

Infection Prevention and Control Annual Report 2021/2022

Contents

- 1. Purpose**
 - Infection prevention and control staffing
 - Staffing structure
- 2. Organisms Subject to Mandatory Reporting**
 - Methicillin-resistant staphylococcus aureus (MRSA Bacteraemia)
 - Methicillin- sensitive staphylococcus aureus (MSSA Bacteraemia) (Hospital onset)
 - Clostridiodes difficile
 - E.coli bacteraemia
 - Klebsiella spp. bacteraemia
 - Pseudomonas aeruginosa bacteraemia
 - VRE bacteraemia
- 3. Surveillance of MRSA and Multiple 'Resistant' Gram Negative Organism Including Screening**
- 4. Investigation of Infection Prevention and Control Incidents and Outbreaks**
- 5. Management of Respiratory and Enteric Viral Infections**
- 6. Audit and Compliance to Policy**
 - Hand hygiene and care bundle compliance
 - Surgical site surveillance
 - Neurosurgical surveillance
 - Cardiac surgical site surveillance
- 7. Central Line Surveillance**
 - Date collection
 - Results
 - Recommendations
- 8. Wider Infection Prevention and Control Service**
 - Antimicrobial stewardship
 - Water safety
 - Specialist ventilation
 - Decontamination committee
 - Sepsis
- 9. COVID-19 Update and Board Assurance Framework (BAF)**
- 10. Recommendation**

1. Purpose

1.1 The Director of Infection Prevention and Control (DIPC) Annual Report reports on infection prevention and control activities within Great Ormond Street Hospital NHS Foundation Trust for April 2021 to March 2022. The publication of the IPC Annual Report is a requirement to demonstrate good governance, adherence to Trust values and public accountability.

1.2 A zero-tolerance approach continues to be taken by the Trust towards all avoidable Healthcare associated infections (HCAs).

1.3 The Infection Prevention Control Committee (IPCC) reports to Patient Safety Outcomes Committee (PSOC) which reports to the Trust Board

1.4 Committees reporting to the IPCC are:

- Genetically Modified Organism Safety Committee (GMOSC)
- Water Safety Group (WSG)
- Ventilation Safety Group
- Antimicrobial stewardship committee (AMS)

1.5 Regular reports to IPCC include:

- PHE

Infection Prevention and Control Staffing

1.6 Director of Infection Prevention and Control (DIPC):

Helen Dunn, Consultant Nurse IPC since May 2020- present

Executive lead for IPC:

The Chief Nurse is the Executive lead for IPC; supported for medical issues by the Deputy medical director. Alison Robertson took over this role in April 2018 and left in Sep 2021. Darren Darby was the interim Chief Nurse until Tracy Lockett joined as the Chief Nurse in February 2022. The DIPC meets bi-weekly with her. A highlight report of all acute significant IPC issues is presented weekly to the Safety Team.

1.7 The Infection Prevention and Control Team (IPCT) during 2020/21

Nursing and clinical scientist establishment:

- Consultant Nurse IPC & DIPC - Helen Dunn
- Deputy Lead Nurse in IP&C - Barbara Brekle
- Lead Practice Educator IP&C- Kate Harkus, on maternity leave from February 2022
- IPC Nurse – Helen Saraqi
- IPC Nurse- Alyson Prince (0.4 WTE), left in December 2021
- IPC Nurse- Anna-Lena Waldner- commenced in Nov 2021

- Principal Clinical Scientist in IPC & ICD-Elaine Cloutman-Green, role change in April 2021.
- Infectious Diseases CNSs lead on Tuberculosis control as required

Medical Staff:

- Dr John Hartley - Consultant Microbiologist, part time
- Dr Garth Dixon - Consultant Microbiologist: 1PA for IPC
- Dr James Soothill - Consultant Microbiologist: 1 PA for IPC
- Dr James Hatcher – Consultant Microbiologist Lead Clinician for the Department of Microbiology, Virology and Infection Control: 1 PA IPC
- Dr Surjo De- Consultant Microbiologist, started Feb 2022: 1 PA IPC
- Professor Judy Breuer – Consultant Virologist (advisory)

Working with:

- Dr Alasdair Bamford - Consultant in Infectious Diseases, lead for Antimicrobial Stewardship for most of year.
- Professor Nigel Klein – Professor of Infectious Diseases and Microbiology
- Dr Delane Shingadia – Consultant in Infectious Diseases
- Dr Louis Grandjean New consultant started June 2018
- Dr Karen Moshal – Consultant in Infectious Diseases

Antimicrobial stewardship (AMS) -

One WTE pharmacist

Paediatric infectious disease consultant AMS time – Chair of AMS committee

Antimicrobial Policy Group Chair - consultant microbiologist 1 PA (IPC time)

Consultants in microbiology and PID contribute.

Administrative support

Angela McGee Administrator IPC Team & Microbiology and Virology – 1 WTE, commenced Jan 2022

IPC Data management

This is a permanent role with support provided across the laboratory but with a focus on IPC activity and data.

1.8 Development of IPC Team

In recognition of the ever-growing demands for IPC services (including antimicrobial stewardship, expansion of services with PICB opening and work with Space & Place on new and existing developments as well as covid-19) the team has expanded. A fixed term one year post was made available this financial year to support the covid workload, which was recruited into in June 2021, that staff member left during the probation period and the role was refilled in November 2021. It was agreed that the split role between Space & Place (0.4 WTE in IPC) would sit fully back in IPC and this role was filled in Feb 2022 with the applicant starting in April 2022 making the team fully staffed.

1.9 Quality Improvement Team

Continues to provide invaluable central support for audit and surveillance data display.

1.10 Directorate Responsibility

Under the terms of the Trust IPC Strategy set out previously each Directorate developed a local Directorate group / structure to drive local planning and implementation of IPC actions.

1.11 The Directorate system started in Aug 2019. The trust now functions under 9 directorates:

- Body, Bones & Bones
- Brain
- Research & Innovation
- Blood, Cells & Cancer
- IPP
- Sight & Sound
- Operations & Images
- Heart & Lung
- Medicines, Tests and Therapies

1.12 Governance and reporting

The Infection Prevention and Control Committee (IPCC).

The Terms of Reference were updated in 2021

This committee is chaired by the DIPC and meets monthly 10 times a year. Regular reports are submitted to PSOC & Trust Board. IPCC continues to be held over zoom due to social distancing restrictions because of the COVID-19 pandemic.

Membership by role:

- Consultant Nurse Infection Control & Director of Infection Prevention and Control – currently the Chair
- Executive lead for infection control – currently the Chief Nurse
- Medical Director team (TBC)
- IPC Team
- Infection Control Doctor (Deputy DIPC)
- Consultant Microbiologist(s)
- Paediatric ID consultant
- Associate Director of Space & Place (or nominated representative)
- Head of Staff Health & Wellbeing (or representative)
- Representation from each clinical directorate (role not specified)
- Pharmacy/AMS
- Member of Risk team
- Representation from Academic Paediatric Infectious Diseases, ICH
- UK Health Security Agency (UKHSA) representative formerly Public Health England
- Additional members may be invited to attend the IPCC as appropriate.

Administrative support: provided by IPC Administrator

1.13 Trust wide risks identified/reviewed by the IPCC

The IPCC reviews all risks which relate to IPC across the trust. They ensure appropriate mitigations are in place by the clinical team. Within the last year the risks reviewed and recommended for action are below:

Risk	Actions/Mitigation
------	--------------------

<p>Increased acquisition of adenovirus on Robin and Fox ward</p>	<p>A business plan was submitted and approved in principle for the ongoing whole genome sequencing (WGS) of samples from patients to help determine if transmission is occurring. Screening of communal areas has been undertaken on a weekly basis by the IPC team since November 21 providing information on virus load in the general environment to the monthly monitoring meetings. This has already been demonstrated to support rapid IPC response and intervention reducing the risk whilst awaiting the appointment of a member of staff to undertake the WGS.</p>
<p>CJD- nonadherence to NICE guidance leading to surgical delays as currently we still use pre and post 97 guidance</p>	<p>Protein level recording post-surgical instrument cleaning has been introduced to support quality and auditing linked to NICE requirements. A process is currently being evaluated to determine the best method for maintaining moist surgical instruments pre cleaning to enable further NICE guidance compliance. Once this is established a transition to combining of Pre and Post 97 instrument set pools (in line with NICE guidance) will be undertaken. Until this point two instrument pools will be maintained to in order to control vCJD exposure risk.</p>
<p>Lack of authorised persons on site</p>	<p>Challenges remained throughout the year in providing assurance on status and planned preventative maintenance (PPM) for water and ventilation to the IPCC and the organisation. This was recognised by the Space & Place team and an improvement programme undertaken which has led to the recruitment of both these posts. Both AP posts are filled. Work continues to have an AP for ventilation employed by GOSH. Significant improvements have been made with regards to water management linked with the filling of this post.</p>
<p>Drainage in OBW</p>	<p>This risk relates to the drain flies in the OBW building. The risk was red but was reduced to amber during the year as it was controlled.</p>
<p>Legionella in RHILM</p>	<p>In March 2022 this risk was added following communications from UCLH that the water in this building had tested positive for legionella. Initial action plans included added filters to taps used for</p>

	hand hygiene within the building (no showers as an outpatient area) and treatment of the whole water system was planned and undertaken. Monitoring of the situation is being carried out by the Water Safety Group.
--	---

1.14 Work streams completed in the previous year included:

- First cohort of the paediatric IPC module run at Southbank University
- Mobilisation of the in-house cleaning contract
- Support and input with the design for the Children’s Cancer Centre (CCC) including decant and enabling works
- Update of the sepsis navigator within EPR
- All ongoing projects including audit days, mandatory reporting and covid response was maintained.

1.15 KPMG Infection Control Audit internal audit 2021-22

No internal audit was undertaken this year.

2. Organisms Subject to Mandatory Reporting

2.1 The following organisms are subject to mandatory reporting. These are MRSA & MSSA bloodstream infections, *Clostridioides difficile* and Gram-negative blood stream infections (*Escherichia coli*, *Klebsiella species*, *Pseudomonas aeruginosa*).

2.2 The table below shows numbers of bloodstream infections over the past twenty years

2.3 The following objectives were set for the year 2021/22:

- *C.diff* <7
- *E-coli* <8
- *Pseudomonas aeruginosa* <18
- *Klebsiella sp* <21

Year	E. coli					Klebsiella				MRSA				MSSA				P. aeruginosa					Total
	Total	CAI	HA I	N/C	PP	Total	C AI	H AI	N/C	Total	C AI	H AI	N/C	Total	C AI	H AI	N/C	Total	C AI	H AI	N/C	P	
00/01	32	0	0	32	0	30	0	0	30	6	0	0	6	49	0	0	49	24	0	0	24	0	141
01/02	35	0	0	35	0	35	0	0	35	6	0	0	6	48	0	0	48	20	0	0	20	0	144
02/03	33	0	0	33	0	58	0	0	58	11	0	0	11	55	0	0	55	15	0	0	15	0	172
03/04	29	0	0	29	0	47	0	0	47	4	0	0	4	46	0	0	46	19	0	0	19	0	145
04/05	21	0	0	21	0	44	0	0	44	3	0	0	3	42	0	0	42	24	0	0	24	0	134
05/06	26	0	0	26	0	47	0	0	47	5	0	0	5	49	0	0	49	26	0	0	26	0	153
06/07	46	0	0	46	0	43	0	0	43	4	0	0	4	41	0	0	41	18	0	0	18	0	152
07/08	21	0	0	21	0	33	0	0	33	2	0	0	2	31	0	0	31	19	0	0	19	0	106
08/09	29	0	0	29	0	24	0	0	24	7	0	0	7	29	0	0	29	13	0	0	13	0	102
09/10	19	0	0	19	0	33	0	0	33	1	0	0	1	26	0	0	26	9	0	0	9	0	88
10/11	29	0	0	29	0	24	0	0	24	4	0	0	4	32	0	0	32	14	0	0	14	0	103
11/12	19	0	0	19	0	33	0	0	33	5	0	0	5	18	0	0	18	8	0	0	8	0	83

12/13	19	0	0	19	0	26	0	0	26	4	0	0	4	30	0	0	30	14	0	0	14	0	93
13/14	23	0	0	23	0	23	0	0	23	1	0	0	1	31	0	0	31	11	0	0	11	0	89
14/15	18	0	0	18	0	15	0	0	15	0	0	0	0	25	0	0	25	9	0	0	9	0	67
15/16	17	0	0	17	0	18	0	0	18	2	0	0	2	23	0	0	23	9	0	0	9	0	69
16/17	21	0	0	21	0	20	0	0	20	3	0	0	3	33	0	0	33	13	0	0	13	0	90
17/18	18	0	0	18	0	18	0	0	18	3	0	0	3	20	0	0	20	13	0	0	13	0	72
18/19	21	0	0	21	0	19	0	0	19	2	0	0	2	28	0	0	28	16	0	0	16	0	86
19/20	13	3	7	2	1	28	1	15	0	1	1	0	0	23	9	13	1	20	1	9	1	0	85
20/21	19	5	14	0	0	14	4	10	0	2	1	1	0	20	1	9	0	14	6	8	0	0	69
21/22	8	3	5	0	0	16	5	11	0	1	0	1	0	19	6	13	0	14	5	8	0	1	58
Grand Total	516	11	26	47	1	648	2	36	590	77	2	2	73	718	6	35	65	342	2	25	29	5	230

Methicillin-resistant Staphylococcus aureus (MRSA Bacteraemia)

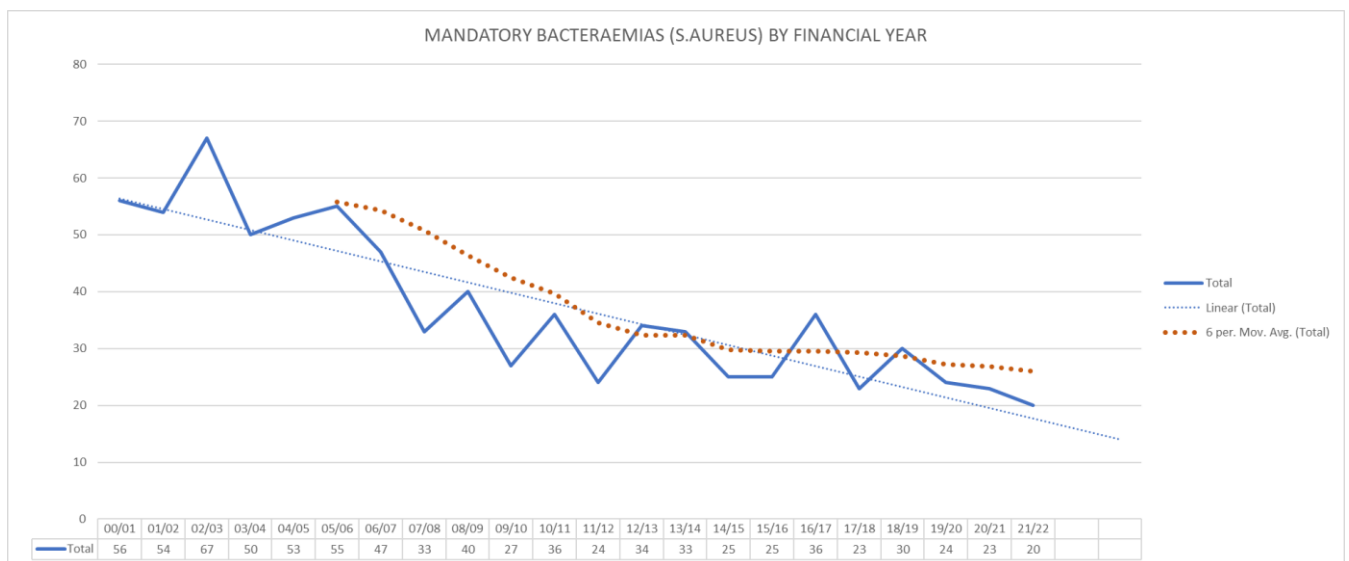
2.4 In 2021/22 financial year 1 child had an MRSA bacteraemia. This was Trust attributable. A full RCA was conducted into the case. The RCA concluded that the child was known to be colonised from the local hospital by the ward, but this was not communicated to the IPC team. There were also improvements that could have been made around the care and documentation of the neck site (insertion).

