NHSScotland during this defined national audit period (9-20 March 2009). The clinical settings audited by LHBCs have been identified as priority areas for auditing as part of the national campaign. These priority areas are based on available HAI indicators, for example, *Staphylococcus aureus* bacteraemia data, as action in these areas is considered priority in helping to prevent and control HAI\(^8\),\(^9\).

Twenty opportunities for hand hygiene were observed during an audit, conducted in one day, in order to monitor the compliance of a range of staff. Therefore, 15 audits were performed during the mandatory audit periods of
two weeks (or 10 working days). The number of audits was agreed following modifications to the electronic tool in March 2009.

3.2 Approach at HPS level

3.2.1 Submission of data
Following the defined audit period, data were submitted to HPS by the LHBCs and HPS project support was available at all times to answer queries. In order to ensure safe and secure data transfer to HPS export data were encrypted.

3.2.2 Quality assurance of data
Standard operating procedures for the preparation of the report in addition to quality assurance of the data were followed within HPS. Validation of the data was addressed through the use of Microsoft Access quality assurance queries.

Quality assurance was enhanced further by the fact that the audit tool was designed with built in rules to reduce the risk of missing data or impossible or illogical entries. Further cross checking of the final audit results produced from the database with a number of NHS Boards was performed.

3.2.3 Establishment of inter rater reliability and prevention of location selection bias
In order to establish if bias or personal opinion is present, a Scotland-wide data quality assurance exercise is planned for 2009. Furthermore, HPS will undertake an annual review of all wards audited by LHBCs within each NHS Board during ‘National audit periods’ to provide assurance that selection bias is minimal. LHBCs will be asked to download this information to HPS once annually.

3.3 Data analysis
The method for establishing the Scotland-wide compliance percentage and staff group compliance results involved weighting NHS Board compliance results by the total number of staff in each NHS Board, and also by the number of staff they have for the four defined staff groups. 17, 20, 21

Exactly 300 opportunities are monitored in each NHS Board across Scotland to ensure monitoring compliance with hand hygiene at the same power and precision in each NHS Board. The 95% confidence intervals for each NHS Board’s compliance rate were calculated and these take into account the overall number of hand hygiene opportunities observed. In addition, confidence intervals provide improved understanding of the significance in variation of the results.
4. Results

4.1 Audit results for Compliance with Hand Hygiene Opportunities - Scotland

Based on the data submitted by NHS Boards, audit results for compliance with hand hygiene opportunities have been established for Scotland as a whole, for this 1st bi-monthly audit period.

Figure 1: Audit Results for Compliance with Hand Hygiene Opportunities - Scotland

Figure 1 indicates that the level of overall national compliance was 92% in the first bi-monthly audit period.

Also see Appendix III for Table 3: Audit results for Compliance with Hand Hygiene Opportunities – Scotland.
Audit results for compliance with hand hygiene opportunities are presented for each NHS Board for this 1st bi-monthly audit period.

![Figure 2: Audit Results for Compliance with Hand Hygiene Opportunities by NHS Board](image)

Figure 2 indicates that for the 1st bi-monthly audit period compliance with hand hygiene ranged from 85% to 98% (mean 92%) by NHS Board.

Also see Appendix IV for Table 4: Audit results for Compliance with Hand Hygiene Opportunities by NHS Board. This gives details of the numbers of opportunities observed and taken within each NHS Board, along with 95% confidence intervals.

*The NHS National Waiting Times Centre is categorised as a special Board as its circumstances are exceptionally different to other NHS Boards (for example there are not multiple hospitals within this Board).*
4.3 Audit results for Compliance with Hand Hygiene Opportunities by Staff Group

Audit results for compliance with hand hygiene opportunities are presented for each of the defined staff groups for this 1st bi-monthly audit period.

Figure 3 indicates that the compliance percentage for defined staff groups in the 1st bi-monthly audit period ranged from 86-96%. Compliance with hand hygiene was highest among the AHP staff group at 96%. The nurse and ancillary/others staff groups compliance with hand hygiene was 92% and 93% respectively. Compliance with hand hygiene among the medical staff group was 86%.

