

9.3 Hand Hygiene Compliance

Summary

- On a background of on-going hand hygiene compliance audits in acute hospitals, national data were collated and reported for two audit periods during 2015
- For Period 9 (May/June), 51 hospitals participated [HSE; 44 and private; 7]. In total, 10,667 opportunities for hand hygiene were observed; achieving an average compliance of 88.4% (range = 75.2 - 96.7)
- For Period 10 (October/November), 52 hospitals participated [HSE; 44 and private; 8]. In total, 10,890 opportunities for hand hygiene were observed; achieving an average compliance of 89.5% (range = 78.6 - 96.7)
- While the overall compliance of 88.6% for the combined periods for HSE hospitals fell short of the HSE target of 90% for 2015 the underlying trend in compliance has increased. Compliance for participating private hospitals for the combined periods was 91.4%

Hand hygiene is one the most important actions to prevent HCAI. Measuring hand hygiene compliance by direct observation is described by the World Health Organization (WHO) as the gold standard. In Ireland, public reporting of biannual hand hygiene compliance audit data from acute hospitals commenced in 2011. Healthcare workers (HCWs) are observed for their compliance against the '5 moments of hand hygiene' by trained auditors using the WHO methodology for hand hygiene audits. Each hospital is required to measure HCW compliance against 30 hand hygiene opportunities for each of the seven randomly selected wards in the facility, resulting in a maximum of 210 opportunities per hospital per period. In 2013, the analysis and management of data were moved to the HPSC online service, MicroB.

Biannual audits were undertaken in May/June (Period 9) and October/November 2015 (Period 10). In total, 10,667 opportunities for hand hygiene were observed for Period 9; achieving an average compliance of 88.1% (range = 75.2 - 96.7). For Period 10, 10,890 opportunities for hand hygiene were observed; achieving an average compliance of 89.5% (range = 78.6% - 96.7).

Table 1: Summary of hand hygiene compliance in acute hospitals in Ireland combined for the two national audit periods in 2015. Note that data from private hospitals were excluded for the Staff Categories and WHO 5 Moments sections.

	Hand Hygiene Opportunities	Hand Hygiene Actions	Percent Compliance	Lower 95% Confidence Interval	Upper 95% Confidence Interval
Overall	21,557	19,183	89.0%	88.5%	89.4%
HSE Hospitals	18,413	16,308	88.6%	88.1%	89.1%
Private Hospitals	3,144	2,875	91.4%	90.4%	92.5%
HSE - South	6,297	5,620	89.2%	88.4%	90.1%
HSE - Dublin North-East	3,770	3,232	85.7%	84.5%	86.9%
HSE - Dublin Mid-Leinster	4,193	3,791	90.4%	89.5%	91.3%
HSE - West	4,153	3,665	88.2%	87.2%	89.3%
Nurse/Midwife	10,538	9,647	91.5%	91.0%	92.1%
Auxiliary	2,995	2,626	87.7%	86.4%	88.9%
Medical	3,444	2,721	79.0%	77.5%	80.5%
Allied health/Other	1,436	1,314	91.5%	90.0%	93.0%
Moment 1	4,809	4,327	90.0%	89.1%	90.9%
Moment 2	867	742	85.6%	83.1%	88.1%
Moment 3	1,451	1,322	91.1%	89.6%	92.6%
Moment 4	6,424	5,851	91.1%	90.3%	91.8%
Moment 5	5,629	4,777	84.9%	83.8%	85.9%

Staff category: 'Auxiliary' includes healthcare assistants, porters, catering and household services; 'Allied health/Other' includes physiotherapists, radiologists, dieticians, social workers and pharmacists

Moment 1: Before touching a patient; Moment 2: Before clean/aseptic procedure; Moment 3: After body fluid exposure risk; Moment 4: After touching a patient; Moment 5: After touching patient surroundings

Results for the two periods are combined in a summary in Table 1 and Figure 1. In 2015, the overall compliance for HSE and private hospitals combined was 89.0%. At 88.6%, compliance for HSE hospitals fell short of the target of 90%. The underlying trend for compliance among HSE hospitals has increased (Figure 2). Participating private hospitals reported an overall compliance of 91.4% in 2015.