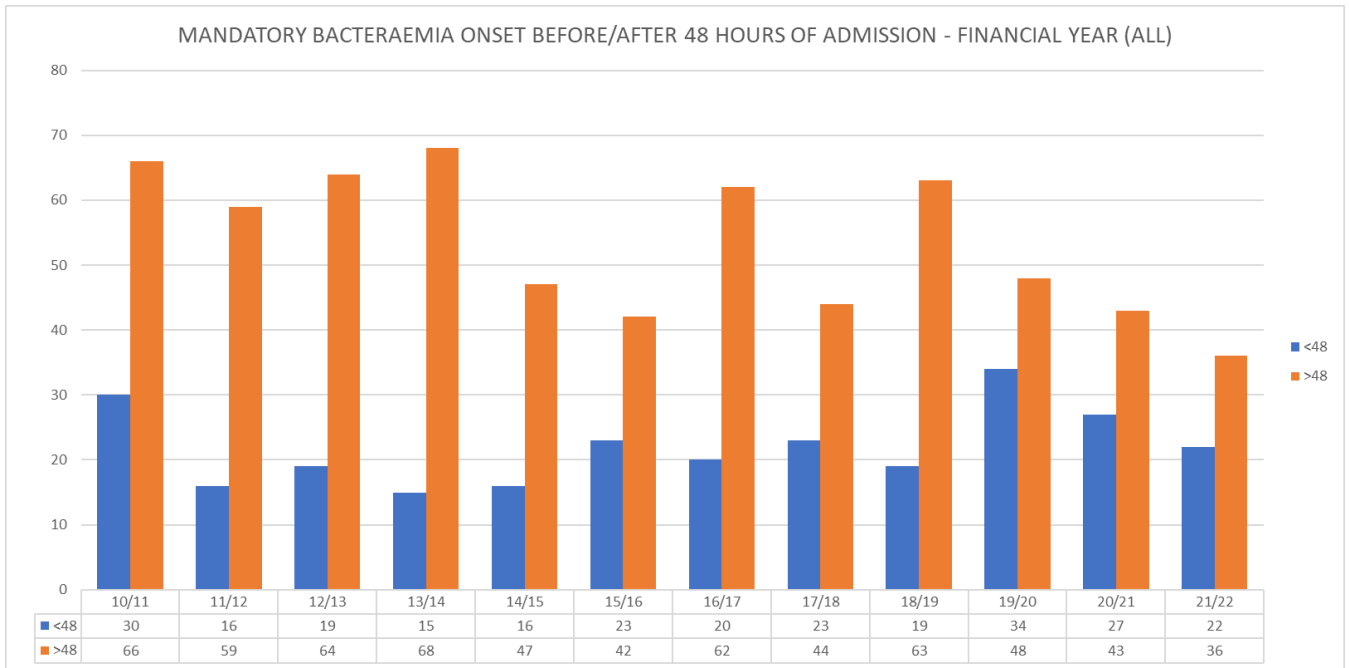
Methicillin- sensitive Staphylococcus aureus (MSSA Bacteraemia) (Hospital onset)

2.5 In 2021/22 financial year 19 children had an MSSA bacteraemia, 13 were Trust attributable.

Analysis of all S. aureus bacteraemias

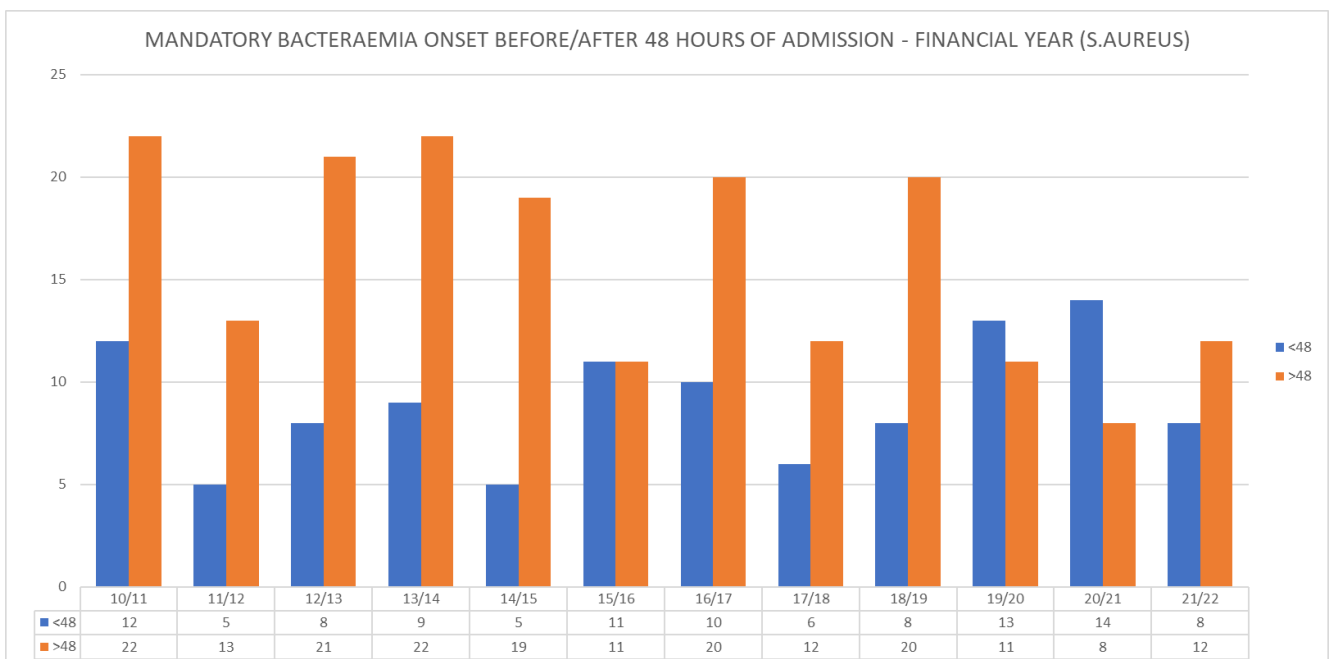
2.6 The following graphs showing number of S. aureus bacteraemias (all and MRSA alone) by financial year. These graphs demonstrate a downward trend over the years but do demonstrate some normal variance across the small numbers.





Root cause analysis of all S. aureus bacteraemias (MRSA and MSSA)

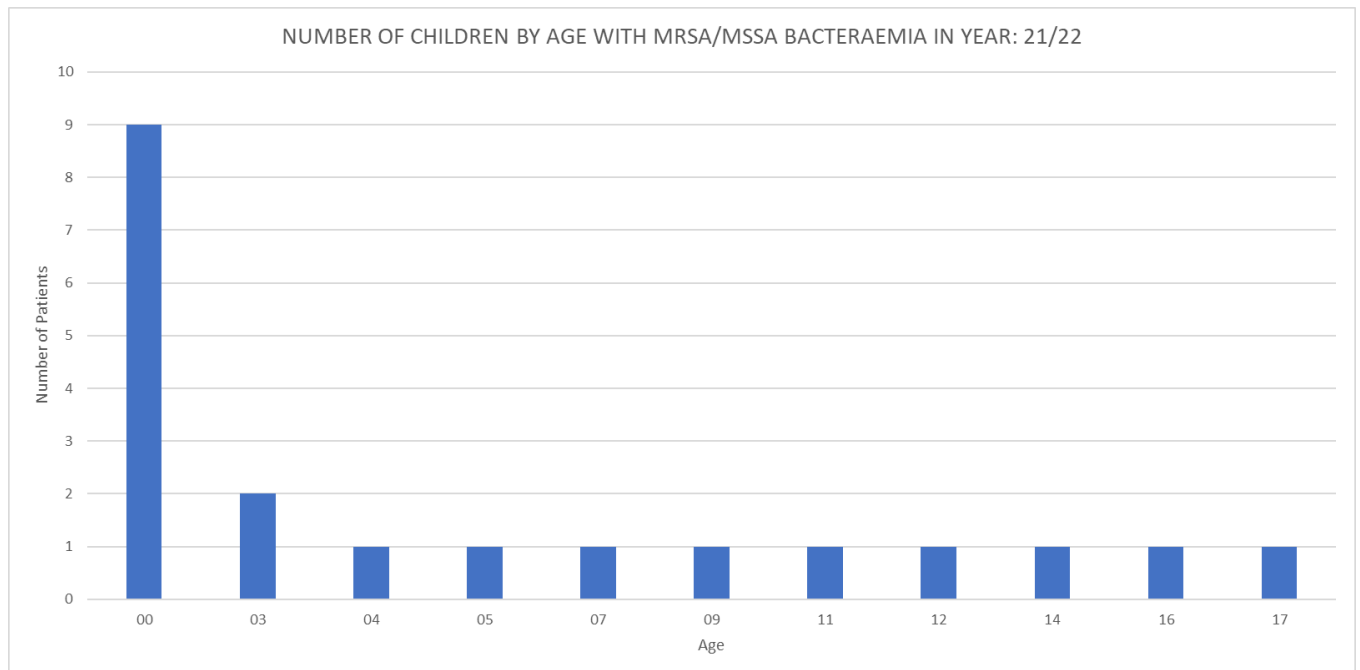
All S. aureus bacteraemias are reviewed by IPC team and full or mini-RCAs requested for all S. aureus bacteraemias developing after 48 hours of admission and not incubating before admission and those occurring in prior GOSH patients.



2.7 RCA completion by clinical teams was not complete for the year, however clinical review was undertaken by IPC team and identifies some themes. These themes include the lack of a

documented pre-operative wash, lack of documentation within Epic and the care and maintenance of the lines and lack of adherence to protocols including not using biopatch.

2.8 Previous years data showed the highest proportion of children with MRSA/MSSA bacteraemia coming from <1 year olds. Whilst this is still true there is a much more even distribution over the age groups for this financial year. This may be due to a change in population because of the COVID-19 pandemic.



Clostridiodes difficile

2.9 In line with previous agreement with NHS England, while we test extensively for toxigenic C difficile colonisation and infection, we continue to report all children aged 2 and over who have C difficile toxin in the faeces and diarrhoea with no other cause, or other possible cause but treated. The table below shows testing and reporting over the past 4 years.

	18/19	19/20	20/21	21/22
C. difficile 1 st toxin new detections ALL ages and any duration of admission	57	47	48	47
CDI notified on HCAI website (total numbers)	7	7	13	8
Number 'trust apportioned cases' (aged above 1 year and in for > 3 days when tested and reported as possible CDI on HCAI site)	7	2	10	5
Objective (number below which we aim to keep apportioned cases.	14	5	5	7

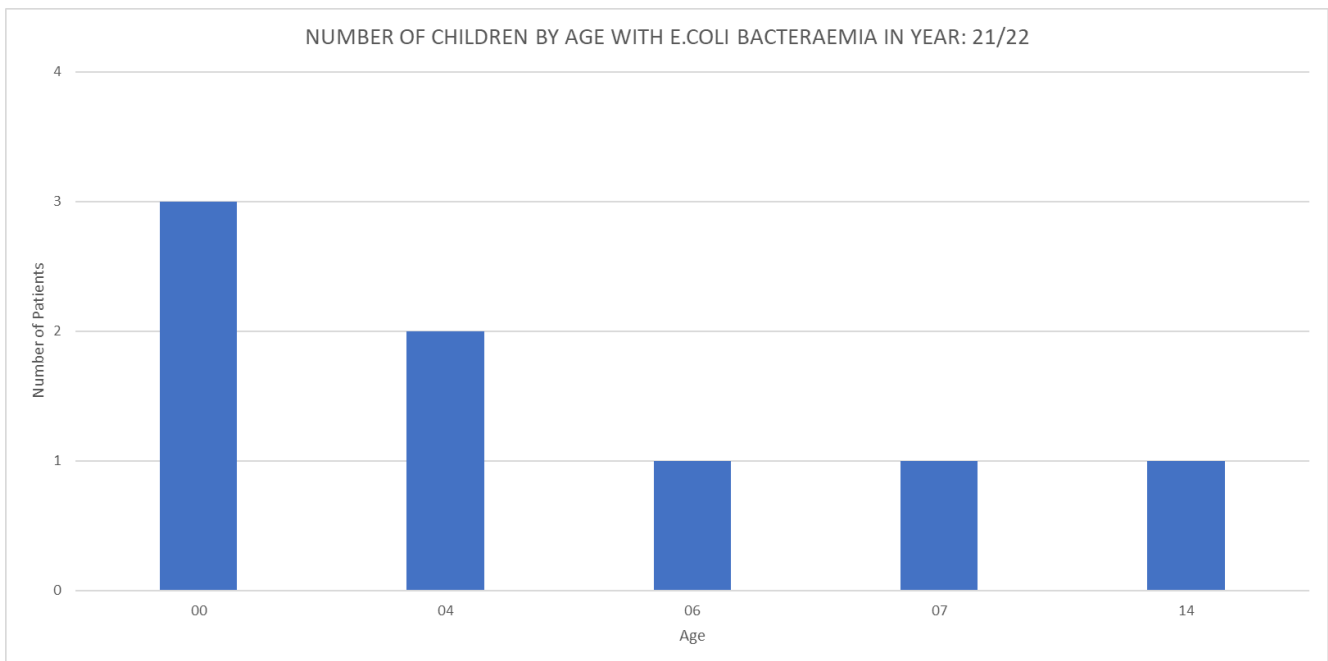
Possible lapse in care	0	0	0	0
------------------------	---	---	---	---

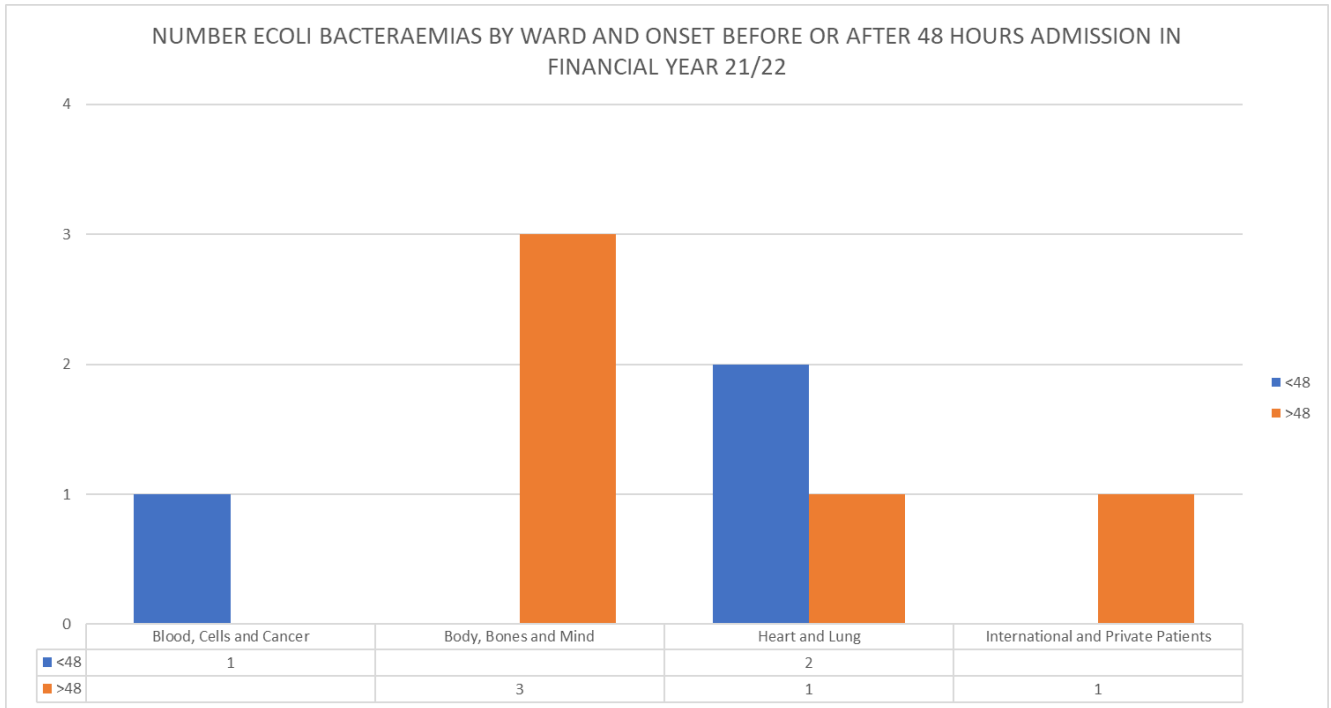
2.10 Analysis of every case is undertaken to assess the likelihood of true disease, and any avoidable risk factors or lapses in control measures.

The number of cases reported in 21/22 was more in line with previous years excluding 20/21 when there were a number of children from UCLH cancer services housed within GOSH as a result of the pandemic. There were no obvious clusters detected in the year 21/22. Of the eight cases, three were observed to be post transplant (two heart and one kidney), no obvious ward clustering was observed.

2.11 E.coli bacteraemia

The number of children with E-coli bacteraemia reported dropped in 21/22 to 8 with 5 of these being hospital acquired. This is substantially lower rate of both overall infections and hospital acquired infections than in previous years. Last year most cases had clustered in under ones and within the Body, Bones and Mind directorate but this year there is a much more even distribution.

