

Board of Directors (in Public) Item 2.6*

Subject: Director of Infection Prevention and Control (DIPC)
Quarterly Report

Date of Meeting: Tuesday 28th January 2020

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Presented by: Dr Raphael Perry – Medical Director

Reason for Report: To Note

BAF Ref	Impact on BAF
1.1,1.2	Potential for patient harm

1. Executive Summary

This paper provides information and an update on infection prevention and control issues for the 3rd quarter of this financial year 1st October– 30th December 2019. Previous reports have covered the period up to September 2019.

This paper provides assurances that surveillance systems and audit programmes are in place to monitor and prevent healthcare associated infections. A number of audits have been performed across the Trust which identified some issues which have been fed back to the relevant managers to address.

2. Background

High standards of infection prevention and control are essential to ensure that people who use health care services receive safe and effective care. The *Health and Social care Act 2008: Code of Practice on the prevention and control of infections* identifies that good organisational processes and a robust assurance framework are essential to ensure effective infection prevention.

In order to demonstrate that infection prevention is integrated into the assurance framework one recommendation is that the Board of Directors receives regular updates from the infection prevention and control team, including information on alert organisms, outbreaks, cleanliness standards and audit information. This report provides such an update.

3. Issues

3.1 Surveillance

3.1.1 Mandatory reporting of Bacteraemias and C Difficile infections

There is a requirement that bacteraemias (blood stream infections) caused by certain bacteria and also Clostridium difficile infections are monitored and reported to Public Health England on a monthly basis. These cases are also reported to the Clinical Commissioning Group monthly.

		Oct 19 – Dec 19 (Year to Date)	Target
1.	Trust attributable MRSA (Methicillin Resistant Staphylococcus aureus) bacteraemias	1 (1)	0
2.	Trust attributable MSSA (Methicillin Sensitive Staphylococcus aureus) bacteraemias	0 (9)	Internal target = 7
3.	Trust attributable E coli bacteraemias	3 (3)	Internal Target for the total of all these Gram negative bacteraemias = 9
4.	Trust attributable Klebsiella species bacteraemias	2 (5)	
5.	Trust attributable Pseudomonas aeruginosa bacteraemias	1 (3)	
6.	Trust attributable Clostridium Difficile infection	1 (6)	≤ 4

Patient reviews have been performed for all reportable bacteraemias to try to identify the initial source of infection and assess if there are any learning points or areas for improvement.

MRSA Bacteraemia

The patient with an MRSA bacteraemia was being treated for a deep seated MRSA infection and endocarditis prior to transfer to this Trust and therefore the MRSA infection did not actually first occur in LHCH. However repeat blood cultures were taken at this Trust more than 14 days after the original set and despite being on appropriate antibiotic therapy, under microbiology guidance, these were also positive. This episode is therefore reportable as a new infection, according to the national definitions.

Gram Negative Bacteraemia

For one of the Klebsiella bacteraemias the probable cause was a chest infection. For the other 2 Gram negative bacteraemias, in December the patient reviews have not been fully completed. Both patients were emergency admissions for PCI and a cause has not been identified.

Clostridium difficile

1 patient developed Clostridium difficile infection during this time period and had a full patient review performed. The patient was an elective admission for cardiac surgery and 5 days after admission developed diarrhoea. There were no issues identified related to antibiotic prescribing, cleanliness, isolation or sampling and the audits

performed around this time did not identify any problems. There were no other patients positive for C difficile in the Trust at the time. Therefore no lapses in care were identified.

3.1.2 MRSA – all cases (Non- bloodstream)

Cases of MRSA in the Trust are closely monitored to identify any increased incidence or outbreaks. This includes all patients and all isolates, including colonised and infected patients.

34 patients were MRSA positive in this time period, all of these were already known to be positive or MRSA was isolated from the admission screen. However 1 patient will be designated as having a Trust attributable MRSA infection for the reasons given above.

3.1.3 Carbapenemase Producing Enterobacteriaceae (CPE)

5 patients were identified, none of these was designated as Trust attributable, all were colonised only.

3.1.4 Vancomycin Resistant enterococcus (VRE)

17 patients were identified as having VRE positive isolates in this time period. The majority of these positive samples were from rectal swabs. However 1 patient had a positive blood culture following identification of colonisation

7 of the patients were designated as not Trust acquired i.e. screened positive on admission.

6 patients had not had a screen for VRE prior to the positive sample therefore unknown whether this was Trust acquired

3 patients had had a negative screen (s) prior to the positive one therefore probably acquired VRE whilst an inpatient at this Trust.

The majority of the new isolates were from patients on the Critical Care Unit. However this is the only area that routinely tests for colonisation with VRE as part of a weekly screening regime. Therefore it is not always possible to identify where and when the patients acquired VRE.

