Internal Audit

Healthcare Associate Infection

February 2019

Internal Audit Assurance assessment:

Objective One	Objective Two	Objective Three	Objective Four
Significant Assurance	Significant Assurance	Moderate Assurance	Significant Assurance

Timetable

Date closing meeting held: No meeting held, client responded directly to draft report

Date draft report issued: 6 February 2019

Date management comments received: 8 February 2019

Date Final report issued: 13 February 2019

Date presented to Audit and Risk Committee: 25 February 2019

Contents

1. Introduction

1.1 There is significant risk to patients, clients, healthcare workers, visitors and the wider public of the consequences of Healthcare Associated Infection (HAI). Therefore, appropriate education and training is a core component of delivering safe, effective and patient centred services.

1.2 HAI is one of the mandatory education and training requirements for all NHS Lothian employees as part of induction, with education and training requiring update every two years thereafter.

1.3 The NHS Lothian Healthcare Associated Infection Education Strategy was approved by the NHS Lothian Infection Control Committee in July 2018. The Strategy outlines the core mandatory and optional education and learning programmes for all clinical and non-clinical staff employed through the health and social care sector in Lothian, and has been designed to support NHS Lothian in complying with Standard 2 (Education), Standard 5 (Antimicrobial Stewardship) and Standard 7 (Invasive Devices) of the Healthcare Associated Infection Standards (2015).

1.4 The NHS Education for Scotland (NES) Scottish Infection Prevention and Control Education Pathway (SIPCEP) provides a range of modules to enable staff to continuously improve their knowledge and skills around infection prevention and control. On the 14 June 2017, the Scottish Government wrote to all NHS Boards, advising them that they are expected to adopt SIPCEP and to ensure that appropriate learning materials are available and accessible to all staff.

1.5 In response, NHS Lothian has developed and supported the delivery of local induction and update education resources to meet the SIPCEP foundation layer learning outcomes.

1.6 Additionally, the Information Prevention and Control Team (IPCT) plan, develop and deliver structured programmes of face-to-face education and training to support and enhance knowledge of infection prevention and control, either of request or in response to issues and incidents.

Scope

1.9 The audit assessed the design and operation of the key controls for the delivery of the Board's HAI Education Framework. Our fieldwork also reviewed the controls in place to support the identification and assessment of HAI issues and incidents, including recommended actions.

Acknowledgements

1.10 We would like to thank all staff consulted during this review for their assistance and cooperation.

2. Executive Summary

Conclusion

2.1 There are adequate controls in place for the training and education of staff on infection and prevention control requirements, in addition to the various surveillance activities employed by the IPCT. While the audit controls in place are effective in providing a combined framework of control, some improvement opportunities have been identified.

Summary of Findings

2.2 The table below summarises our assessment of the adequacy and effectiveness of the controls in place to meet each of the objectives agreed for this audit. Definitions of the ratings applied to each action are set out in Appendix 1.

No.	Control Objectives	Assurance Level	Number of Findings			
			Critical	High	Medium	Low
1	The education and training needs of all staff are being met.	Significant Assurance	-	-	-	1
2	The content of HAI education and training materials meet the requirements of national objectives.	Significant Assurance	-	-	-	-
3	NHS Lothian is able to demonstrate a culture of learning from positive reporting and adverse events.	Moderate Assurance	-	-	3	-
4	NHS Lothian has a support and surveillance programme that incorporates mandatory national and local surveillance of infections and alerts.	Significant Assurance	-	-	-	-
TOTAL			-	-	**3**	**1**

Main findings

2.3 Through the HAI Education and Training Strategy, the Board has introduced an effective framework of control in directing NHS Lothian staff on the training and education requirements relevant to their roles.

2.4 In addition to the completion of mandatory and optional training through LearnPro. Staff can receive training out with the LearnPro system where accessing electronic resources is difficult, or where additional training requirements have been identified and tailored training provided by the IPCT.

2.5 The IPCT is supported in the delivery of the essential mandatory updates on HAI by Clinical Educators working out of the Comely Bank Training Centre.