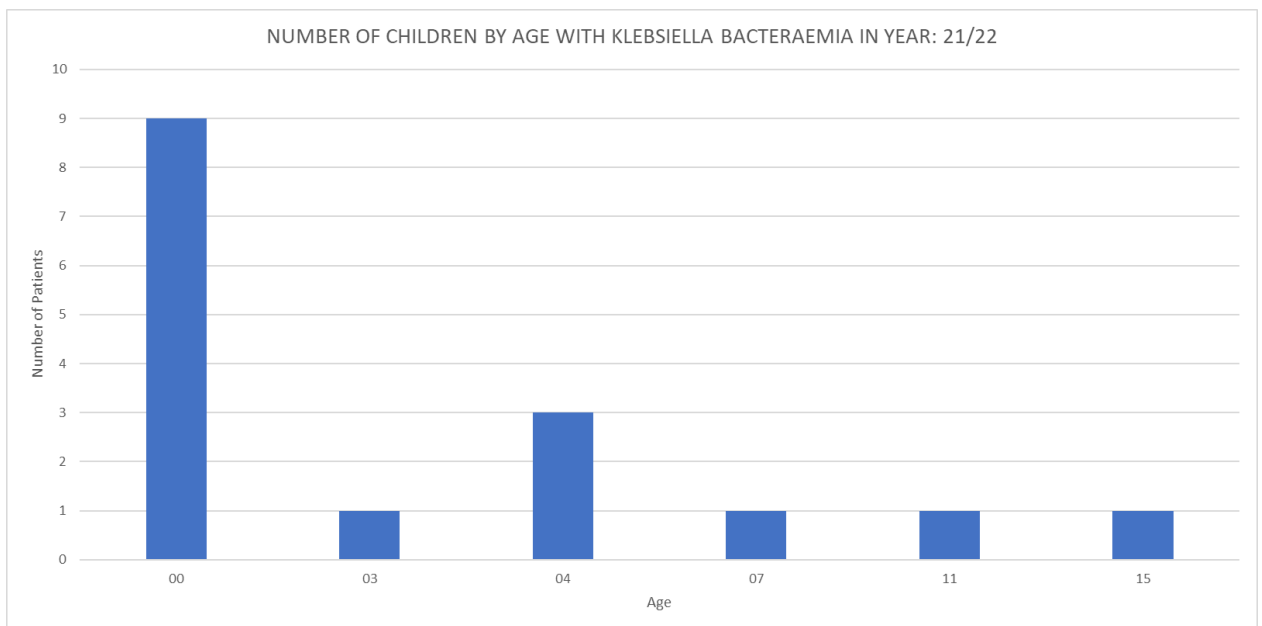


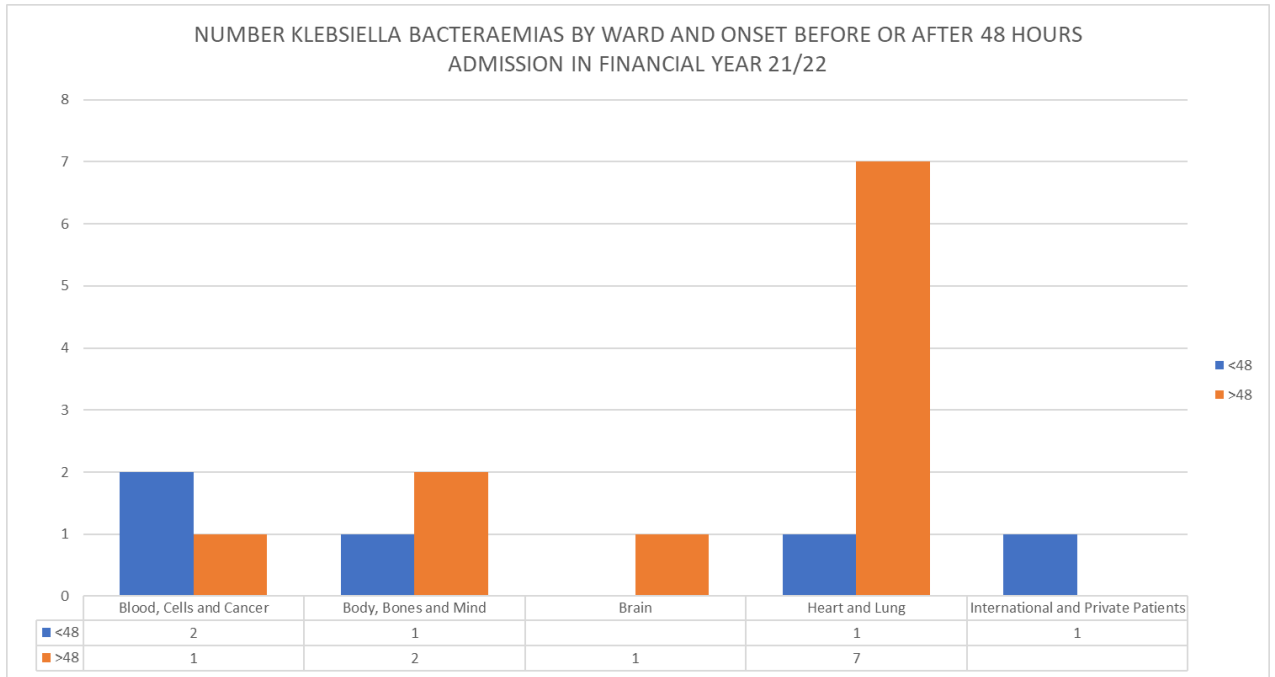


Klebsiella spp. Bacteraemia

2.12 The number of klebsiella sp. Bacteraemia slightly increased from 12 to 16 in the year 2021/22.

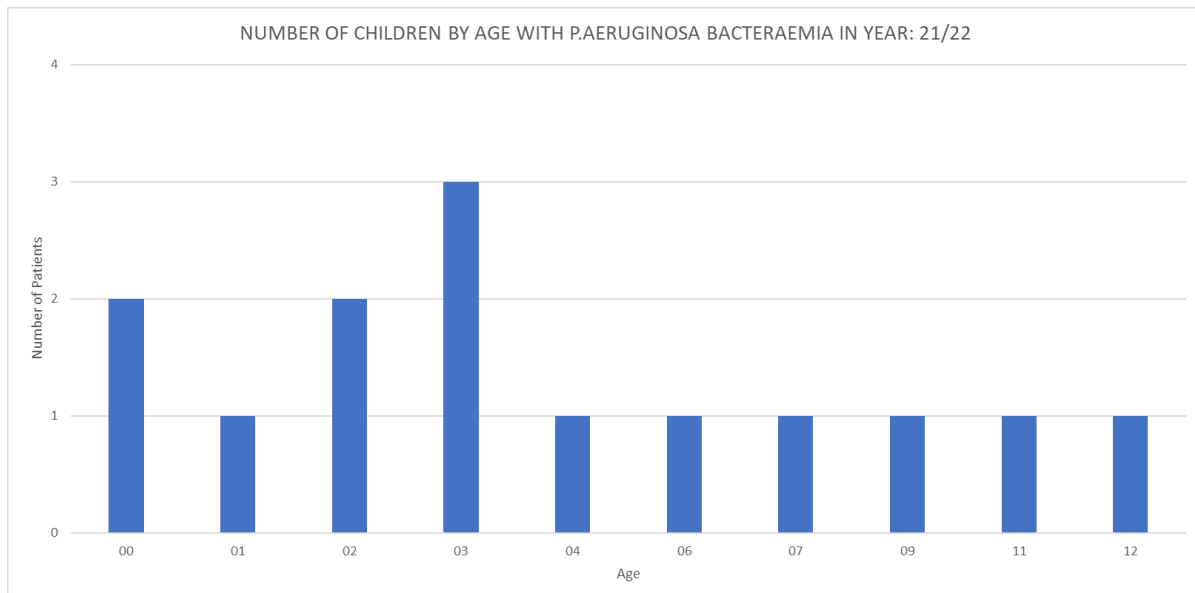
2.13 Cases of Klebsiella sp are displayed in the graph below. The majority of all cases occurred within the Heart and Lung directorate where the Intensive Care Units sit. The reason for this cluster is unclear but focused RCA tools are currently in development. The majority of the cases were also in children under the age of one.

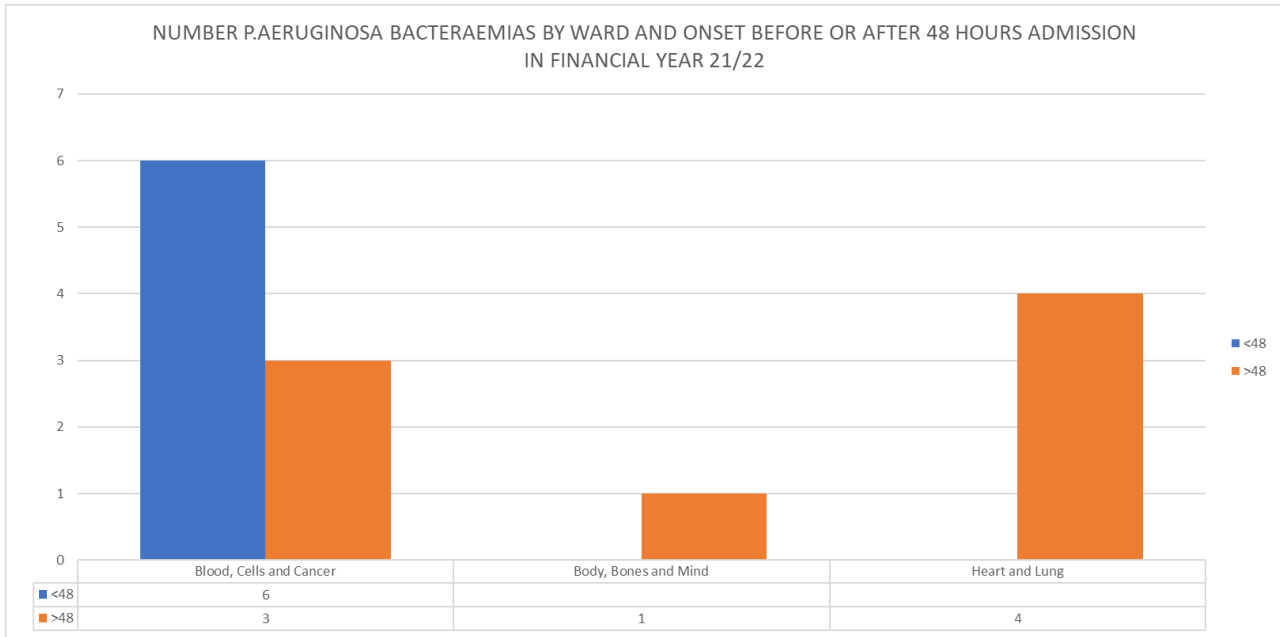




Pseudomonas aeruginosa bacteraemia

2.14 *Pseudomonas aeruginosa* age ranges are displayed below with hospital locations below. It is observed that age ranges are spread more evenly with a higher proportion of these cases in Blood, cells and cancer unlike the other gram-negative organisms reported through mandatory surveillance.





Mandatory Surveillance of Glycopeptide Resistant Enterococcal bacteraemia (GRE) 2020/21

2.15 The number of children experiencing VRE bacteraemias remains largely unchanged*

*Figures differ slightly from previous Annual reports due to change in methodology in counting (Moved to automation from manual review). Large Number of samples from 17/18 attributed largely to 1 patient and repeated infections.

Year	Samples	Patients
21/22	4	4
20/21	8	3
19/20	8	5
18/19	14	4
17/18	6	3
16/17	2	2
15/16	2	2
14/15	2	2
12/13	5	5
11/12	5	5
10/11	1	1
08/09	2	2
07/08	1	1
06/07	6	6
05/06	5	3
04/05	2	2
03/04	2	2
02/03	5	5
01/02	5	5
00/01	1	1

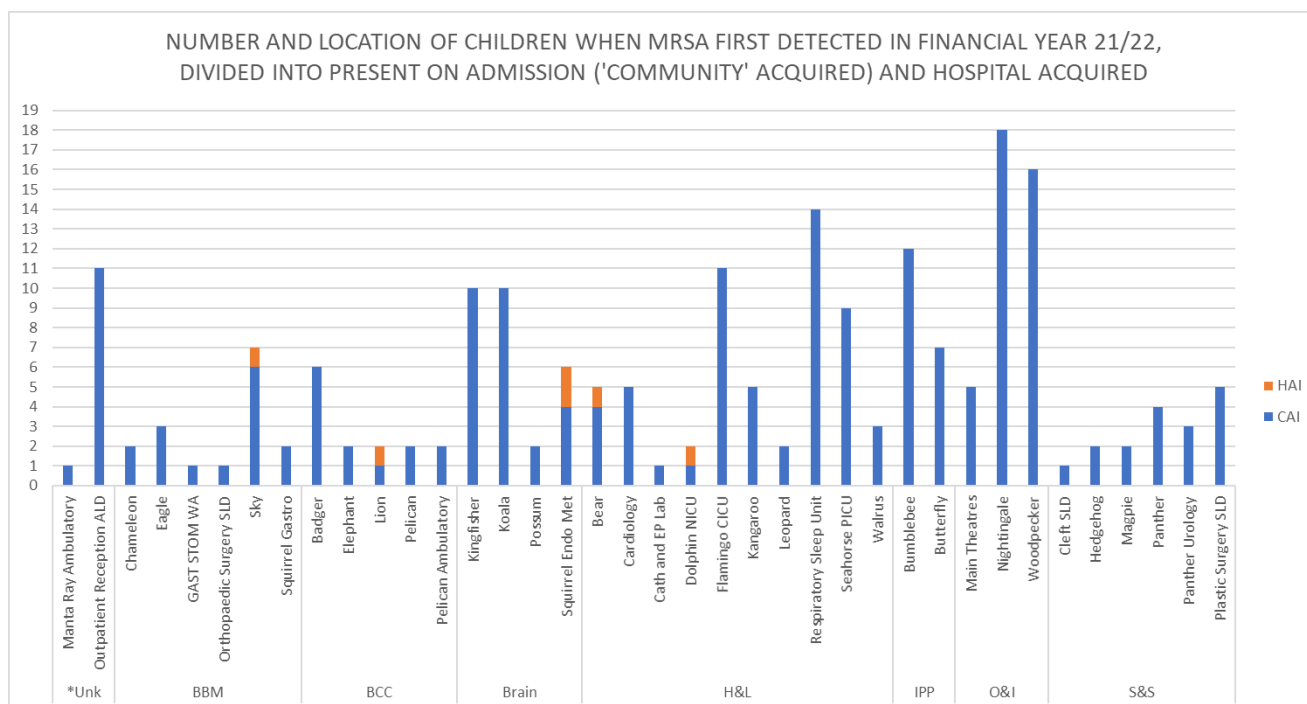
3. Screening for MRSA and Multiple 'Resistant' Gram Negative Organisms

MRSA colonisation by financial year:

3.1 All patients are screened on admission or prior to admission at Great Ormond Street Hospital. Details of newly detected MRSA carriage is shown in the table below.

	CAI	HAI	N/C	UNK	Grand Total
10/11	125	13	1	0	139
11/12	145	7	1	1	154
12/13	116	5	3	0	124
13/14	147	15	0	0	162
14/15	150	7	0	1	158
15/16	163	23	1	2	189
16/17	209	16	1	4	230
17/18	197	9	1	3	210
18/19	200	23	1	3	227
19/20	204	16	0	5	225
20/21	154	10	0	1	165
21/22	195	5	0	0	200
Grand Total	2005	149	9	20	2183

3.2 The table below shows the ward location of where both community and hospital first detections were isolated.



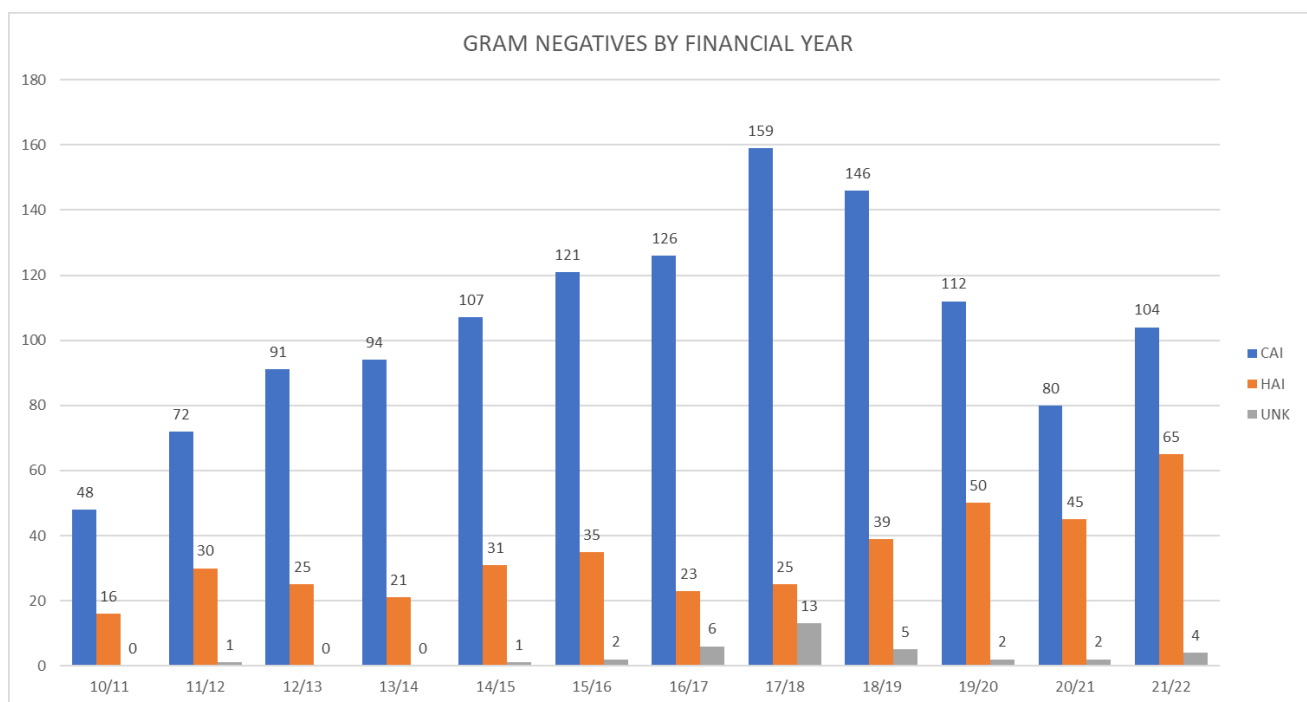
3.3 Every apparent GOSH acquired case is investigated. Long term colonised patients are always present and represent ongoing risk.