3.1.5 Respiratory Viruses

16 patients were laboratory confirmed influenza A positive in December. 4 were identified on admission and 12 after they had been in the Trust >48 hours. It appears that there was some transmission on Birch ward.

4 patients were identified with Respiratory syncytial virus, 1 of these was identified on admission, the others while present on Critical Care.

The patients were isolated, precautions instituted and appropriate personal protective equipment provided when the infections were identified.

3.1.6 Increasing reportable infections

There has been an increase in reportable infections over the year. Other than two instances of C Diff there were no themes identified.

The issue has been discussed in depth at the IPC and all the individual investigations reviewed. Although the audits of process are all encouraging there needs to be a further drive on the bare below the elbows policy; feedback to ward managers over staff attention to detail; empowerment of staff to challenge poor infection prevention processes.

A more robust audit process with increased externality is planned.

3.2 Hand Hygiene

Clinical areas carry out weekly observational audits of hand hygiene in their area, with 1 audit in a peer review ward each month. Some areas have not submitted all the peer audits, but this has been raised with the relevant managers and the results have been forwarded to the Heads of Nursing so they can monitor that the audits are performed according to the schedule.

	October	November	December
Results of Compliance Audits	99%	100%	99%
No. of Observations	559	590	604

Although audits performed by the wards show good compliance audits separately performed by the infection prevention nurse showed that not all staff were compliant with the hand hygiene and “bare below the elbows” policy, this has been fed back to individual staff members, ward managers and the Infection Prevention Committee.

3.3 Cleanliness

3.3.1 Environmental Cleanliness

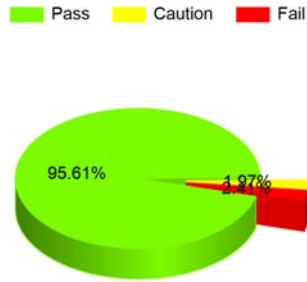
A standard monitoring tool is used by the Hygiene supervisors to assess environmental cleanliness. The target is an overall Trust score of 95%, with an individual score for clinical areas of 95% or above.

All clinical areas scored above the target score within this time period.

	October	November	December
Results of Compliance Audits	97%	99%	98%

3.3.2 Monitoring of Equipment cleanliness

The Clean Trace system helps to assess standards of hygiene and cleaning processes by using a swabbing system to monitor levels of contamination at the point of use. All wards are expected to complete an audit monthly to monitor cleanliness of equipment and patient items.



Measurements: 456. Pass: 436. Caution: 9. Fail: 11

All equipment that failed was cleaned at the time and results fed back to individual ward managers and Matrons.

3.4. Infection Prevention Audits

A national infection control audit tool has been adapted by the infection prevention nurses and is used to audit all wards and clinical areas within the Trust 6 monthly.

Each ward/department was audited by the IPNs with a representative from that area and following the audit each area is given a score sheet and an action plan. This was circulated to the Ward Managers, Matrons and also relevant HoN to ensure that actions were completed.

See appendix 1, which gives results for each area and common themes where the specified standards were not met (i.e. in 2 or more areas).

4. Sepsis

There has been an improvement in the management of sepsis with the principal KPIs either achieved or significantly improved. The most clinically important KPI, antibiotic delivered within one hour, is being consistently achieved. There remain issues with EPR that make collection of blood culture data appear delayed. Usage of the screening tool and the sepsis bundle has improved and screening fails are circulated to the individuals concerned.

The lead for sepsis Dr Al-Rawi continues to lead the sepsis group to ensure continuous improvement of the care of patients with sepsis at LHCH. The group comprises Dr Al-Rawi, Dr Nistal de Paz, (consultant microbiologist), the infection prevention nurses, the sepsis audit analyst, outreach nurses, EPR representation and ITU staff

The objectives have been clarified and simplified using MEWS scoring. MEWS ≥ 5 and suspicion of infection do not need screening and should be treated within one hour preferably using the sepsis bundle. Two consecutive MEWS ≥ 3 and suspicion of infection need the screening tool completing and if high risk treated within one hour. There is a national drive to use NEWS2 scoring rather than MEWS however the sepsis

group and the infection prevention committee consider that this is not the best tool for our specific patient population. Discussions with commissioners have led to LHCH continuing to use MEWS with NEWS2 being monitored and applied to transfer patients.

Plans for optimisation of EPR workflow have been completed other than making the collection of blood culture timing to be a mandatory field. Pop up reminders for the screening tool when trying to prescribe sepsis antibiotics off bundle; a tick box for MEWS greater than 5 to eliminate the need for the screening tool; automatically open the sepsis bundle on completion of high risk screening are all functional.