In 2015, of the four major HCW categories, medical staff had the lowest compliance at 79%, 'Auxiliary' which includes healthcare assistants had a compliance of 87.7% and both nurse/midwife and 'Allied health/Other' staff category which includes physiotherapists, radiologists, dieticians, social workers and pharmacists had the highest at 91.5%.

Based on the WHO '5 moments for hand hygiene', compliance for moment 5 (after touching patient surroundings) was the lowest at 84.9% and the highest for moment 3 (after body fluid exposure risk) at 91.1%. The proportion of hand hygiene actions that were undertaken using soap and water was 26.4%, versus alcohol-based hand rub which accounted for 73.6% of hand hygiene actions. Data from private hospitals were excluded from analysis by staff categories and by WHO 5 Moments in Table 1 and Figure 1.



Staff category: "Auxiliary" includes healthcare assistants, porter, catering and household services; "Allied health/Other" includes physiotherapists, radiologists, dieticians, social workers and pharmacists

Moment 1: Before touching a patient;
 Moment 2: Before clean/aseptic procedure;
 Moment 3: After body fluid exposure risk;
 Moment 4: After touching a patient;
 Moment 5: After touching patient surroundings

Figure 1: Summary of hand hygiene compliance in acute hospitals in Ireland combined for the two national audit periods in 2015. The 95% confidence intervals are shown in bars and the HSE target for 2015 (90%) is shown as a red line.

Note that data from private hospitals were excluded for the Staff Categories and WHO 5 Moments.

Limitations of current methodology

- While standardised hand hygiene auditor training and validation (with inter-rater reliability testing) should ensure that measurement of hand hygiene is comparable, these results have not been validated by external auditors
- All auditors measured hand hygiene compliance in the facility in which they work. Therefore, there may be an element of bias in the results
- It is possible that hand hygiene auditing may not have been performed in a comparable fashion in all hospitals and these results may not reflect HCW compliance at all times

Compliance with hand hygiene is measured by auditors observing HCW undertaking patient care and who may change their behaviour if aware that they are being observed. However, it is also known that this effect (known as the Hawthorne effect) diminishes over time and HCWs under observation may not be aware of the presence of the auditor due to the many competing demands on their attention. Auditors are requested to give immediate feedback to ward staff following an audit, thereby increasing awareness and knowledge of hand hygiene. This risk of bias should be balanced by the benefits of increasing local staff's knowledge and awareness of hand hygiene.

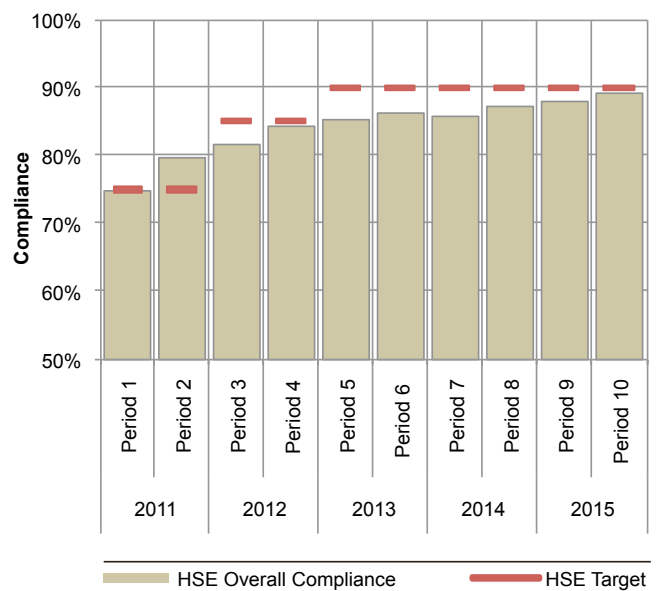


Figure 2: Summary of hand hygiene compliance in HSE acute hospitals in Ireland for the last eight national audit periods, 2011 to 2015. The HSE target for each year is shown as red lines.