3.4 In previous years there has been a disproportionately high rate of carriage in IPP where the unique situation of parents and families probably leads to higher transmission. During 19/20 an outbreak on MRSA colonisation was noted in the cardiac services.

3.5 Five HAI cases were detected in the year 2020/21. These were all investigated by the IPC team and no source was identified. There were no outbreaks of MRSA reported this year.

Multiple resistant 'gram negative' organisms, including transmissible carbapenemase producing organisms

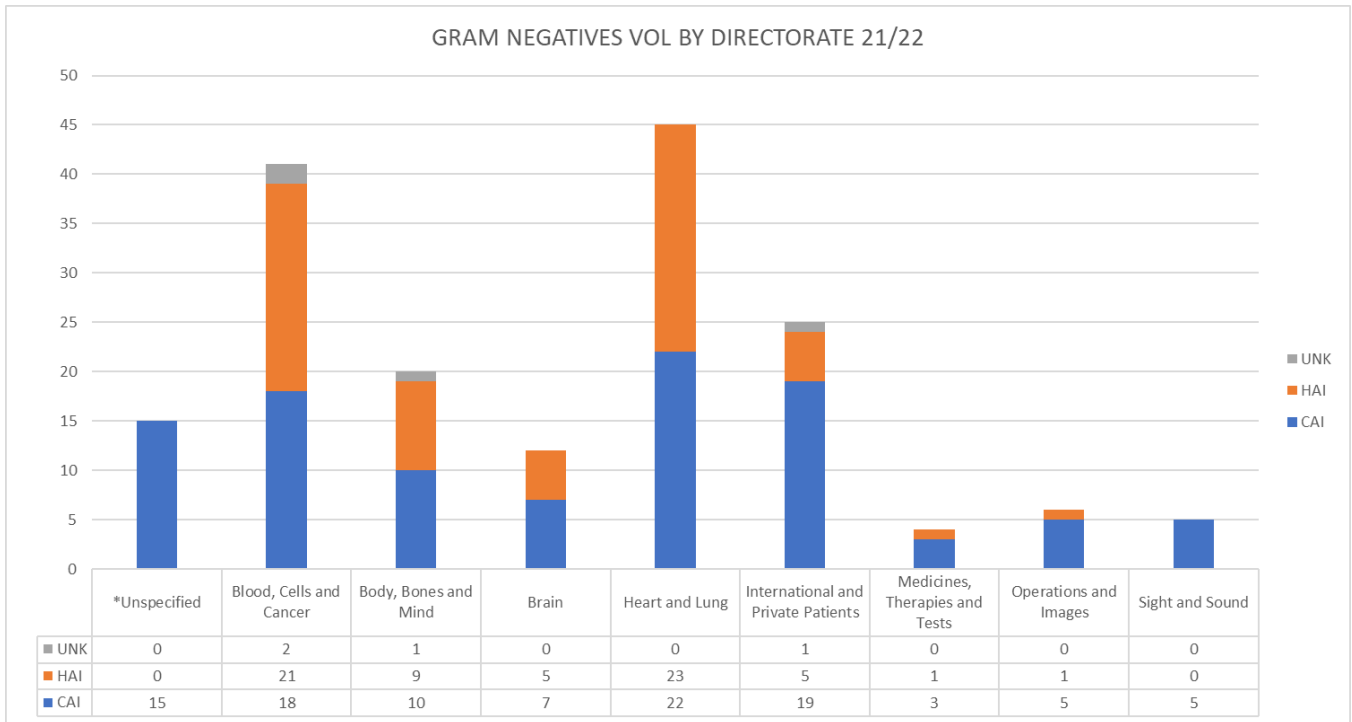
3.6 All patients should have a stool sample sent for screening for resistant gram-negative organisms on admission. The chart below shows the number of children with newly detected colonisation with multidrug resistant gram-negative organisms (as defined in GOSH Admission screening policy) by financial year.



CAI = those colonised on admission
HAI = those acquiring colonisation in hospital

3.7 This high level is due to the continuing national and international increase in antimicrobial resistant organisms but was also due to cross infection. In addition, stool screening compliance figures are not as high as we would like them to be, meaning children may be allocated as HAI when they arrived with the resistant organism or there may be cases of cross-infection which go unnoticed due to transmission-based precautions not being implemented.

3.8 The chart below shows the location of children when first detected as colonised with multidrug resistant gram-negative organisms in financial year 2021-22. Investigations of HAI gram-negatives are conducted by the IPC team but routine typing of these organisms does not take place therefore identifying sources can be more complex. This is made even more difficult if not every child admitted has a stool sample sent as cases of unknown risk may then be present.



3.9 Potential acquisitions occur throughout the year and not all isolates can be investigated through detailed typing, so complete analysis of source is not possible. Where the initial epidemiological analysis strongly suggests cross infection further typing is undertaken if an outbreak is suspected.

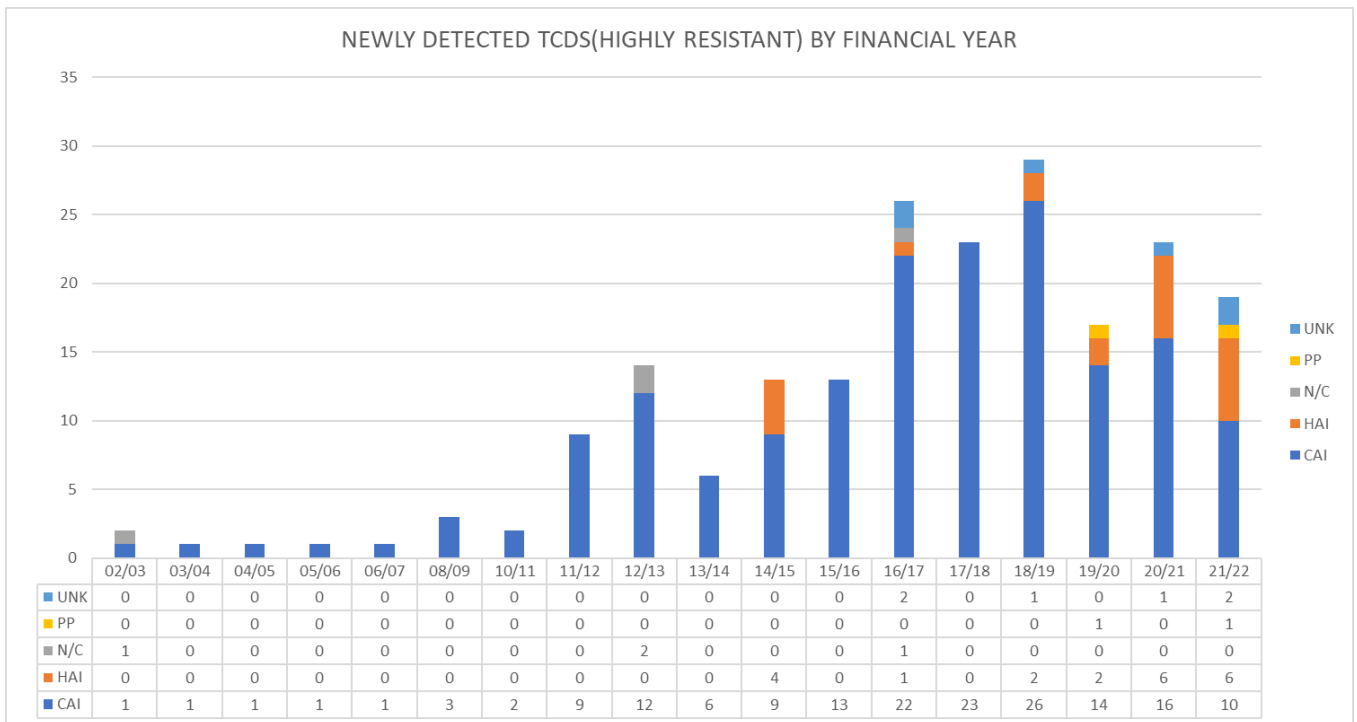
3.10 The organisation is stretched in its ability to apply controls mechanisms without adverse impact on other aspects of care provision; however, we feel it is essential to continue to do so.

Carbapenemase resistant gram negatives

3.11 The transmissible carbapenemase resistance determinants (TCDs; blaNDM, KPC, oxa48, VIM and IMI especially) represents the most serious threat to treatment yet. Organisms carrying this mechanism may become truly untreatable. They are becoming more prevalent in various countries and regions within UK and have been responsible for major outbreaks. We routinely screen for carriage and implement strict control mechanisms when found. There had been an increase in detection of children colonised with TCDs. Rates now appear to have stabilised with 18 detected in the year 2021/22 compared to 21 in 2020/21. We have however seen a rise in the proportion of these cases which are HAI in the past three years.

3.12 Organisms are detected during routine screening and clinical samples.

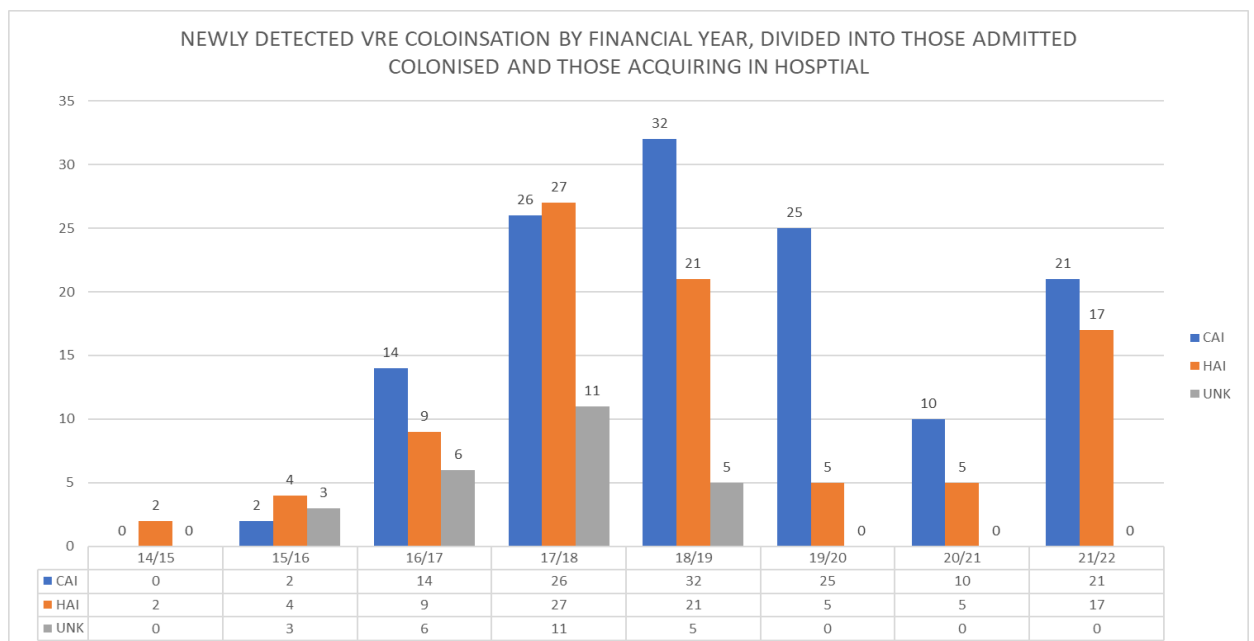
3.13 Bar chart showing the number of children newly detected as colonised with significant **transmissible carbapenemase carrying organisms**



3.14 The majority of cases found are detected on admission. The larger number of hospital acquired cases in 14/15 relates to an outbreak within Blood, Cells and Cancer. Lack of compliance with stool screening means that there may be cases which we do not know about which are a risk to the trust. Where suspected clusters are identified then typing is requested. To date this typing has not shown any TCDs of the same mechanism to be related but this does not rule out cross-transmission.

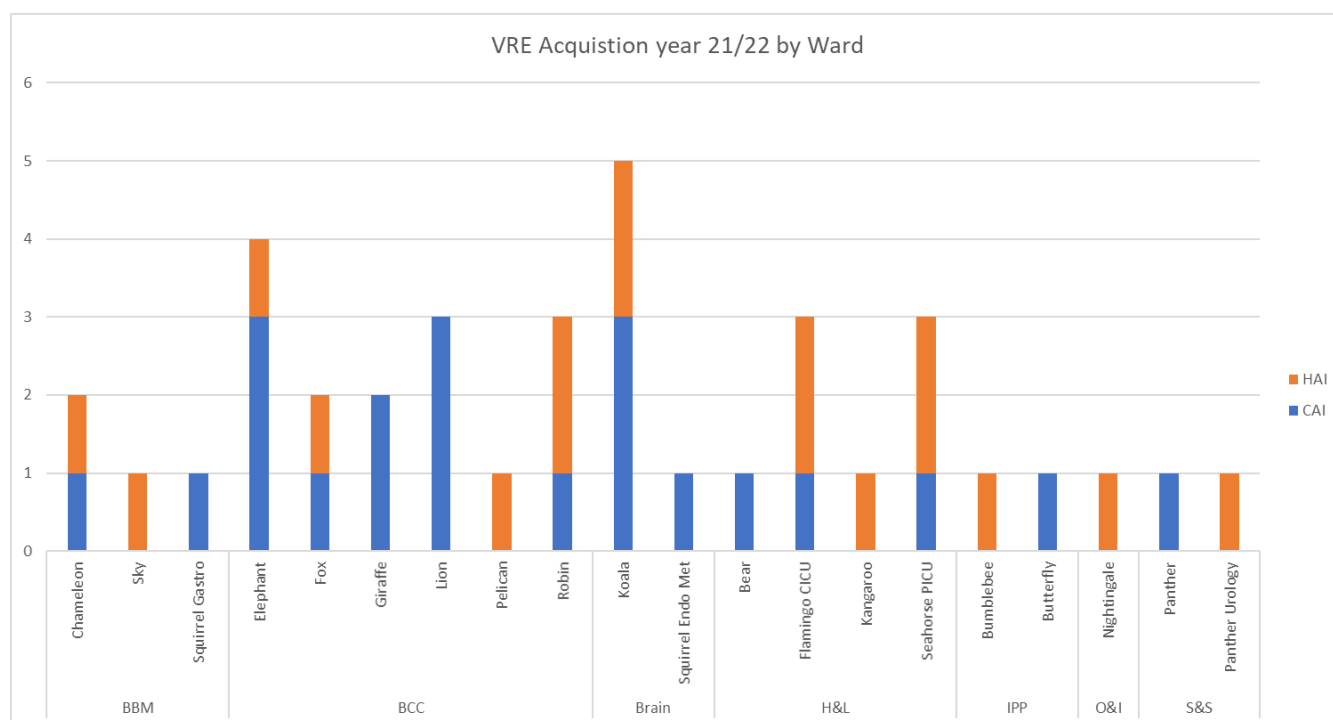
Vancomycin resistant enterococci (VRE)

3.15 VRE colonisation, community and hospital acquired, is shown below. Children may be found in most clinical services.



3.16 As a result of the increase in cross transmission detected in 2017-18, we have increased terminal cleaning after room occupancy and, combined with actions on general cleaning, we hoped to reduce transmission. A small but sustained reduction was seen in hospital acquired cases. This reduction was not sustained in 2021/22 and a rise in both CAI and HAI cases of VRE was noted suggesting that current control measures were not sufficient.

3.17 The graph below shows community and hospital acquisitions for 21/22. In the latter part of the financial year a cluster of HAI cases were noted within BCC which have been declared as an outbreak in April 2022.



Screening compliance for multiple 'resistant' gram-negative organisms

3.18 Routine admission faecal surveillance is performed to allow:

- instigation of isolation procedures in patients who are colonised with multiple antibiotic resistant organisms, including transmissible carbapenemase resistance ('ALERT' organisms as defined in the Admission screening policy) and
- to guide individual antibiotic choice of empirical treatment of serious sepsis.