The drive now is to increase further the use of the screening tool and ensure all KPIs can be measured via EPR. The mortality from sepsis remains low. The weekly and year to date screening data is presented in the executive harm report. High risk screens are identified and the KPIs presented for that subgroup. Data is fed back to the wards and areas and a clear line of responsibility established. Any fails of the KPIs are reviewed by the sepsis lead or the medical director to ensure accuracy and appropriateness.

There is a continued education program to deliver teaching sessions for junior doctors outreach and hospital coordinators. Trust wide reminders through screen savers and desktop backgrounds continue. There is a new sepsis eLearning package which is included in mandatory training for clinical staff.

5. Summary

The surveillance of infections and routine audit data continue to be monitored. Work is on-going to ensure the annual programme is fulfilled and an improved audit programme is planned.

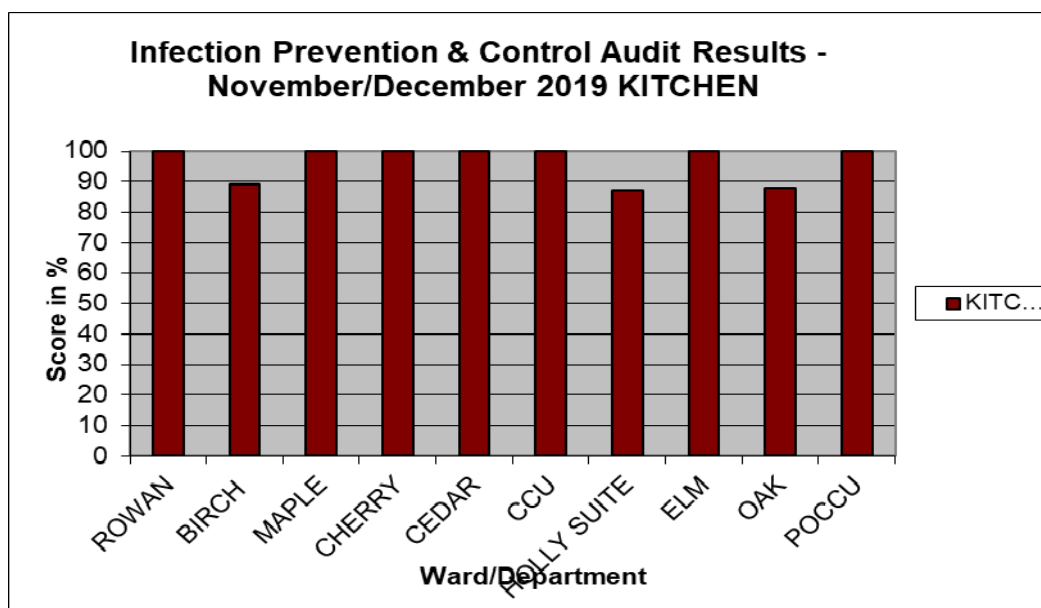
The increasing number of reportable infections is being addressed.

6. Recommendations

The Board is asked to note the contents of this report.

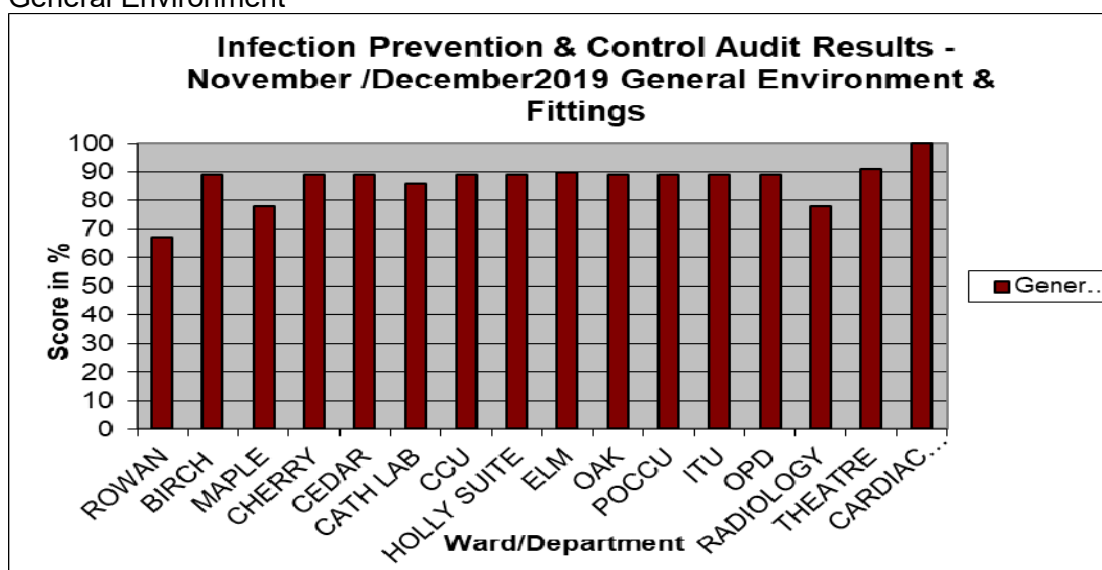
Appendix 1.