Also see Appendix V for Table 5: Audit Results for Compliance with Hand Hygiene Opportunities by Staff Group including 95% confidence intervals.
5. Discussion

This is the 1st bi-monthly report to present hand hygiene compliance data at a national level throughout NHSScotland. It is not the aim of this national report to describe any other aspects of hand hygiene performance out with compliance with opportunities, for example the use of the correct hand hygiene technique.

A number of modifications were made to the audit protocol for the 1st bi-monthly audit period including an increase in the number of clinical settings that can be audited. There is a requirement that the clinical settings defined within the tool must be audited at least once (where possible to do so) during the periods of national audit data collection. However, it should be noted that there is variation between NHS Boards due to their ranging compositions. The additional settings have been chosen for inclusion as they intend to direct LHBCs to address hand hygiene compliance in ‘priority’ areas as part of NHSScotland’s approach to zero tolerance. Furthermore, there is now a requirement that all NHS Boards must submit exactly 15 audits to HPS following a mandatory bi-monthly audit period. As 300 opportunities are monitored in each NHS Board across Scotland this ensures monitoring compliance with hand hygiene at the same power and precision in each NHS Board. As such, comparisons between data obtained in this 1st bi-monthly audit period and previous audit periods should be done with caution due to the described changes to the methodology that have been introduced. Hand hygiene compliance within NHSScotland was 92% in this 1st bi-monthly audit period. The results for this 1st bi-monthly audit period suggest that compliance in Scotland compares favourably to rates from hospitals/single clinical areas of 5% to 92% within the published literature.

Further comparisons of the national compliance results are hampered by the absence of any other published reports of hand hygiene compliance on a country wide level. By presenting 95% confidence intervals around the NHS Board results, it is possible to assess the accuracy of these observed results (which are an estimate of the true overall compliance obtained through observation of a sample). Therefore, we can be 95% confident that the true compliance figure can be found within these intervals. Although these ranges and confidence intervals are presented within the report, caution should be taken when attempting to make any comparison between NHS Boards as they can differ in their composition. The overall aim of presenting these results is to allow monitoring within NHS Boards and to give an indication of hand hygiene compliance amongst staff. Any small differences presented that show either minimal increase or decrease in compliance percentages between NHS Boards should be interpreted with caution as these are unlikely to be statistically significant.

Staff group compliance ranged from 86%-96% in the 1st bi-monthly audit period. A range of studies show that compliance varies between staff groups, therefore, it is necessary to understand the reasons for variation in order to target interventions at relevant groups to improve compliance with hand hygiene. WHO clearly summarises that there are many factors that influence adherence to hand hygiene compliance, including skin irritation, lack of supplies and time pressures. In addition, sustainability over time can also be an ongoing challenge. Efforts continue throughout NHSScotland to ensure that both recommended initiatives such as the supply of hand hygiene solutions and locally identified actions to improve compliance are implemented. Other elements of the Campaign have been aimed at promoting sustainable improvements in hand hygiene throughout Scotland to aid NHSScotland’s approach to zero tolerance. To support NHS Boards to achieve a zero tolerance approach to non-compliance with hand hygiene, a professional marketing campaign was launched in March 2009 by the Cabinet Secretary for Health and Wellbeing.

A range of other on-going national and local activities to enhance hand hygiene compliance are planned including implementation of the national hand hygiene campaign within non-acute NHS healthcare settings and exploration of the options for auditing actual hand hygiene technique at local and national levels.
6. Limitations

- It should be acknowledged that in the context of this Campaign, auditing aims to measure processes that contribute to effective hand hygiene performance. Audit results do not present the same robust scientific data as surveillance data, however they aim to provide valuable and contextual information that can help target hand hygiene activities to improve compliance where required in each area by utilising a cyclical approach and this involves feedback of results to NHSScotland staff.