2.6 The educational resources, policies and guidance adopted throughout NHS Lothian are reflective of national guidance including the National Infection Prevention and Control Manual and the Standard Infection Control Precautions (SICPs). Controls are in place for the regular review and update of all resources.

2.7 The IPCT follows the National Infection Prevention Manual guidance in managing healthcare infection incidents, outbreaks and data exceedance, with sample testing confirming that the appropriate steps are being followed.

2.8 Controls are in place to assess the clinical environment against the 10 Standard infection Control Precautions, with audits being carried out by wards and clinical areas, in addition to a programme of audits overseen the IPCT. Action plans are in place to address any issues raised from the IPCT audits.

2.9 The IPCT oversees mandatory surveillance on a number of areas as part of national improvement works. Results of surveillance activity are reported to the Acute Clinical Management Group and Pan-Lothian Infection Control Committee.

2.10 Staff within IPC monitor each day any infection alerts arising from surveillance activity. ICNet surveillance software is set to trigger alerts for data exceedance or high risk organisms.

2.11 We identified four issues/improvement opportunities during this review:

Medium Rating

- Some wards and departments are not following the IPC guidance for carrying out self audits against the 10 SICPs. With only 39% of the sample tested completing self audits at the appropriate frequency. The management of any issues identified from these exercises is also inconsistent and does not provide assurance that corrective actions are being taken (Finding 2).

- Staffing constraints and the prioritisation of IPC activity has meant that the required frequency of SICPs snapshot audits has not been applied consistently. While testing identified a number of audits that had been completed by IPCT according to the process

guidance, some locations did not have the required number of audits completed across a 12 month period. Also, the action take to address issues from these exercises does not follow prescribed guidance (Finding 3).

- It cannot be confirmed that actions arising from in-depth audits are being entered into rolling action plans by all wards and clinical areas (Finding 4).

Low Rating

- Some training and education modules are not yet available to staff electronically though the LearnPro training application (Finding 1).

Further details of these points are set out in the Management Action Plan.

3. Management Action Plan

Finding 1	
Control objective 1: The education and training needs of all staff are met **Associated risk of not achieving the control objective: Staff do not receive training appropriate to their role**	**Low**

Background

Appendix 1 of the Board's HAI Education and Training Strategy records the optional and mandatory training available for staff. The strategy advises that the completion of the individual NHS Education for Scotland SIPCEP Foundation layer modules is optional for all staff and that the NHS Lothian HAI Induction Module is completed by all new starts.

Specific training around the prevention and management of Clostridium Difficile infection is recorded in the Strategy as a mandatory requirement for Nursing, Medical and Healthcare Support Workers.

The Strategy also records the NHS Lothian HAI scenario based learning module as an optional resource to be completed every two years, in addition to the elements provided through the SIPCEP Intermediate and Improvement.

Observation and Risk

While it is noted from the review that filming has recently been completed around the scenarios, this is not yet available for staff.

Without access to all training materials relevant to their role, there is a risk that staff may be unable to effectively manage the risk of infection to patients.

Recommendation

Management within Infection Prevention and Control should work with staff responsible for the provision of education and training to finalise the SICP scenario based learning resources.

Once done, this should be made available for staff through the normal means, with Nursing, Medical and Healthcare Support Workers advised of the availability of this particular module.

Management Response

The IPCT recognises the importance of HAI related education and ease of access to resources. We are working to complete the scenario based module but have been limited by high number staff activities and high winter activity. We believe staff access to resources is good and that the same learning outcomes can be met within those resources.

Management Action

Prioritise completion of scenario based learning resources

Responsibility:	Target date:
HAI Education Lead	30 April 2019

Control objective 2: The content of HAI training materials meets the requirements of national objectives
We identified no significant weaknesses in relation to the above control objective. The educational resources, policies and guidance adopted throughout NHS Lothian are reflective of national guidance including the National Infection Prevention and Control Manual and the Standard Infection Control Precautions. Also, within the Infection Prevention and Control Team, a tracker spreadsheet is maintained of all infection control policies, procedures and guidance. This has been created to ensure that all resources are relevant to IPC and subject to review and update every two years.