1. Kitchen



No Common themes

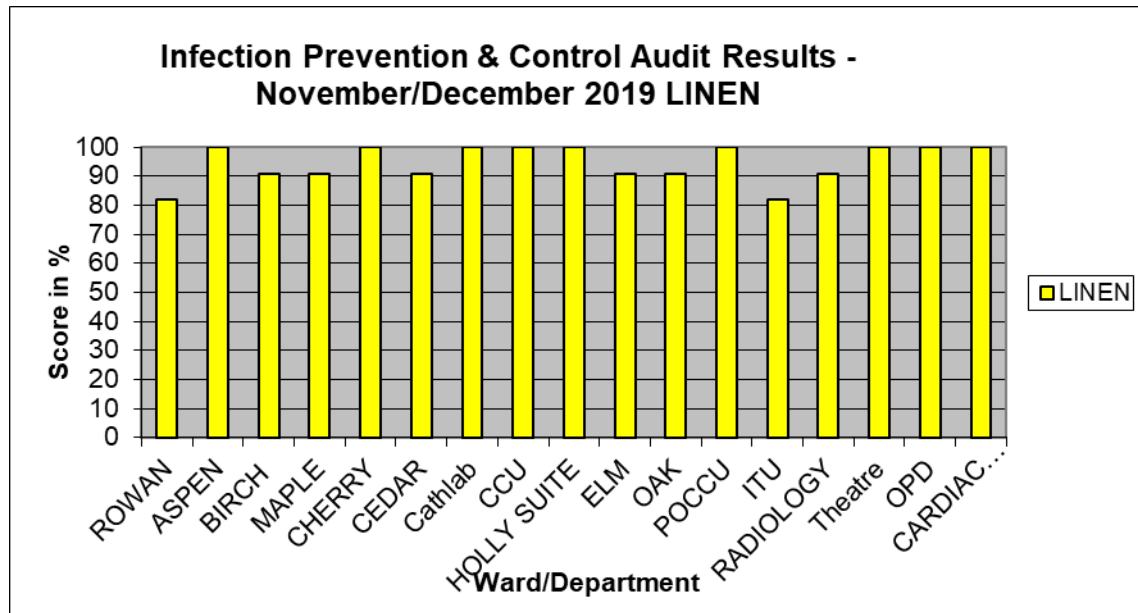
2. General Environment



Common themes

- Computer systems and display screens are not visibly clean
- Cleaning processes and outcomes are not audited regularly (non-hygiene staff cleaning)