- A number of limitations may be associated with ‘being observed’ and the role of auditors:
  - It has been recognised that ‘being observed’ in practice, e.g. during auditing, can lead to falsely elevated compliance rates. Entry into wards in order to conduct audits was considered and a variety of strategies suggested in an attempt to ensure changes in staff practices related to being observed were minimised as far as possible, e.g. it was preferable that LHBCs said they were in an area to observe aspects of infection prevention and control practices if asked about this, without focussing on the subject of hand hygiene in particular. On one hand it is often expected that over time any effects of being observed should diminish. On the other hand, it is acknowledged that awareness of the role of LHBCs could be raised over time and this might impact on results. However, it should be considered that the staff being observed are busy people with a range of considerations on their minds when providing care and any effect of ‘being observed’ might not always be present. Additionally, in the broadest terms, any way in which hand hygiene compliance can be improved in both the short and long term is welcomed, bearing in mind that hand hygiene is essentially an attitude driven activity.
  - It has been considered that there may be a risk of bias associated with LHBCs not being fully ‘independent observers’, particularly over time, and unconsciously introducing bias or personal opinion to the results they enter into the audit tool. As described in the methodology, a data quality assurance exercise is planned for 2009 to address any potential for this bias. The duration of an audit is proposed to be at most one full day/shift period (whether this is day, night, weekday or weekend). If a full audit is completed in less than a day/shift the auditor can progress on to auditing a new area. Auditors should not, however, return within a ‘National Campaign audit period’ to a specific ward where they have already audited.
  - Consideration has also been given to a review of whether all LHBCs chose the same opportunities to score compliance against. However, as a wide range of factors affect this decision, e.g. activities vary considerably in day-to-day practice and therefore the occurrence of opportunities varies each time an audit is conducted, this is not deemed a practical national exercise at this time. Guidance on the application of the ‘Your 5 moments’ is available from: http://www.washyourhandsofthem.com/support/5moments-support.html.
7. References


11. ICNA. Audit tools for monitoring infection control standards. 2004:ICNA, UK.

12. ICNA. Audit tools for monitoring infection control guidelines within the community setting. 2005: ICNA, UK.


Your 5 moments for HAND HYGIENE

1. BEFORE PATIENT CONTACT
   WHEN? Clean your hands before touching a patient when approaching him or her
   WHY? To protect the patient against harmful germs carried on your hands

2. BEFORE AN ASEPTIC TASK
   WHEN? Clean your hands immediately before any aseptic task
   WHY? To protect the patient against harmful germs, including the patient’s own germs, entering his or her body

3. AFTER BODY FLUID EXPOSURE RISK
   WHEN? Clean your hands immediately after an exposure risk to body fluids (and after glove removal)
   WHY? To protect yourself and the health-care environment from harmful patient germs

4. AFTER PATIENT CONTACT
   WHEN? Clean your hands after touching a patient and his or her immediate surroundings when leaving
   WHY? To protect yourself and the health-care environment from harmful patient germs

5. AFTER CONTACT WITH PATIENT SURROUNDINGS
   WHEN? Clean your hands after touching any object or furniture in the patient’s immediate surroundings, when leaving - even without touching the patient
   WHY? To protect yourself and the health-care environment from harmful patient germs

Germs. Wash your hands of them.
Appendix II – Staff Group Definitions

For the purposes of the audit the staff groups provided as options are defined, however, this is not an exhaustive list.

Table 2: Staff Group Definitions

<table>
<thead>
<tr>
<th>Staff Group</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>All nurses, midwives, health visitors – both registered and non-registered, i.e. including healthcare support.</td>
</tr>
<tr>
<td>Medical</td>
<td>All doctors and dentists – qualified and in-training, including consultants, GPs, staff and associate specialists.</td>
</tr>
<tr>
<td>Allied Health Professionals (AHP)</td>
<td>Arts therapists, podiatrists, dieticians, occupational therapists, orthoptists, physiotherapists, radiographers, speech and language therapists, prosthetists and orthotists, and including healthcare support that work within these groups, e.g. dietetic assistants.</td>
</tr>
<tr>
<td>Ancillary staff and professionals who have patient contact</td>
<td>Pharmacists, psychologists, Medical Technical Officers (MTO) or Healthcare Scientists, for example, cardiac, respiratory and audiology technicians, phlebotomists, medical photographers, medical records staff, domestic staff, housekeeping staff, porters, catering staff.</td>
</tr>
</tbody>
</table>
Appendix III - Audit Results for Compliance with Hand Hygiene Opportunities – Scotland