Finding 2	
Control objective 3: NHS Lothian is able to demonstrate a culture of learning from positive reporting and adverse events **Associated risk of not achieving the control objective: Patients and staff are subject to an increased risk of infection, or additional education/training requirements not identified and acted on**	**Medium**

Background

Wards and departments are required to undertake self audits against the 10 Standard Infection Control Precautions (SICPs). Output from these exercises is uploaded to the NHS Lothian Quality Improvement Dashboard (QiDS), with clinical areas required to submit data separately under each of the 10 SICPs.

A matrix is used to advise each clinical areas of the number of audits they are required to carry out and which of the SICPs are relevant to their area. All wards and clinical areas are required to complete a monthly hand hygiene audit (SICP 2), with the other nine quarterly where required.

Observation and Risk

Testing was carried out on a sample of 86 clinical areas that have completed self audits for at least one of the 10 SICPs, from a population of 126 clinical areas across the RIE and WGH sites. The objective was to confirm that SICP self audits are being completed according to the self audit matrix.

Locations were selected at random from monthly trend analysis data obtained from QiDS and covering the 11 months from January to November 2018. As a number of clinical areas are required to complete audits under several of the SICPS, the total SICP audits reviewed was 129, from a population of 980.

Of the 129 SICP audits selected for testing, 50 had been carried out in line with the relevant audit guidance.

55 audits had been carried out at a frequency less than that advised by the guidance, or an excessive number had been carried out. For example Ward 116 at the RIE had uploaded Patient Placement audit data to QIDs only once. Elsewhere, Ward 6 at the WGH had uploaded information for eight Environmental Control audits. Both of these areas have not adhered to the requirement that such audits should be completed quarterly.

Of the remaining 24, all had the requisite number of audits carried out across the 11 months, however they were either at irregular points across the year (i.e. - not every three months), or where the score was <= 85%, there was no evidence to indicate that guidance had been followed and monthly audits commenced until the results were graded as amber/green (i.e. >85%).

Without following the IPC audit guidance there is a risk that wards and other clinical areas are

not identifying issues and taking the necessary precautions to prevent the spread of infection.

Recommendation

Clinical managers should be reminded of the responsibility of ward and other clinical areas to carry out the SICP audits in line with IPC guidance.

The IPC Team should periodically review a sample of the data uploaded to QIDS, providing support and guidance where wards or clinical areas are not complying with guidance, or experiencing difficulties in carrying out this work.

Management Response

The Nurse Director has advised an audit amnesty over the winter period, from the end of 2017 until Spring 2018 to help alleviate pressures. this will impact on the number of audits completed

However, Clinical and Senior Clinical Managers are responsible for local compliance monitoring and improvement. It is not appropriate for IPCT to hold individual teams or directorates to account for compliance.

IPCT have recognised the burden of audit and competing pressures of workload within clinical services. A proposal to reduce the volume of data required and refocus on the key SICPs was submitted to Nurse Directors in December and has been approved.

Management Action

In line with our drive for continuous improvement, IPCT will continue to assist with any supportive actions.

IPCT geographical lead for audit will work with QiDs administrators to revise audit full audit process for Infection Control including tools and programme. There will be communication, education and training across organisation when revised tools available to support implementation.

Responsibility:	Target date:
IPCT Lead for Audit	31 July 2019

Finding 3	
Control objective 3: NHS Lothian is able to demonstrate a culture of learning from positive reporting and adverse events **Associated risk of not achieving the control objective: Patients and staff are subject to an increased risk of infection, or additional education/training requirements not identified and acted on**	**Medium**

Background

IPC staff carry out their own monitoring exercises through a regular series of snapshot audits. These are short semi-formal reviews with the locations and frequency directed by those clinical areas with a high or medium risk of infection (i.e. surgical wards or those with invasive procedures).

According to the IPC work plan areas within acute hospitals identified as high risk should be visited monthly and those categorised as medium risk every two months.

Output from these exercises is fed back verbally to the nurse in charge, with the Senior Charge Nurse, Clinical Nurse manager and Associate Nurse Director advised. In discussion with the IPCN any snapshot audits scoring 70% or less, the SCN is advised to have planned improvement actions recorded in a rolling action plan if the findings are deemed significant or 3rd party action is required, which is then saved in a shared drive for IPC review.