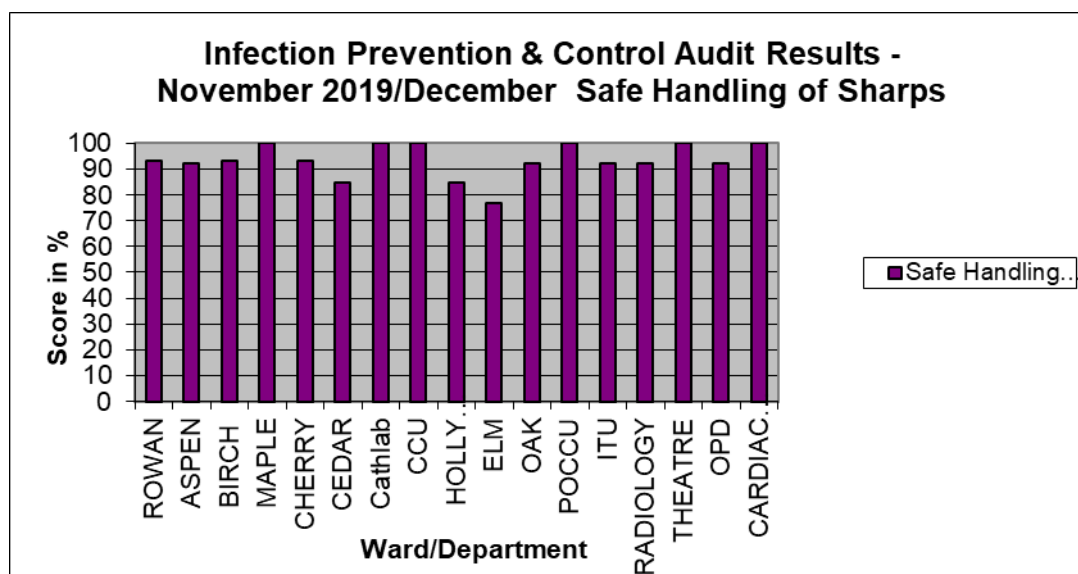
3. Linen



Common themes

- Linen stored on the floor

4. Sharps

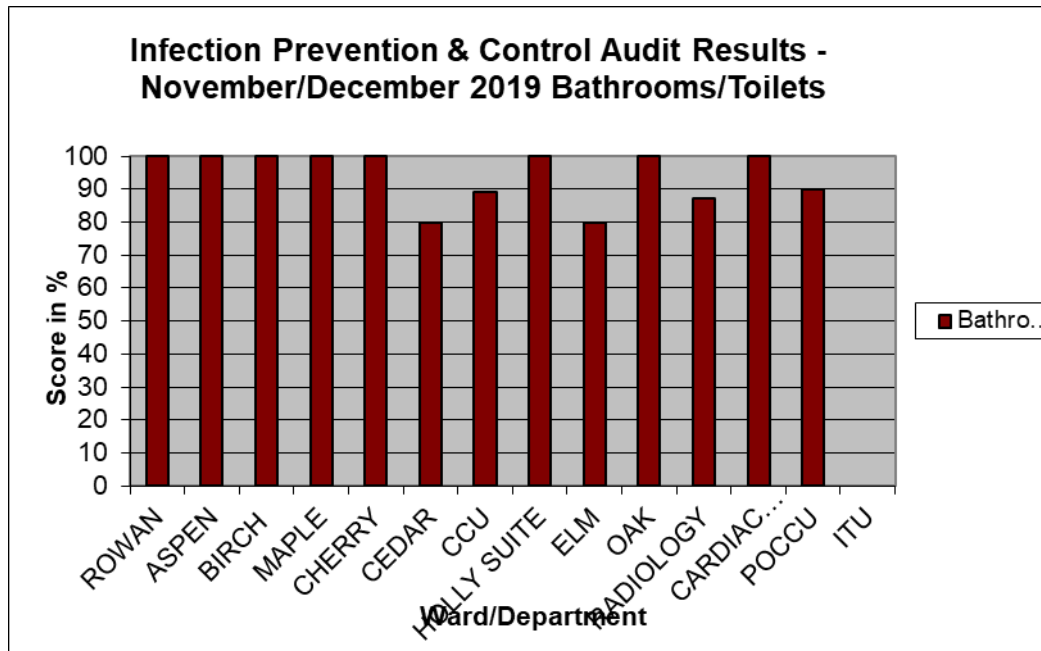


Common themes

- Locked sharps containers are not stored in a secure facility away from public access until collected.

- Sharps container lids not temporarily closed in between use
- Staff unaware of the procedure for managing an inoculation contamination injury