Table 3: Audit Results for Compliance with Hand Hygiene Opportunities – Scotland

<table>
<thead>
<tr>
<th>1st Bi-monthly Audit Period 9-20 March 2009</th>
<th>92% (91% to 93%)</th>
</tr>
</thead>
</table>
### Appendix IV - Audit Results for Compliance with Hand Hygiene Opportunities by NHS Board including 95% confidence intervals

Table 4: Audit Results for Compliance with Hand Hygiene Opportunities by NHS Board including 95% confidence intervals

<table>
<thead>
<tr>
<th>NHS Board</th>
<th>1st Bi-monthly Audit Period (%) 9-20 March 2009</th>
<th>Opps Obs*</th>
<th>Opps Taken**</th>
<th>% (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Western Isles</td>
<td></td>
<td>300</td>
<td>278</td>
<td>93% (90%, 96%)</td>
</tr>
<tr>
<td>NHS Tayside</td>
<td></td>
<td>300</td>
<td>273</td>
<td>91% (88%, 94%)</td>
</tr>
<tr>
<td>NHS Shetland</td>
<td></td>
<td>300</td>
<td>288</td>
<td>96% (94%, 98%)</td>
</tr>
<tr>
<td>NHS Orkney</td>
<td></td>
<td>300</td>
<td>255</td>
<td>85% (81%, 89%)</td>
</tr>
<tr>
<td>NHS Lothian</td>
<td></td>
<td>300</td>
<td>279</td>
<td>93% (90%, 96%)</td>
</tr>
<tr>
<td>NHS Lanarkshire</td>
<td></td>
<td>300</td>
<td>278</td>
<td>93% (90%, 96%)</td>
</tr>
<tr>
<td>NHS Highland</td>
<td></td>
<td>300</td>
<td>261</td>
<td>87% (83%, 91%)</td>
</tr>
<tr>
<td>NHS Greater Glasgow &amp; Clyde</td>
<td></td>
<td>300</td>
<td>264</td>
<td>88% (84%, 92%)</td>
</tr>
<tr>
<td>NHS Grampian</td>
<td></td>
<td>300</td>
<td>286</td>
<td>95% (93%, 97%)</td>
</tr>
<tr>
<td>NHS Forth Valley</td>
<td></td>
<td>300</td>
<td>294</td>
<td>98% (96%, 100%)</td>
</tr>
<tr>
<td>NHS Fife</td>
<td></td>
<td>300</td>
<td>292</td>
<td>97% (95%, 99%)</td>
</tr>
<tr>
<td>NHS Dumfries &amp; Galloway</td>
<td></td>
<td>300</td>
<td>282</td>
<td>94% (91%, 97%)</td>
</tr>
<tr>
<td>NHS Borders</td>
<td></td>
<td>300</td>
<td>287</td>
<td>96% (94%, 98%)</td>
</tr>
<tr>
<td>NHS Ayrshire &amp; Arran</td>
<td></td>
<td>300</td>
<td>280</td>
<td>93% (90%, 96%)</td>
</tr>
<tr>
<td>National Waiting Times Centre</td>
<td></td>
<td>300</td>
<td>283</td>
<td>94% (91%, 97%)</td>
</tr>
</tbody>
</table>

*Opps Obs = opportunities observed

**Opps Taken = opportunities taken
### Appendix V - Audit Results for Compliance with Hand Hygiene Opportunities by Staff Group with 95% confidence intervals

Table 5: Audit Results for Compliance with Hand Hygiene Opportunities by Staff Group with 95% confidence intervals

<table>
<thead>
<tr>
<th>Professional Staff Group</th>
<th>1st Bi-monthly Audit Period (%) 9-20 March 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>92% (90% to 94%)</td>
</tr>
<tr>
<td>Medical</td>
<td>86% (82% to 90%)</td>
</tr>
<tr>
<td>Ancillary/Others</td>
<td>93% (90% to 96%)</td>
</tr>
<tr>
<td>AHP</td>
<td>96% (94% to 98%)</td>
</tr>
</tbody>
</table>