Observation and Risk

Testing was carried out on a sample of 18 clinical areas from a population of 87 across the RIE and WGH sites. Nine locations were selected randomly from the WGH population of 40, with the same number taken from the RIE population of 47. The objective was to confirm that for the selected sample, SICP audits have been completed appropriately and according to the documented process.

The frequency of SICP snapshot audits is not being consistently applied across both sites and clinical areas. Of the 18 areas reviewed, seven had been subject to snapshot audits in line with the process guidance. Of the remaining 11, nine did not have the required number of snapshot audits completed. For example, Ward 215 at the RIE is eligible for monthly audits however eight months had no audit data.

Furthermore, the IPCT SICPS snapshot process guidance advises that where there are greater than three consecutive amber scores for the same element a detailed audit of the non-compliant element(s) should be completed. There is no evidence to indicate that this is taking place for the 13 locations identified from the sample as qualifying under these criteria. The three SICPs that have been consistently scored low are:

- Safe management of care equipment;
- Safe management of care environment, and
- Safe disposal of waste.

Also, it cannot be adequately confirmed through IPC that those wards where the IPCT has

scored 70% or below have recorded improvement actions on the electronic action plans held on the IPC shared drive.

Without following the IPC audit guidance there is a risk that there is insufficient identification of issues and the necessary precautions taken to prevent the spread of infection.

Recommendation

The IPCT should follow the process guidance when carrying out snapshot audits. Where necessary, detailed audits should be completed and improvement plans agreed between the ward/clinical area and the IPCT.

Management Response

It has been agreed previously at Nurse Directors Group each of the sites should have a shared drive and develop a single rolling action note to allow overview of associated risks and progress of actions. This reflects the findings of all monitoring and audit activity not just IPCT related audits.

The responsibility for the action plans is with the clinical services and individual wards/departments. The proposed changes to the audit templates and schedule should assist clinical teams in the management of local action plans.

We have previously identified that action plans and completion of the audit loop is an area for further improvement and this will be included in roll out and communication of the revised audit programme

Management Action

Head of service will raise this issue of shared space and rolling action log at Nurse Directors emphasising the importance of having this information readily available to support improvement. The responsibility for establishing and maintaining shared space and rolling action logs sits with Associate Nurse Directors.

Responsibility:	Target date:
Head of Service and Associate Nurse Directors	30 Sept 2019

Finding 4	
Control objective 3: NHS Lothian is able to demonstrate a culture of learning from positive reporting and adverse events **Associated risk of not achieving the control objective: Patients and staff are subject to an increased risk of infection, or additional education/training requirements not identified and acted on**	**Medium**

Background

IPC staff carry out additional monitoring exercises through the completion of in-depth infection control audits. These are more comprehensive and require several hours on site to complete. These audits are carried out at a frequency of 12/18/24 months based on the high/medium/low risk of the clinical area.

Output from these exercises fed back Senior Charge Nurse, Clinical Nurse manager, Associate Nurse Director, Estates and Domestic Services.

Senior Charge Nurses are responsible for generating and updating a rolling action plan for any corrective actions identified.

Observation and Risk

Testing was carried out on a sample of 20 clinical areas from a population of 122 categorised as high and medium priority across the RIE and WGH sites. Ten locations were selected randomly from the WGH population of 60, with the same number taken from the RIE population of 62. The objective was to confirm that for the selected sample, detailed audits have been carried out at the required frequency.

Generally, in-depth audits are being carried out in line with the IPC guidance. However, two locations were identified in the sample where no audit had been carried out (RIE – Recovery and WGH – Theatre J).

Evidence was also obtained confirming that results had been distributed to all relevant staff.

However, it could not be confirmed for all audits that rolling action plans had been created and subject to regular review and update by the Senior Charge nurse or equivalent. Staff at the North IPCT and based at the WGH maintain a record of completed in-depth audits and whether a corresponding rolling action plan had been provided to the IPCT by the clinical area. Of the 31 audits completed in 2018, only six action plans had been provided to date.