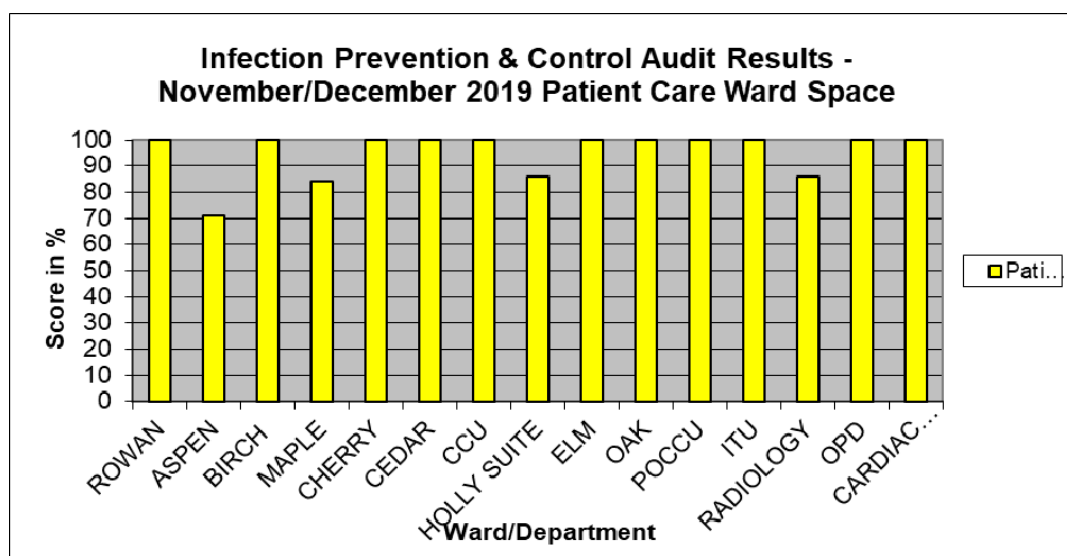
5. Bathrooms



Common themes

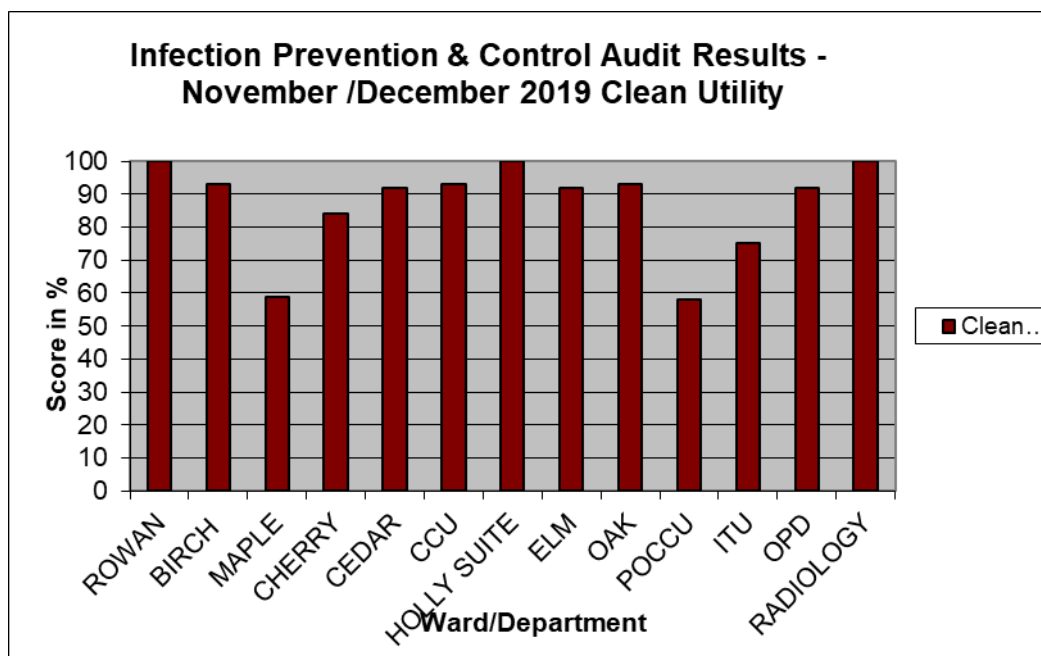
- Toilet brushes and holders are not visibly clean
- Bathrooms are not free from inappropriate items

6. Patient Care ward space



No common themes

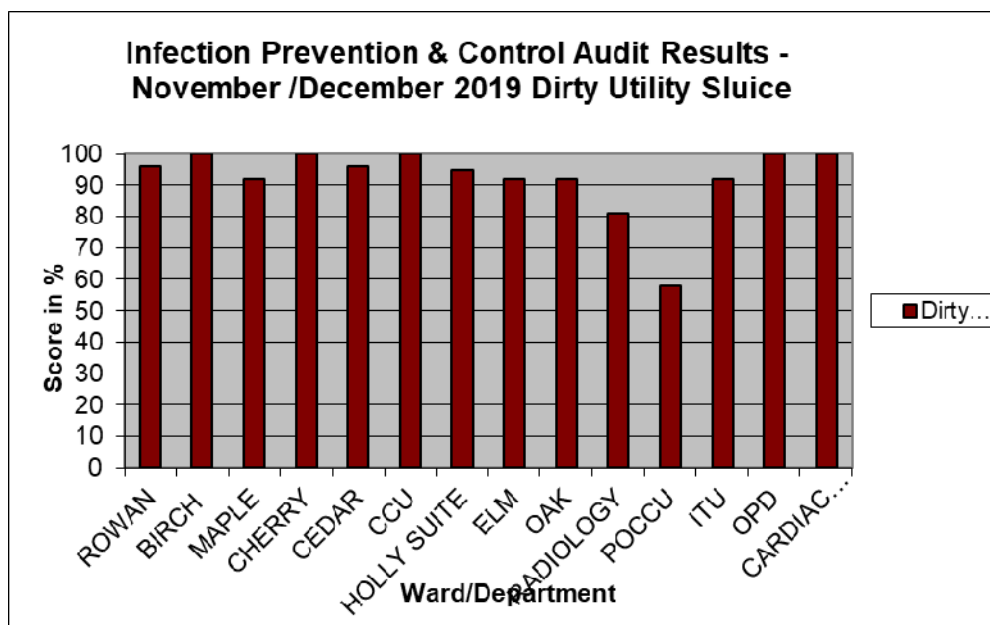
7. Clean Utility



Common themes

- Shelves and cupboards used to store sterile products were dusty
- Products stored on the floor