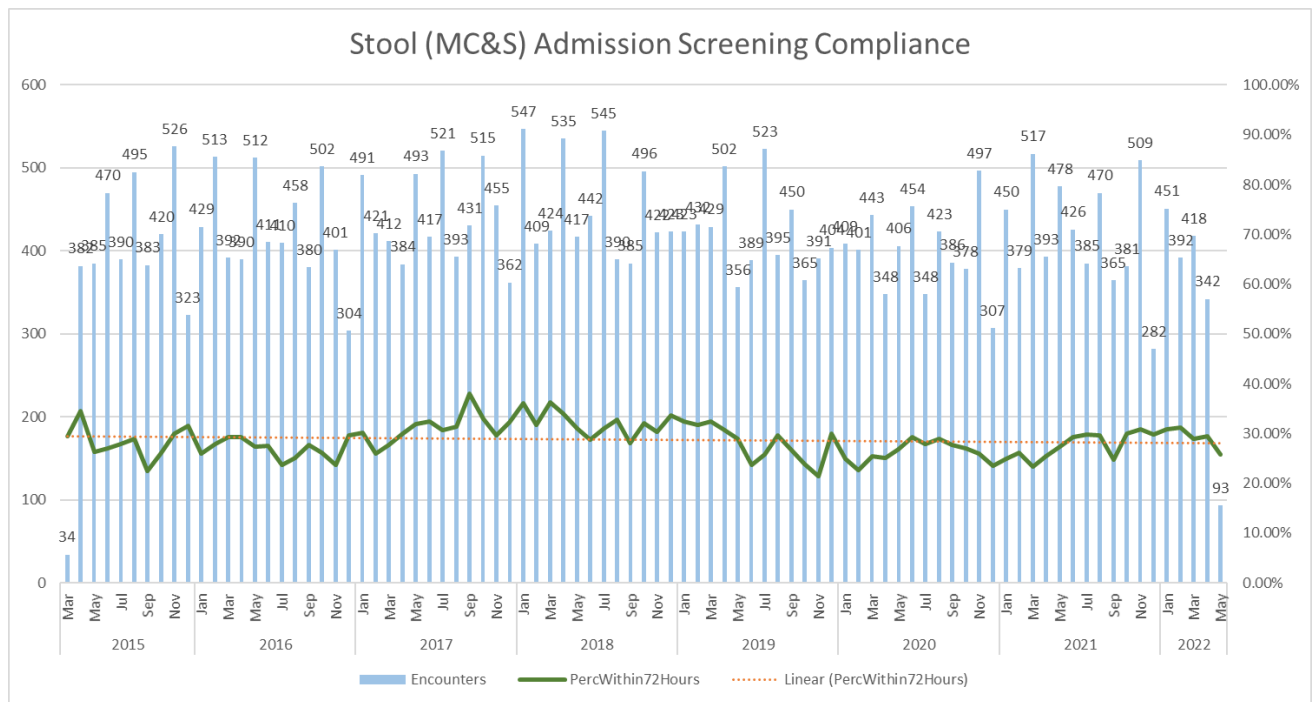
We also detect colonised or infected children during processing of clinical samples and as part of routine stool screening on admission and after 30 days as an inpatient. In 19/20 weekly faecal screening of high-risk inpatients (immunology and bone marrow transplant) was moved in line with the rest of the trust and is now undertaken every 30 days.

3.19 Screening/testing shows a maintained number of colonised children detected on admission and an increase in those acquired in hospital.

3.20 Reporting definitions have been generated and approved at the IPCC during the year 2020/21 for stool screening. Any child who is admitted for greater than 72hrs who has not had a stool sample

will show as non-compliant with the screening programme. Previous stool screening compliance had been showing data for children admitted after 24hrs. In the IPCC we discussed that stool samples were not always available in the first 24hrs therefore created the definition of 72hrs to allow time for samples to be collected.

3.21 Further work continues with the teams to look at how compliance can be improved. This year we have seen the introduction of alerts and flags on Epic to highlight to staff and further updates are planned for rescreening at 30 days in the coming year.

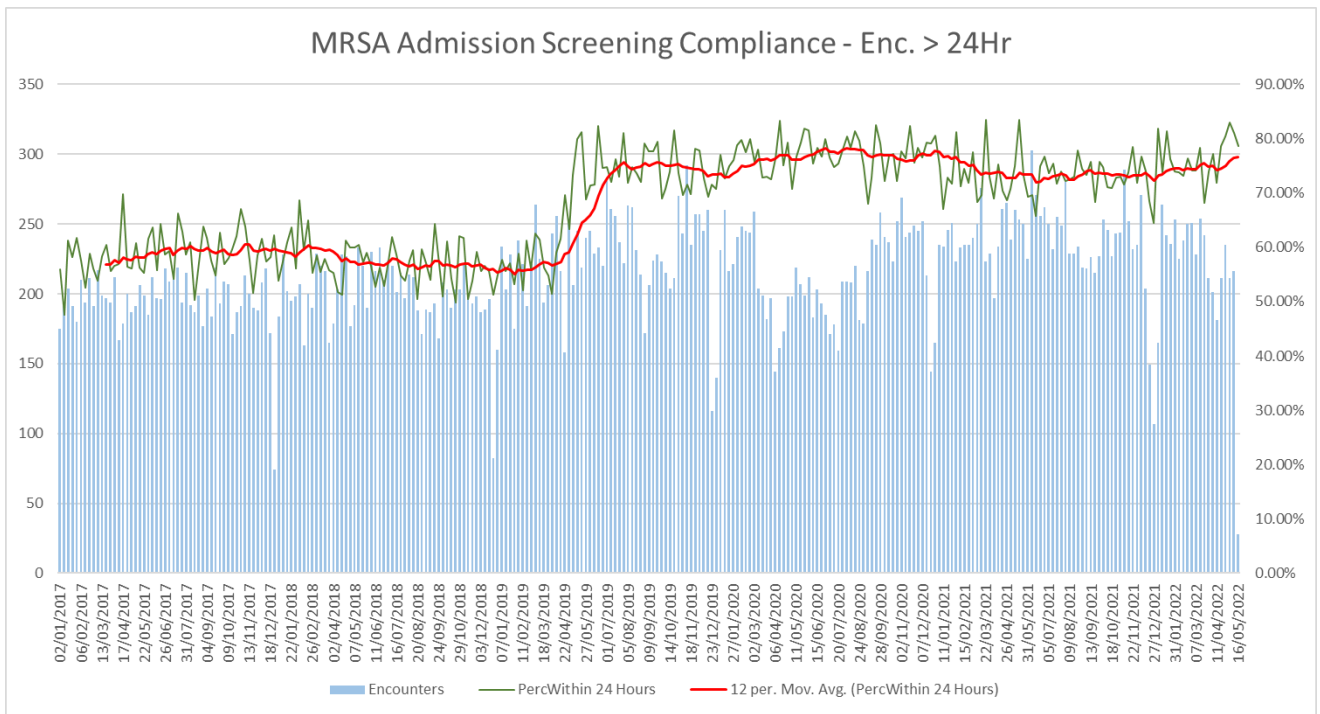


Screening compliance for MRSA

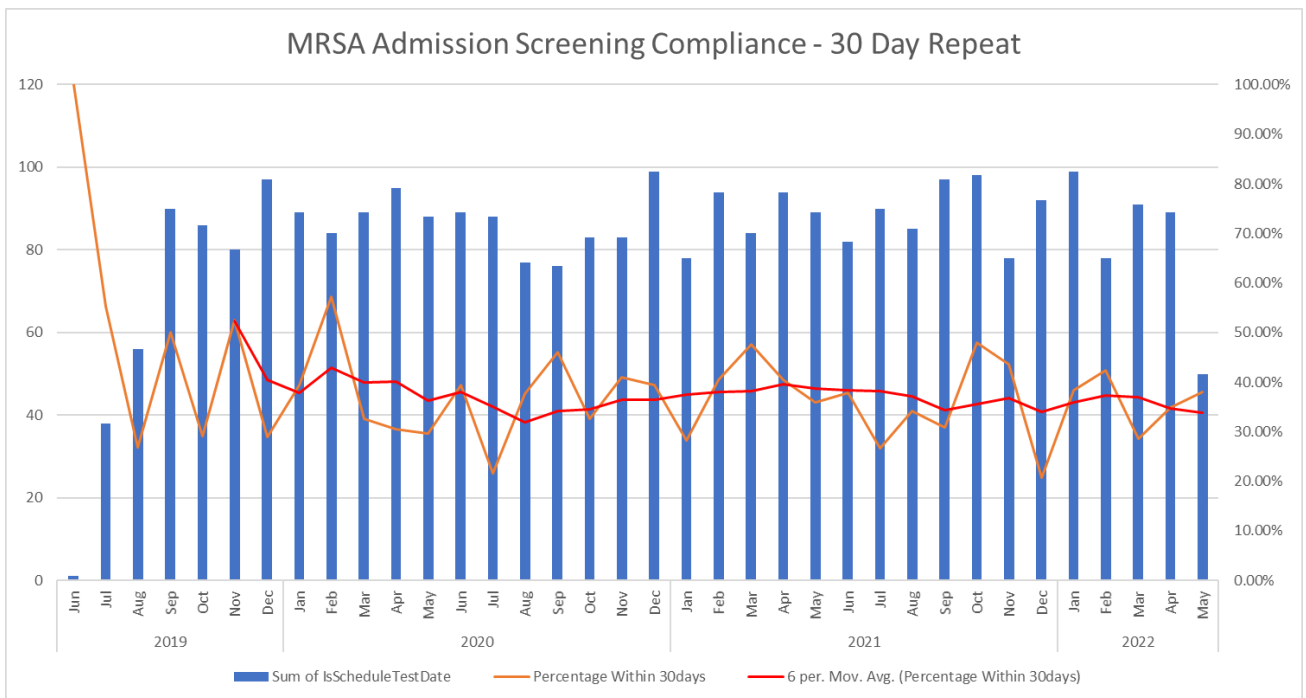
3.22 The Trust MRSA screening policy is universal admission screening (in the 30 days prior to admission (or sooner if admitted elsewhere in those 30 days) or within 24 hours of admission). We aim to achieve > 80% for all admissions, and near to 100% for the ICUs (except some situations it is not appropriate, so > 95% target).

3.23 Wards are provided continuous feedback on completion of screening through the Infection Control Screening Compliance Report located on the Nursing Care Quality Dashboard (which wards monitor daily). In addition, patient alerts and flags are now also present on epic to highlight to staff if admission screens are missing. Further work is underway to introduce the 30-day re-screen as a function on Epic. A ward manager compliance dashboard is also in development to replace the report within the Nursing Care Quality Dashboard.

3.24 The graph below shows compliance with MRSA screening over time. It is important to note that at times of reduced admissions screening compliance was highest.



3.25 The graph below highlights the reduced compliance with the 30-day repeat rescreening for long stay patients. This has been highlighted to directorates at the IPCC and work is underway to create alerts and flags similar to those that have been introduced for the admission screens.



4. Investigation of Infection prevention and control incidents and outbreaks

4.1 Serious Incidents: There were no SI's related to IPC in 21/22.

4.2 Major outbreaks: The table below shows the outbreaks and incidents the IPC team co-ordinated at GOSH or were involved in nationally over the year.

Date	Organism and issue	Ward/ Department	Outcome
Dec 2021	COVID-19 staff outbreak	Anaesthetics	Managed internally
Jan 2022	COVID- 19 Inpatient unit outbreak	Mildred Creak Unit (Mental Health)	Reported externally

4.3 In addition to the above mentioned outbreaks, the IPC team managed the response to patient safety alert regarding the 'Infection risk when using FFP3 respirators with valves or Powered Air Purifying Respirators (PAPRs) during surgical and invasive procedures' (NatPSA/2021/009/NHSPS).

4.4 There were also no wards closed or on restricted admission due to enteric and respiratory viruses.

5. Management of Respiratory and Enteric Viral Infections

Surveillance of Respiratory virus infection

5.1 Respiratory viruses are common in children and often asymptomatic or only causing mild infection. However, in children with immunodeficiency or other severe illness, normally mild infections may be serious, with even the simplest 'common cold' leading to death. We are aware that children acquire infections while in hospital, with multiple sources among patients, visitors and siblings, staff and other adults. The prevention of cross infection requires good compliance with standard and transmission-based infection prevention procedures, including assessment of risk and low threshold for testing, including in asymptomatic immunocompromised children who shed high loads for long periods.

5.2 First detections are called hospital acquired if the symptoms onset in hospital or if the first test was after 48 hours; some detections will have been incubating. Some children have 2 or 3 viruses so the total number of positive patients is less than the number of viruses.

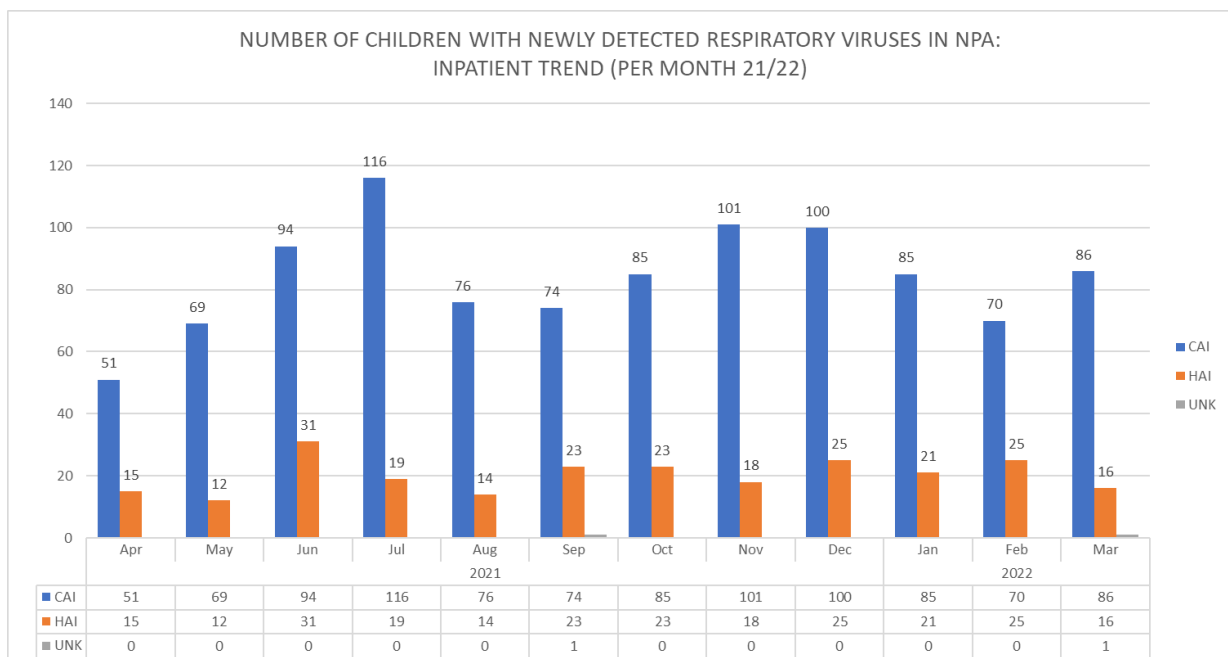
5.3 Comparison of previous years is shown in the table below. The number of positive tests is the highest that it has been since testing began but the majority of these positive tests were on admission. Detections of rhinovirus doubled compared to data from the previous year and there was a marked increase in SARS-Cov2 detections as well. We begin to see the re-emergence of other respiratory viruses including parainfluenza and RSV as a result of easing in restrictions. Whilst the majority of these infections are not acquired in hospital some are, suggesting risk is still present.

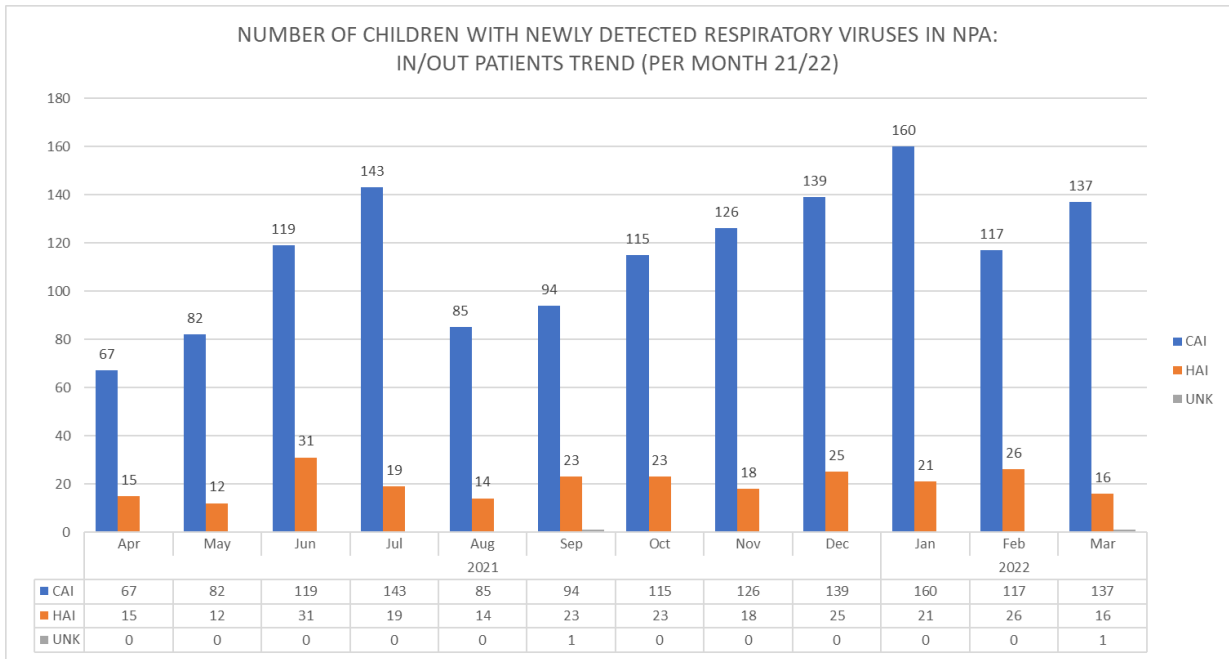
5.4 Adenovirus infection which had increased in 19/20 remained stable and hospital acquired cases continued to reduce slightly.