Without following the IPC audit guidance there is a risk that there is insufficient identification of issues and the necessary precautions taken to prevent the spread of infection. Furthermore, unless there is appropriate review of the rolling action plans, there is an added risk that actions to address issues are not effective or carried out.

Recommendation

The IPCT should continue to follow the process guidance when carrying out in-depth audits.

Appropriate monitoring controls, similar to those in place at the WGH should be introduced to ensure that rolling action plans are created where necessary and subject to review.
Management Response: There are challenges in maintaining the programme of in-depth audits at times of peak and winter activity for management and control of infections. Action plans would not be “received“ by the team at the RIE, They would have access through shared drive where these exist Management Action: IPCT at RIE have amended the wall chart to record if action plan is available. For areas where there is as yet no site based shared drive this will be requested again through Nurse directors group as an action for Associate Nurse Directors. This will be aligned to the revised audit programme roll out.

Responsibility:	Target date:
Head of Service	31 July 2019

Control objective 4: NHS Lothian has a support and surveillance programme that incorporates mandatory national and local surveillance of infections and alerts

We identified no significant weaknesses in relation to the above control objective.

NHSL IPCT follow the National Infection Prevention and Control Manuals guidance on Healthcare Infection incidents, outbreaks and data exceedance

Staff within Infection Prevention & Control (normally the Duty Nurse of each geographical team) monitors each day infection alert organisms primarily through the Apex labs system, although information is also taken from Trak. ICNet surveillance software is utilised by IPC, with the system set to trigger alerts for data exceedance for infections above normal parameters, or the detection of high-risk organisms. All alerts are investigated and appropriate action taken on a patient by patient basis

The IPCT oversees mandatory surveillance on a number of areas as part of national improvement works. Results of surveillance activity are reported to the Acute Clinical Management Group and Pan-Lothian Infection Control Committee.

Appendix 1 - Definition of Ratings

Findings and management actions ratings

Finding Ratings	Definition
Critical	A fundamental failure or absence in the design or operating effectiveness of controls, which requires immediate attention
High	A key control failure has been identified which could be either due to a failure in the design or operating effectiveness. There are no compensating controls in place, and management should aim to implement controls within a calendar month of the review.
Medium	A control failure has been identified which could be either due to a failure in the design or operating effectiveness. Other controls in place partially mitigate the risk to the organisation, however management should look to implement controls to fully cover the risk identified.
Low	Minor non-compliance has been identified with the operating effectiveness of a control, however the design of the control is effective

Report ratings and overall assurance provided

Report Ratings	Definition	When Internal Audit will award this level
No assurance	The Board cannot take any assurance from the audit findings. There remains a significant amount of residual risk.	The controls are not adequately designed and / or operating effectively and immediate management action is required as there remains a significant amount of residual risk(for instance one Critical finding or a number of High findings)
Limited assurance	The Board can take some assurance from the systems of control in place to achieve the control objective, but there remains a significant amount of residual risk which requires action to be taken.	This may be used when: • There are known material weaknesses in key control areas. • It is known that there will have to be changes that are relevant to the control objective (e.g. due to a change in the law) and the impact has not been assessed and planned for. The controls are deficient in some aspects and require management action (for instance one 'high' finding and a number of other lower rated findings)
Moderate assurance	The Board can take reasonable assurance that controls upon which the organisation relies to achieve the control objective are in the main suitably designed and effectively applied. There remains a moderate amount of residual risk.	In most respects the "purpose" is being achieved. There are some areas where further action is required, and the residual risk is greater than "insignificant". The controls are largely effective and in most respects achieve their purpose with a limited number of findings which require management action (for instance a mix of 'medium' findings and 'low' findings)
Significant assurance	The Board can take reasonable assurance that the system(s) of control achieves or will achieve the control objective. There may be an insignificant amount of residual risk or none at all.	There is little evidence of system failure and the system appears to be robust and sustainable. The controls adequately mitigate the risk, or weaknesses are only minor (for instance a low number of findings which are all rated as 'low' or no findings)