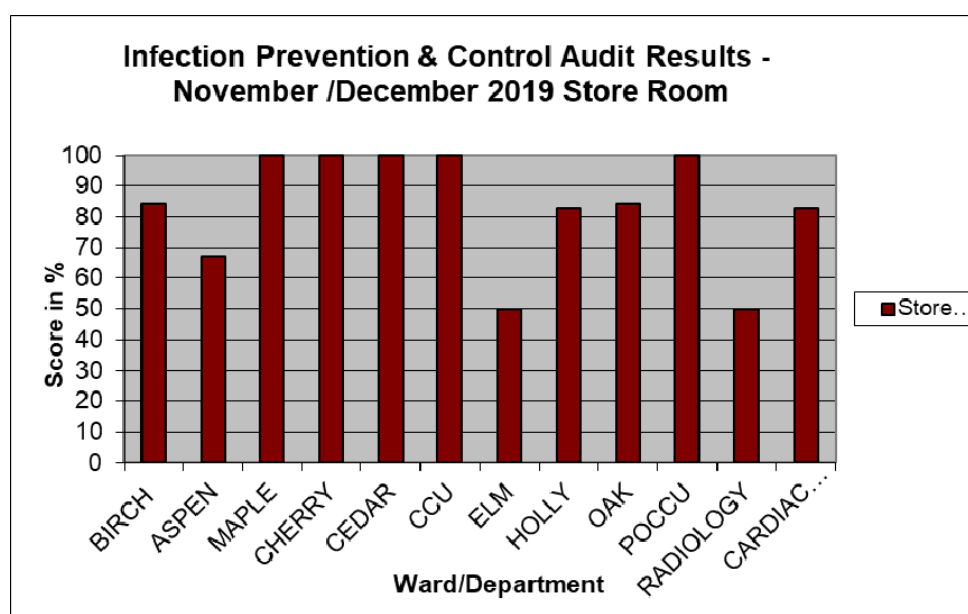
8. Dirty Utility



Common themes

- Spillage kits or alternative not available for use on body fluid spillages

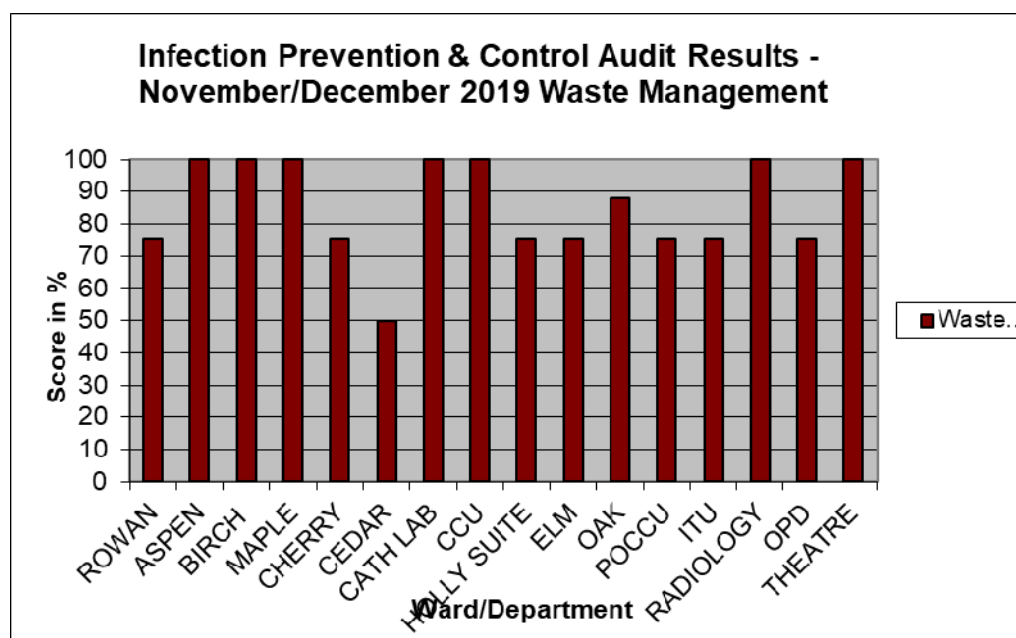
9. Store Room



Common themes

- Products stored on the floor
- Shelves dusty

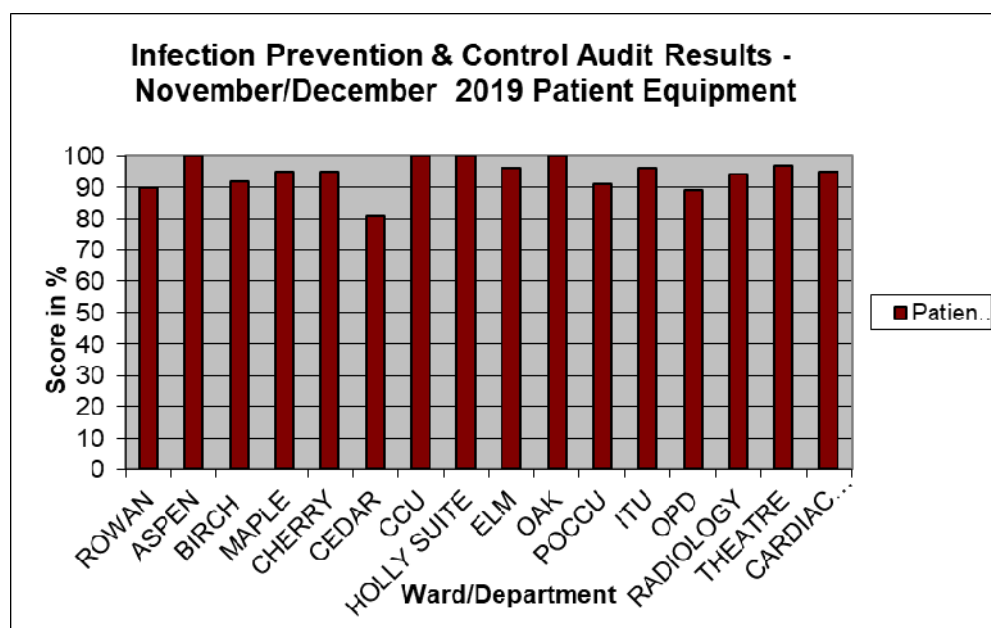
10. Waste



Common themes

- Waste bags not labelled
- Storage areas not locked