5.5 Increased cases of rhinovirus were sustained this year. This is now part of the viral respiratory panel.

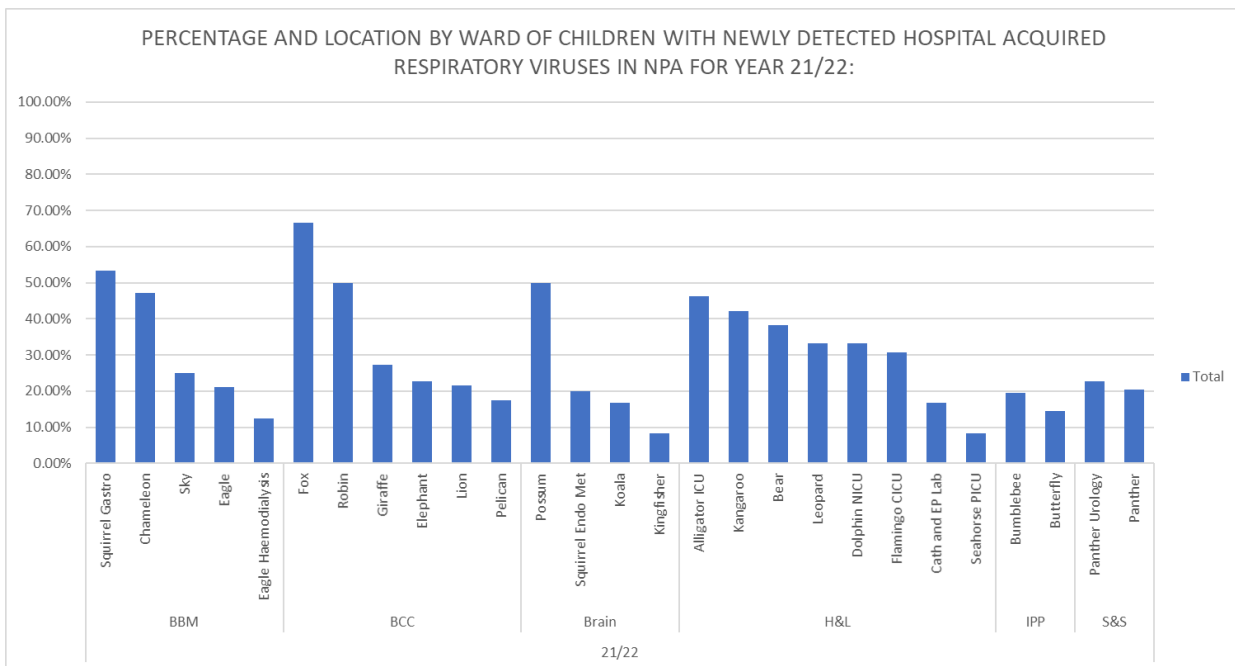
Org	17/18			18/19			19/20		20/21		21/22		
	CAI	HAI	UNK	CAI	HAI	UNK	CAI	HAI	CAI	HAI	CAI	HAI	UNK
Adenovirus	75	40	2	109	61	4	105	61	60	38	59	21	0
Bocavirus	0	0	0	10	0	0	28	11	20	4	77	24	0
Bordetella Pertussis	0	0	0	0	0	0	3	0	0	0	0	0	0
Coronavirus 229E	0	0	0	5	4	0	2	4	1	0	6	1	0
Coronavirus HKU1	0	0	0	2	4	0	6	3	5	1	7	0	1
Coronavirus NL63	0	4	0	4	2	0	14	2	6	0	32	8	0
Coronavirus OC43	0	2	2	6	6	0	5	9	1	0	21	3	0
Enterovirus	1	1	0	2	3	0	1	0	0	1	3	1	0
hMPV	34	9	0	41	9	1	37	6	0	0	48	4	0
Influenza A	25	2	0	45	16	0	32	6	2	0	7	2	0
Influenza A H1N1	10	1	0	29	13	0	6	2	0	0	0	0	0
Influenza A H3	0	0	0	1	0	0	6	0	0	0	2	0	0
Influenza B	33	9	1	3	0	0	10	0	0	0	1	0	0
Legionella Pneumoniae	0	0	0	0	0	0	1	0	0	0	0	0	0
Mycoplasma pneumoniae	0	0	0	0	0	0	0	0	1	0	0	0	0
Parainfluenza 1	18	6	0	3	8	0	23	6	0	1	0	0	0
Parainfluenza 2	9	8	0	10	9	1	13	15	3	0	3	2	0
Parainfluenza 3	34	26	0	60	41	2	29	12	5	0	67	14	0
Parainfluenza 4	0	0	0	2	0	0	8	5	5	1	20	1	0
Rhinovirus	31	20	3	105	49	0	193	121	216	35	547	123	1
RSV A	50	18	1	48	14	0	61	54	4	5	21	3	0
RSV A/B	0	0	0	22	1	0	8	0	0	0	64	4	0
RSV B	40	10	0	63	21	1	14	3	0	1	22	8	0
SARS-CoV-2	0	0	0	0	0	0	6	1	193	17	377	24	0
Grand Total	360	156	9	570	261	9	611	321	522	104	1384	243	2

5.6 The charts below demonstrates that respiratory viruses transmit throughout the year. Traditionally a peak would be seen in Winter, but the pandemic and lockdowns has left an immunity dent in children meaning we are seeing unseasonable trends of respiratory viruses during the summer months as well. The charts also demonstrate the amount of pre-admission screening that was taking place before children were admitted to hospital during the time of the pandemic.

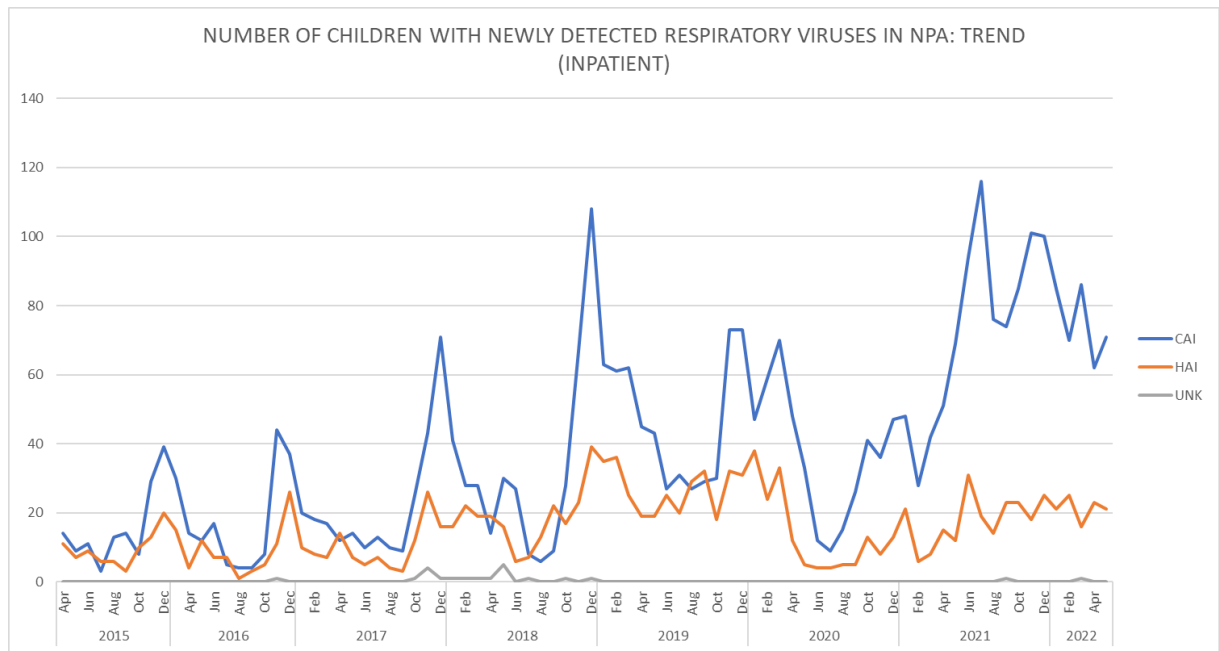




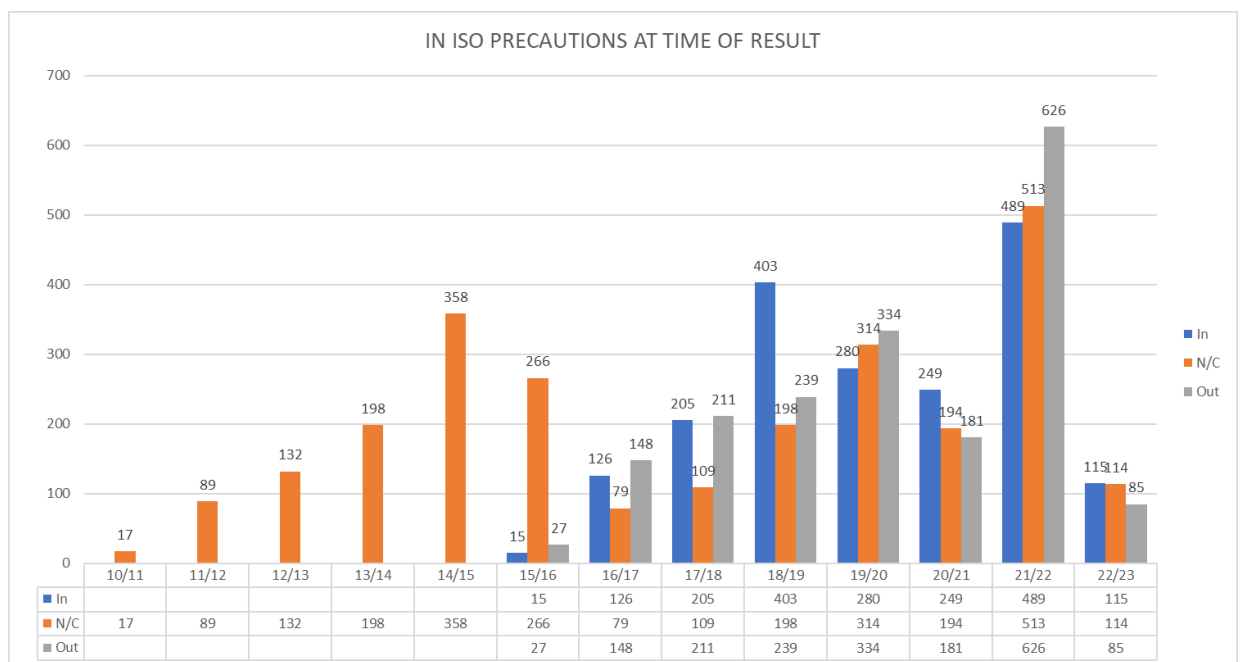
5.7 The chart below demonstrates that hospital acquired respiratory viruses occur across the trust so intervention is needed in all areas to prevent transmission.



5.8 The trend graph below shows that the focus on the recognition of respiratory symptoms and preventative measures introduced as a result of covid-19 have reduced the number of hospital acquired respiratory viruses.



5.9 Data collected demonstrates that staff awareness about putting children in isolation precautions at the time the stool samples are sent is not as high as it could be.



Surveillance of Viral Gastro-enteritis

5.10 GOSH Trust outbreak control policy includes isolation of children with suspected viral gastro-enteritis with emphasis on recognition and early intervention.

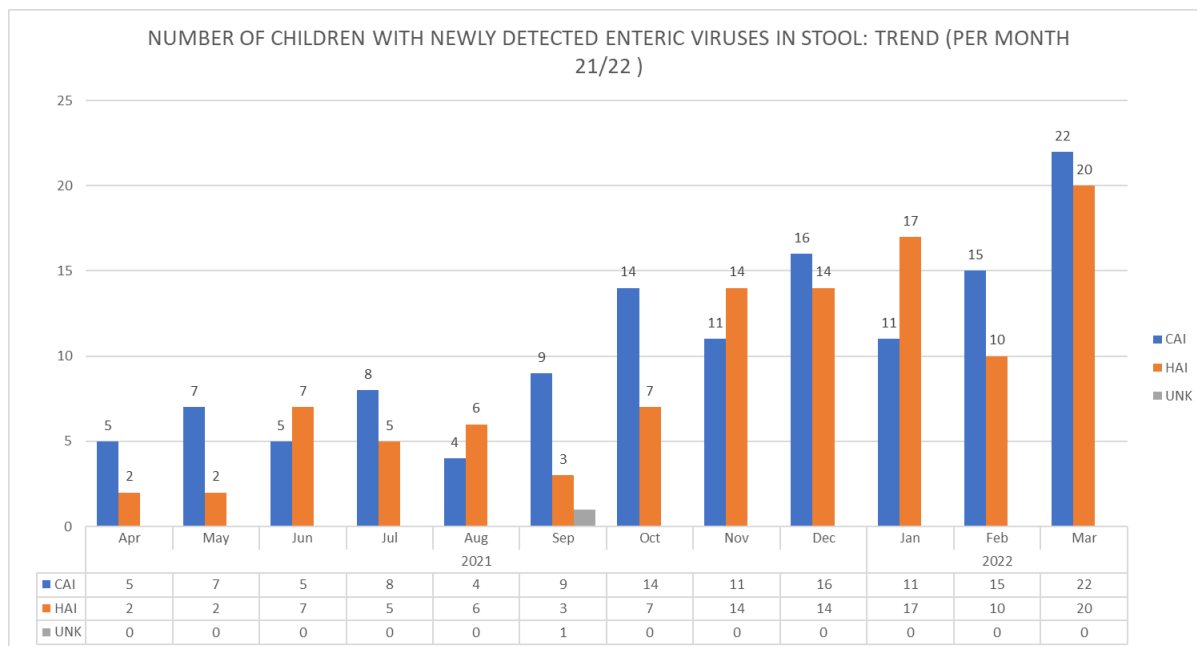
5.11 As in respiratory infections, children, parents and staff frequently enter the Trust incubating these common infections and act as sources for localised outbreaks. Control of these explosive

outbreaks may require closure or restriction of admission to units, along with additional environmental cleaning, as attack rates are high and secondary cases occur. Detailed investigation of these outbreaks and numbers of reported patients, staff or visitors affected are kept by the IPC team and the decision to close wards is based on risk assessment and epidemiological data.

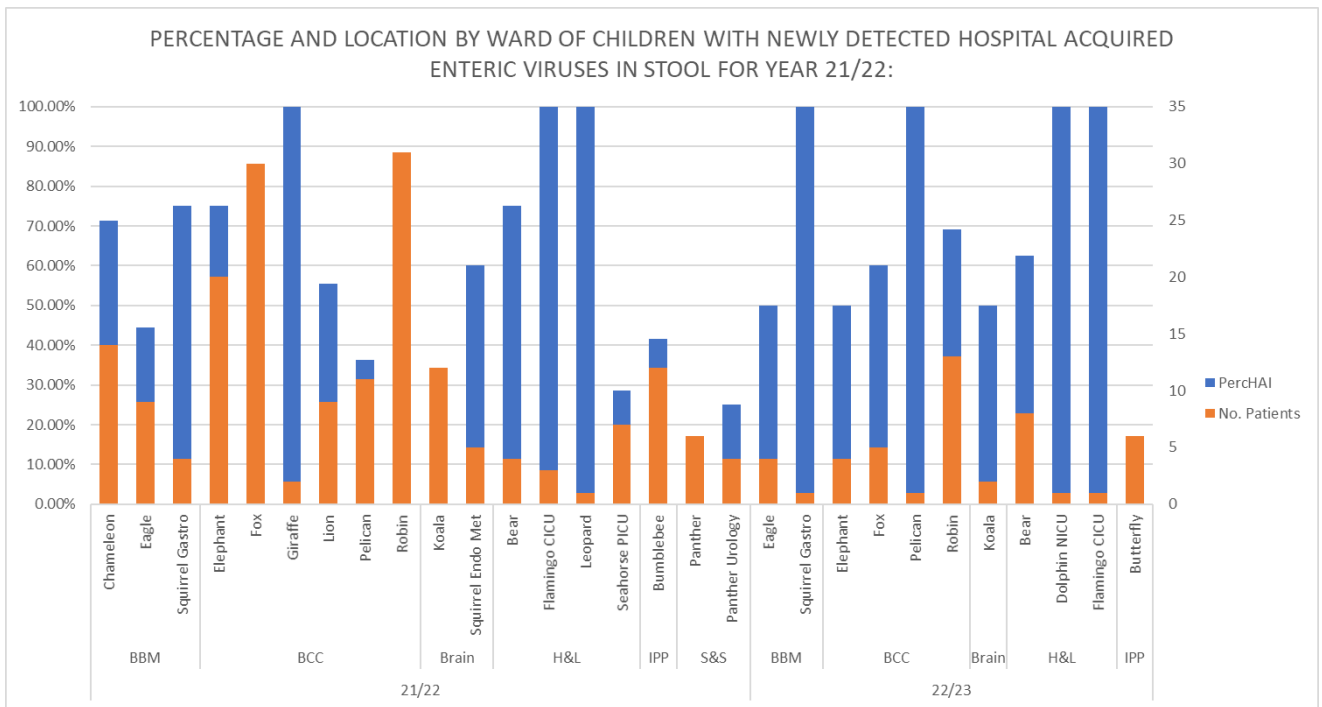
5.12 As shown in the table below the number detected in 2021/22 has increased to 127 (from 71 in 2020/21), with 107 (up from 60) recorded as hospital acquisitions. There was a significant increase in adenovirus detections in the stool with the majority of these being acquired in hospital. We also began to see the re-emergence of norovirus, which was not circulating during the previous year.