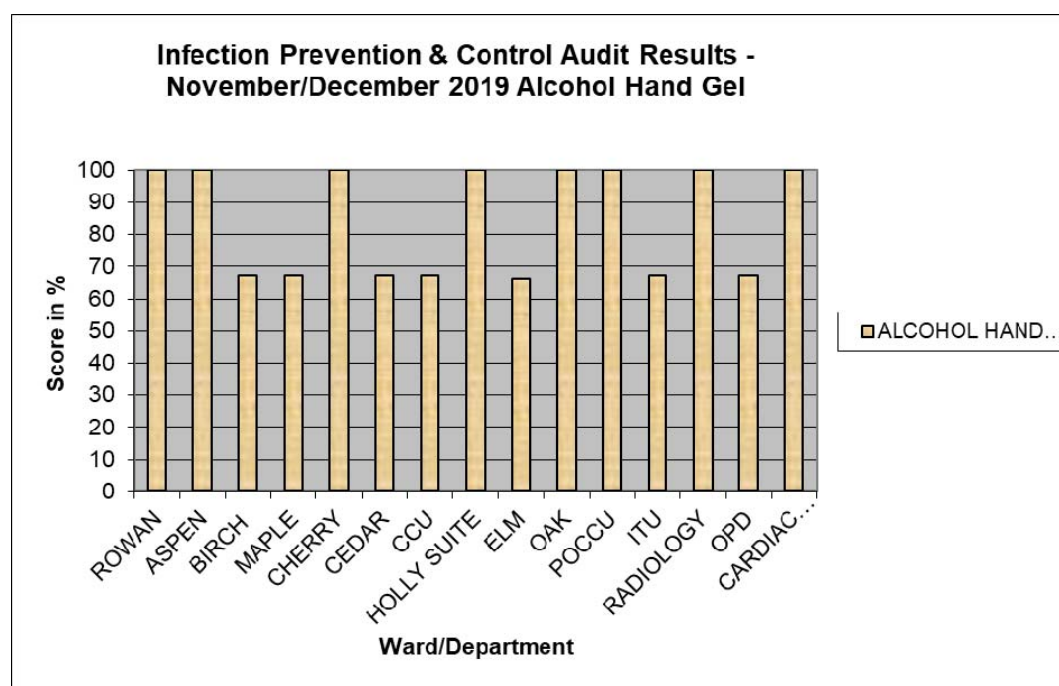
11. Patient Equipment



Common themes

- Items on resuscitation trolley are dusty
- EPR carts dusty
- Blood glucose monitoring is not equipment visibly clean
- Staff unable to describe the symbol used to indicate single use items

12. Alcohol gel



Common themes

- Alcohol based hand rub dispensers dirty
- Alcohol based hand rub bottles not available at point of care