Org	17/18			18/19			19/20			20/21		21/22		
	CAI	HAI	UNK	CAI	HAI	UNK	CAI	HAI	UNK	CAI	HAI	CAI	HAI	UNK
Adenovirus	119	89	6	163	147	15	81	84	4	38	42	68	49	1
Astrovirus	26	37	2	19	21	0	15	8	0	0	0	6	9	0
Norovirus G1	6	5	0	14	9	0	10	4	0	3	0	2	0	0
Norovirus G2	63	50	0	55	54	1	40	28	1	4	1	29	22	0
Rotavirus	20	8	0	15	17	2	13	6	0	8	3	10	4	0
Sapovirus	49	43	1	52	44	1	33	27	0	18	14	12	23	0
Grand Total	283	232	9	318	292	19	192	157	5	71	60	127	107	1

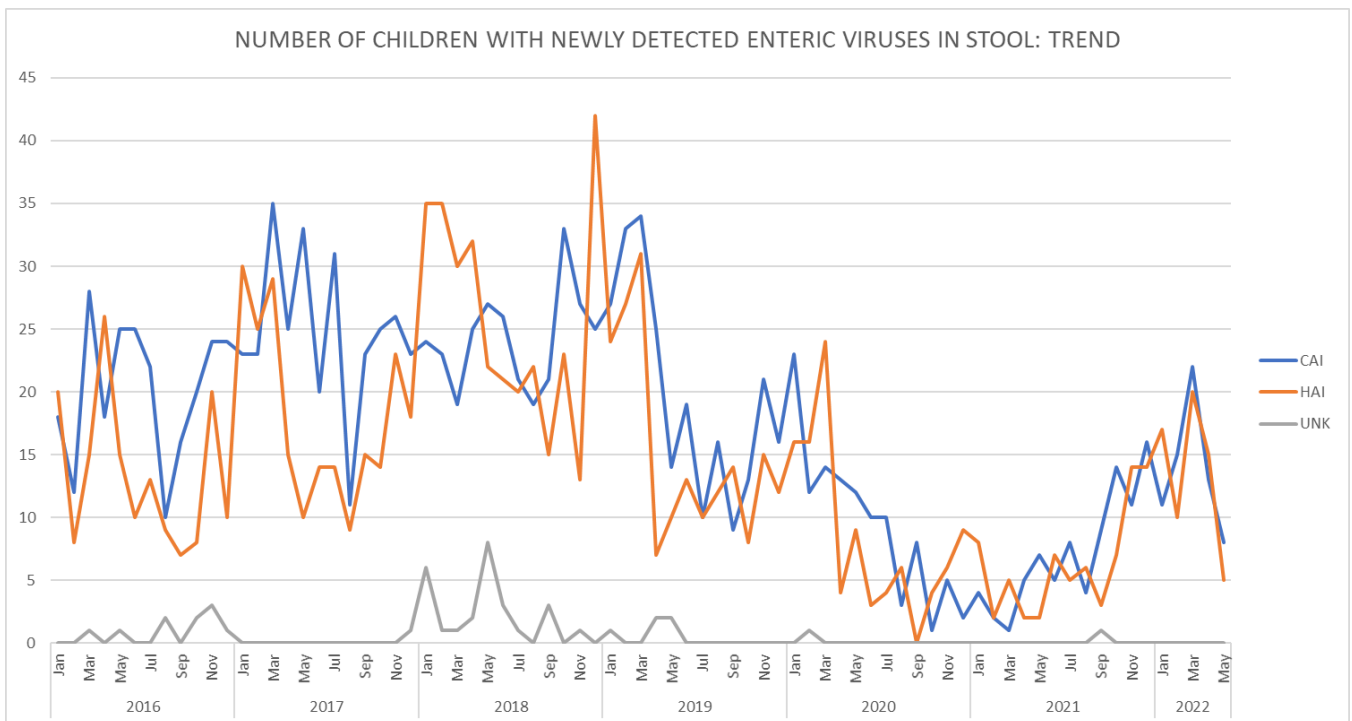
5.13 Enteric viruses remain present throughout the year with more cases during the winter months. This winter there were a disproportionately high number of hospital acquired cases suggesting that staff are less aware of symptoms and isolation requirements during the covid-19 pandemic.



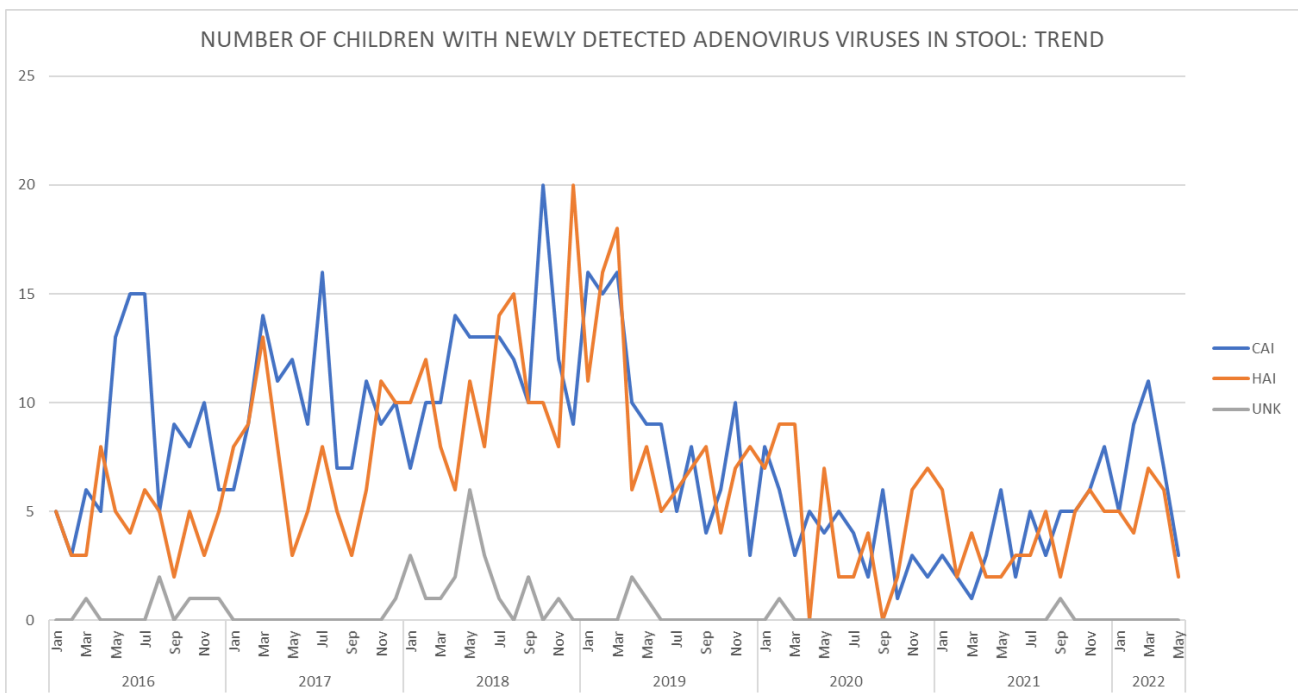
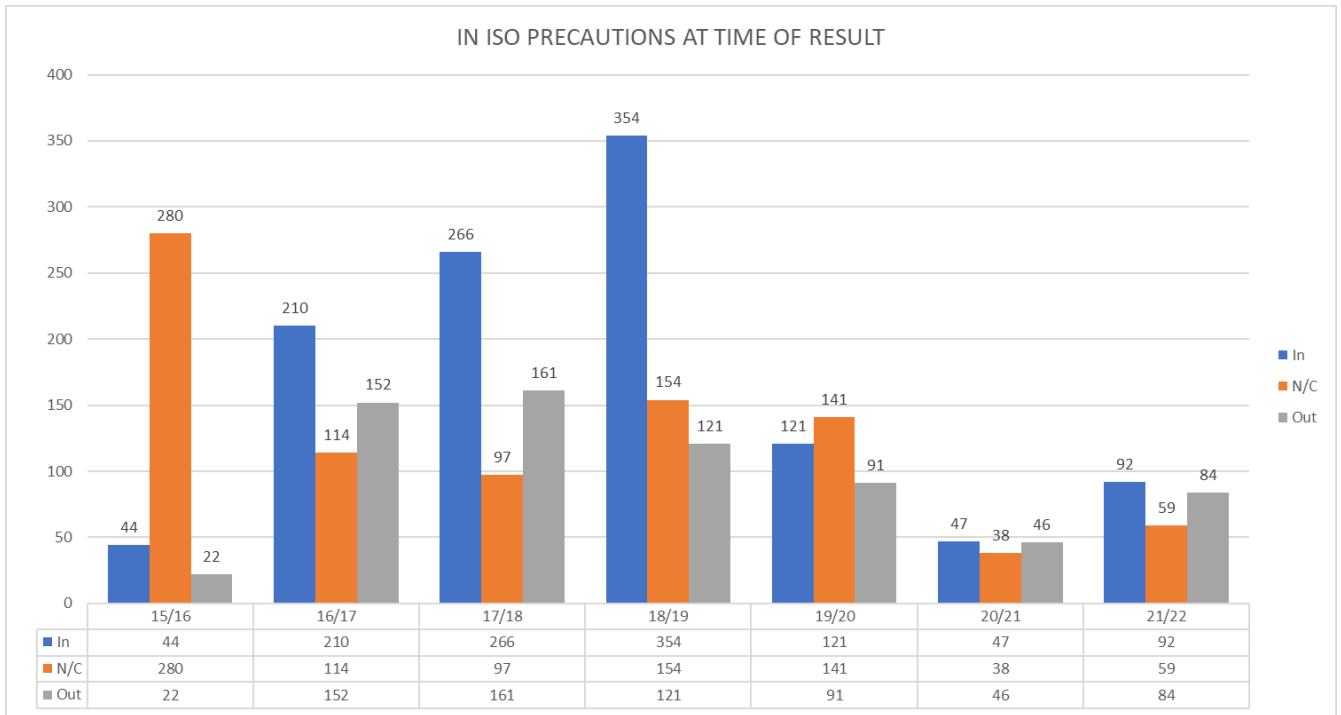
5.14 The graph below demonstrates as with respiratory viruses despite the smaller numbers of enteric viruses, hospital acquired cases occur across the organisation meaning that improvement is required in all areas to detect symptoms and prevent transmission.



5.15 The trend analysis shows that while numbers are at a low level the risk of acquiring a hospital acquired enteric virus has risen. This is a risk to patients.



5.16. The table below shows that the proportion of patients in the correct transmission-based precautions at the time of a result being available is lower now than before the pandemic. It is important to continue to message that symptom recognition and placing patients in isolation at the time of symptoms onset regardless of test result is important to prevent the spread of infection



6. Audit and Compliance to Policy

6.1 The infection control Trust-wide audit plan is well embedded in the Trust's overall audit programme and registered with the audit department. This plan is based on the internal and external infection control strategy which includes elements of High Impact Interventions from the "Saving Lives" programme. Care bundle audits are completed for the associated devices

- Peripheral line care bundle (insertion and maintenance)
- Urinary catheter care bundle (insertion and maintenance)
- Renal dialysis care bundle audited

6.2 Hand hygiene audits are also carried out looking at compliance with 'Bare below the elbows' and the '6 moments of hand hygiene' adapted from the '5 moments' used by the World Health Organisation (WHO).

6.3 Isolation precautions were audited annually prior to the pandemic but currently are monitored each quarter.

6.4 The infection control link personnel in the clinical areas take responsibility, with guidance from the IPCT, for performing planned audits. All data is displayed, by the QI Team, on continuous dashboards, although this required modification with the audit process change and switch to EPIC.

6.5 The infection control trust-wide audit plan undertook a major change in focus and direction in October 2018. In previous years and until the change, hand hygiene (including bare below the elbows) and high impact intervention audits were carried out monthly. Results from both these audits were in the mid to high 90 percentiles and had remained at this rate for many years.

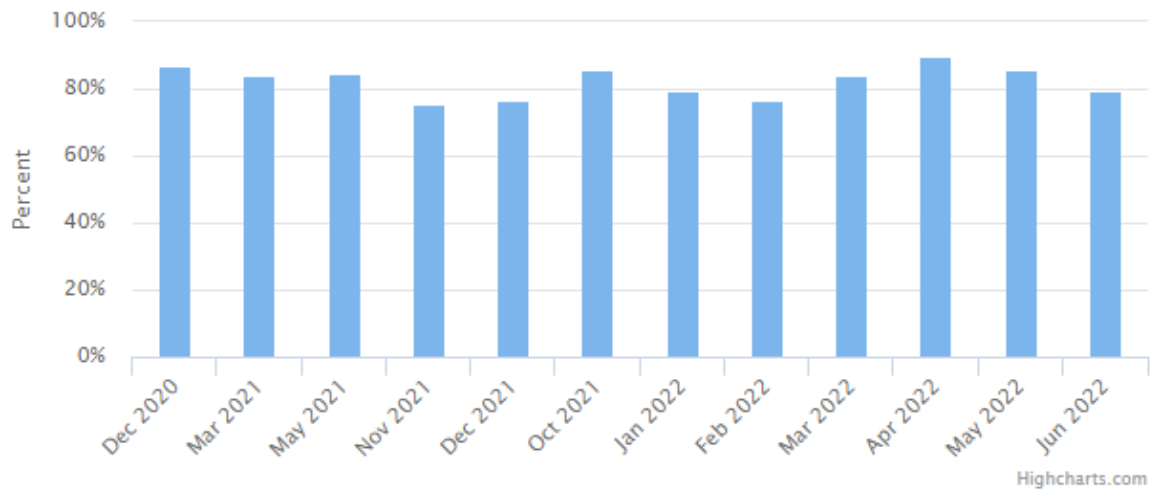
6.6 In October 2018 with approval from the IPCC and the Trust board we moved to quarterly audit days where hand hygiene audits and updated high impact intervention audits would be carried out using point prevalence methods rather than a minimum number of audits per month. In addition to completing the audits and collecting qualitative data as well as quantitative data we implemented the use of action plans to be completed each quarter on the findings from the audit days.

Hand Hygiene Results

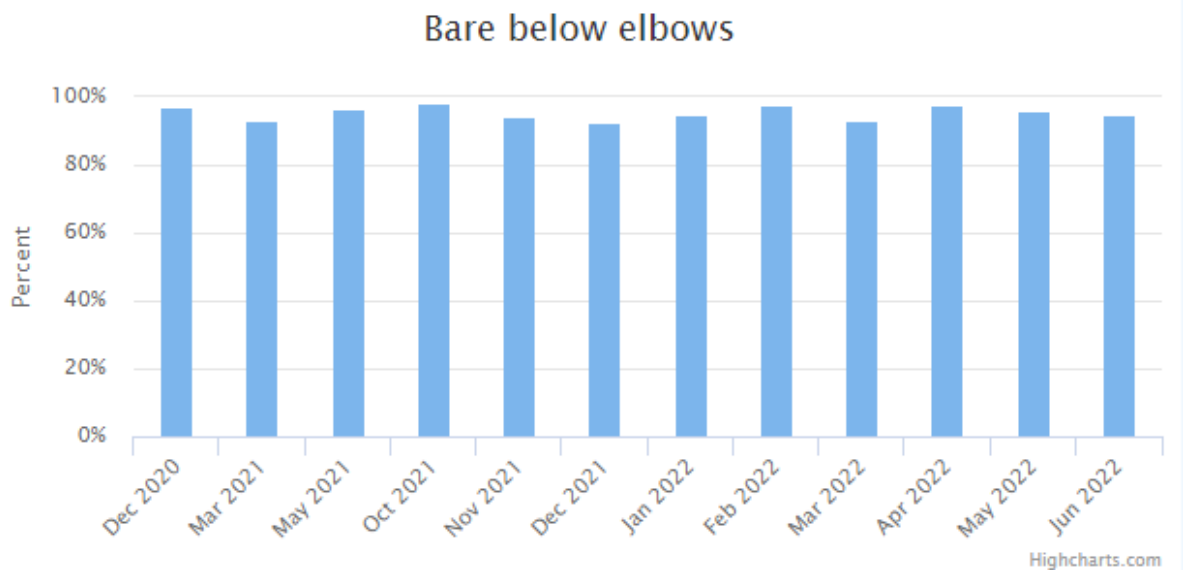
6.7 The first trust-wide audit day was held in November 2018.

6.8 The graph and table below show the percentage rates and numerical count and percentage of hand hygiene compliance for the year. Rates have generally remained stable at over 80% when looking at trust wide compliance. Bare below the elbows (BBE) compliance was over 93% throughout the year at the time of the audits.

Hand Hygiene



Period	Observed	Compliant	Percent
Dec 2020	324	282	87%
Mar 2021	706	595	84%
May 2021	627	531	85%
Nov 2021	560	423	76%
Dec 2021	120	92	77%
Oct 2021	198	170	86%
Jan 2022	580	460	79%
Feb 2022	154	118	77%
Mar 2022	547	461	84%



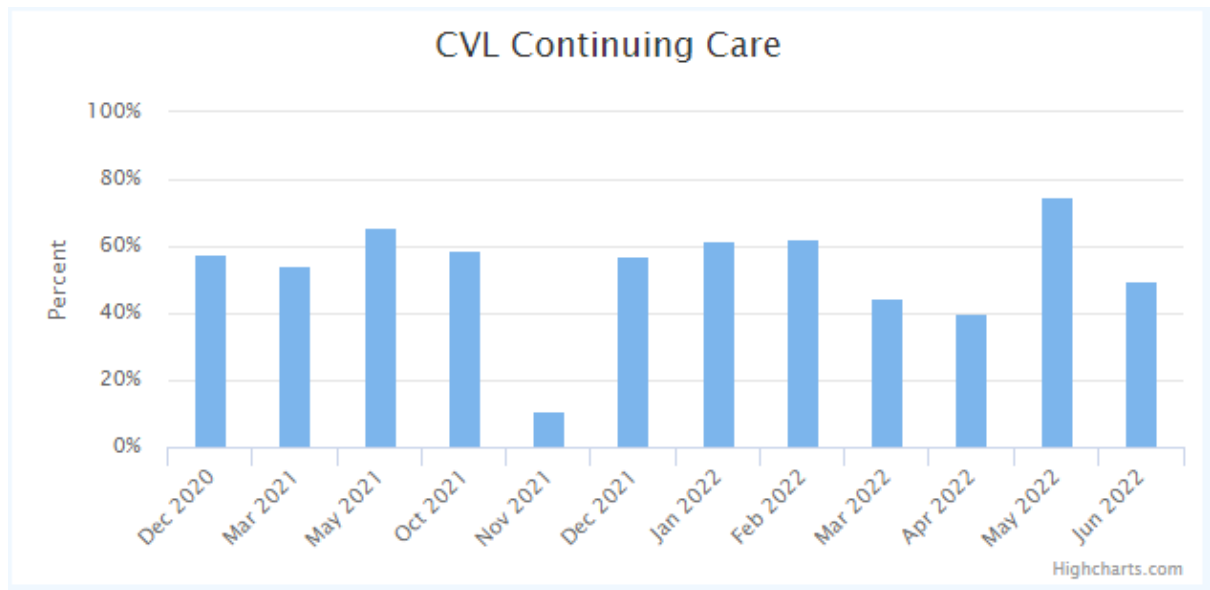
Period	Observed	Compliant	Perce
Dec 2020	318	309	97%
Mar 2021	707	660	93%
May 2021	627	604	96%
Oct 2021	198	195	98%
Nov 2021	471	445	94%
Dec 2021	120	111	93%
Jan 2022	540	513	95%
Feb 2022	170	166	98%
Mar 2022	550	511	93%

6.9 Action plans are live within the IPC dashboards and compliance is monitored through the directorate IPC meetings and the quarterly audit days.

Central Venous Line Ongoing Care

6.10 Audit of the Saving Lives HII CVL care bundle was performed monthly from all areas with frequent CVLs until Oct 2018. From Nov 2018 this was completed on a quarterly basis.

6.11 The graph and table below show the percentage compliance and numerical values for the past year(s).



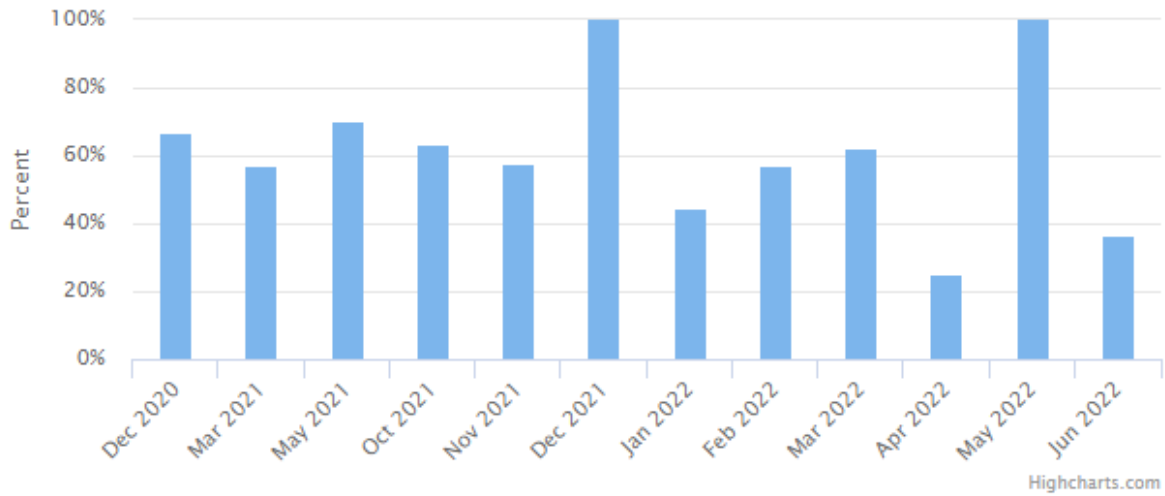
Period	Observed	Compliant	Percent
Dec 2020	45	26	58%
Mar 2021	110	60	55%
May 2021	90	59	66%
Oct 2021	93	55	59%
Nov 2021	18	2	11%
Dec 2021	7	4	57%
Jan 2022	47	29	62%
Feb 2022	8	5	63%
Mar 2022	106	47	44%

6.12 Care bundle compliance remains below the required standard. There have been previous issues around the recording of information in the Electronic Patient Record (EPR) which have been addressed and continue to be reviewed. Capital Nurse has been implemented as a piece of education around Intravenous care, but more work is required around standardising relevant clinical guidelines to set the standard required for staff and act as a clinical resource.

Peripheral Cannula Ongoing Care

6.13 The graph and table below show compliance with the PVC continuing care bundle. Compliance has been variable across the course of the year. Further work is needed around the recording of flushes when cannulas are not used for 8hrs and around the recording of line care within Epic.

PVC Continuing Care

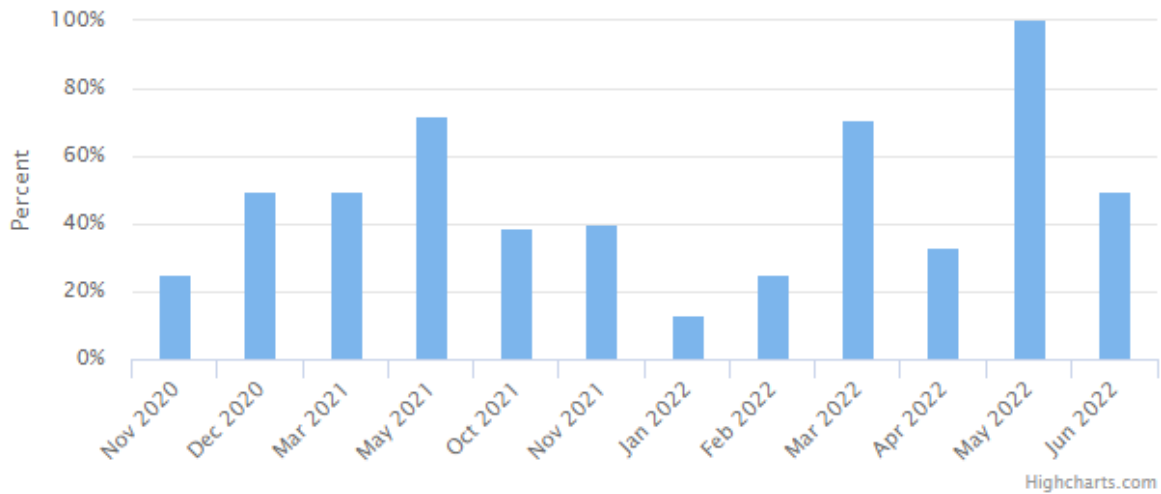


Period	Observed	Compliant	Percent
Dec 2020	30	20	67%
Mar 2021	77	44	57%
May 2021	61	43	70%
Oct 2021	55	35	64%
Nov 2021	19	11	58%
Dec 2021	4	4	100%
Jan 2022	47	21	45%
Feb 2022	7	4	57%
Mar 2022	48	30	63%

Urinary Catheter Ongoing Care

6.14 The graph and table below show compliance with the urinary catheter continuing care bundle. Compliance initially improved and then decreased throughout the year. There is a high variance in compliance rates due to the small numbers of catheters, making education difficult to roll out in this area. There are also difficulties in recording elements of the care bundle as they are recorded in different places within Epic. Work is underway to address this.

Urinary Catheter continuing Care



Period	Observed	Compliant	Percent
Nov 2020	12	3	25%
Dec 2020	2	1	50%
Mar 2021	22	11	50%
May 2021	25	18	72%
Oct 2021	18	7	39%
Nov 2021	5	2	40%
Jan 2022	15	2	13%
Feb 2022	4	1	25%
Mar 2022	17	12	71%

Ventilator associated pneumonia / Ventilator associated events.

6.15 Care plans are in place in the ICUs for the reduction of risk of ventilator associated events but the ICUs do not undertake any systematic surveillance.

Surgical site surveillance

6.16 For the financial year 2021/22, spinal surgery has been collected . All remaining surgical specialities will have no data and the reason is not having the system replacement project from the previous Surgical Site Surveillance System (S4)/PIMS to RLDatix/EPIC completed as initially expected by April 2019.

The data collected for the calendar year of 2021/22 is detailed below:

Spinal Surgery

Within *Body Bones and Mind* directorate, a SSIS officer was appointed to work following Infection Prevention Control team guidance, managed by the modern matron. Surgical Site surveillance data was collected throughout the year 2021/22 for all spinal surgery and is reported to the UKHSA.

This report covers data collected throughout this year but does not include Q1 Jan-April 22 as that data is not submitted at the time of writing.

SSI Surveillance was carried out utilising the UK Health Security Agency SSI Surveillance portal to enter all data including follow up with a robust system in place for ensuring that all children are followed up as per the protocol outlined above.

The table below shows SSI numbers stable – only x2 *new onset* SSI cases in 2021 for a total of 141 operations. It is however important to note that there was a reduced sample size due to the pandemic. GOSH also remains a national ‘high’ outlier with rate of 3%.

Trend for the selected period

Year and Period	No. operations	Patient questionnaire		Inpatient & readmissions		Post discharge confirmed		Patient reported		All SSI *	
		No. Given	% complete	No.	%	No.	%	No.	%	No.	%
2021 Q1	31	31	100.0	1	3.2	0	0.0	0	0.0	1	3.2
2021 Q2	40	40	100.0	0	0.0	0	0.0	0	0.0	0	0.0
2021 Q3	33	33	100.0	0	0.0	1	3.0	0	0.0	1	3.0
2021 Q4	37	37	100.0	0	0.0	0	0.0	0	0.0	0	0.0

*All SSI = Inpatient & readmission, post discharge confirmed and patient reported

Of the two infections identified both were deep incisional with two separate organisms identified for each infection. *Klebsiella oxytoca* and *Pseudomonas aeruginosa*. One was detected on re-admission and one post-discharge.

Your Hospital	Surgical Site Infection					
	Inpatient & readmissions		Post discharge confirmed		All SSI*	
	Type of SSI	No.	%	No.	%	No.
Superficial incisional	0	0.0	0	0.0	0	0.0
Deep incisional	1	100.0	1	100.0	2	100.0
Organ/space	0	0.0	0	0.0	0	0.0

* excludes patient reported SSIs that are post discharge

All hospitals** for the previous 5 years available (Jan-Mar 2017 to Oct-Dec 2021).

All Hospitals	Surgical Site Infection					
	Inpatient & readmissions		Post discharge confirmed		All SSI*	
	Type of SSI	No.	%	No.	%	No.
Superficial incisional	134	31.8	53	58.2	187	36.5
Deep incisional	242	57.3	18	19.8	260	50.7
Organ/space	46	10.9	20	22.0	66	12.9

* excludes patient reported SSIs that are post discharge

**Please refer to 2.4 Definition of Terms at the back of the Summary report for an explanation of data included in the benchmark.

Great Ormond Street Hospital
[144]

SSI risk factors were well controlled in this patient group with the following metrics observed:

- Timely antibiotics pre KTS (100%); ✓
- Pre op wash at ward level (100%); ✓
- Timely pre op MRSA screening (100%); ✓
- Temperature control intra-op (60%). ✓ Historical range before pre-warming started: 30%.

Aims 2022-2023

- To monitor spinal surgery and comply with UK Health Security Agency Surgical Site Infection (SSI) Surveillance programme;
- To provide surveillance data (SSI risk factors: antibiotics prophylaxis, intra-op temperature control, MRSA screening and pre op wash) to relevant areas (automated reports/dashboards currently not available);
- To assist the Infection & Prevention Control, Epic and RLDatix teams with the ongoing process of the SSIS software (S4) replacement (ongoing) and to re-establish SSI reports/dashboards (TBC);
- To continue to review/feedback exceptions to the care bundle to improve the patient pathway/outcome (sharing learning);
- To include other surgical specialties under SSIS, once the new system/reports/dashboards are operating.

Neurosurgical surveillance

A total of **1015** Neurosurgical procedures were performed within this period.

The overall number of adverse events was **122** with an adverse event rate of **12%** (122/1015)

The overall number of Infections was **16** and therefore infections make up **13.1%** of the adverse events (16/122)

The overall Infection rate for Neurosurgical procedures (16/1015) during this time was **1.6%**.

The sub-specialty breakdown of infections is as follows:

Craniofacial	1
Spine (Other)	1
Epilepsy	1
Hydrocephalus	10
Neuro-Oncology	1
Spinal Dysraphism	2

We utilise a Grading system for reporting Complications in Neurosurgery and the number of infections as per this system is as follows:

Grade	Superficial Incisional (SI)	Deep Incisional (DI)	Organ Space (Not GOSH Shunt)	CSF (Shunt)
1 No increase in hospital stay or readmission	1			
2 Increase in hospital stay or readmission without neurological deficit	2	4	2	7
3 Reduction of GCS or neurological deficit				
4 Death				
Total	3	4	2	7

Service Developments

Key Improvements:

- Antibiotic administration < 30 minutes from knife to skin is a significant improvement since discussions with anaesthetic teams compared to the preceding year.
- An improved attempt at patient warming has been made in theatres with warming blankets applied to the theatre table and the Bair Hugger being utilised to warm the table whilst patient is in the anaesthetic room.

Other improvements identified:

- Patients being admitted for Emergency Shunt revision surgery require increased vigilance to ensure they have pre-operative wash prior to Emergency Surgery to further improve adherence to the shunt protocol and further improve our shunt infection rates.

Cardiac surgical site surveillance

The SSI Officer post has not been filled for the past two years. Due to capacity in the team, it has not been possible to collect surgical site surveillance data during the year 2021/22. . As a result, the following compliance measure data has not been collected:

1. pre-operative wash
2. pre-operative antibiotics administered within defined knife to skin time
3. post-operative antibiotics according to protocol
4. MRSA swab result available before surgery – and taken within 30 days?
5. Follow up of 30-day surveillance calls

These measures are recognised factors in the reduction of surgical site infection, and with limited collection of this information we cannot assume that compliance is at desired levels.

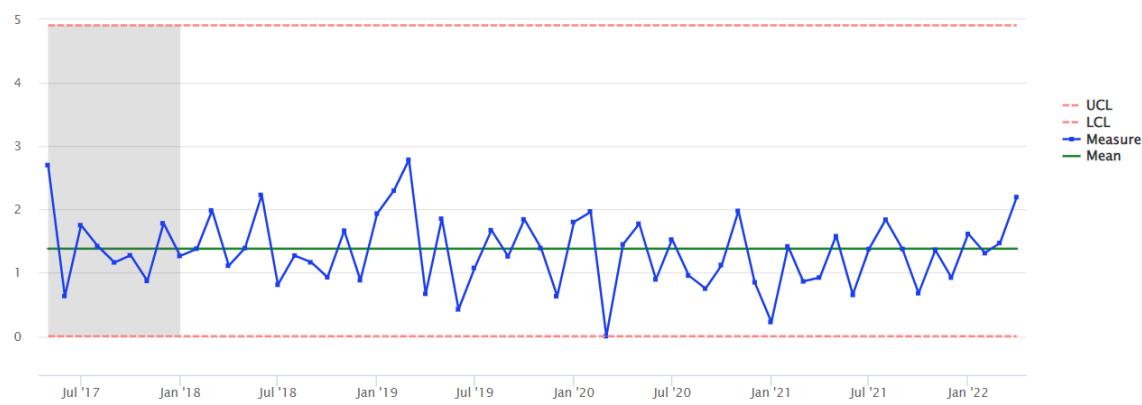
In the next year, it is hoped that the RL SSI reporting software will be rolled out alongside the appointment of an SSI Officer and both will contribute to a reduction in surgical site infection. This is vital to the reliability and sustainability of SSI surveillance and for the service moving forward.

7. GOSACVCRB (GOS acquired CVC related bacteraemias ('Line infections'))*

7.1 GOSH has been monitoring central line infection rates for a number of years, using a specific in-house definition which dates back to pre- 'Matching Michigan'. Most recent year's data is shown below in table and SPC graph format and demonstrates a small reduction year on year.

Period	GOSACVCRB_No	Days Recorded	Rate	Rate_YtD
Year 15/16	75	51976	1.4	1.4
Year 16/17	87	52679	1.7	1.7
Year 17/18	82	50847	1.6	1.6
Year 18/19	82	52977	1.5	1.5
Year 19/20	73	56456	1.3	1.3
Year 20/21	63	54221	1.2	1.2
Year 21/22	66	53160	1.2	1.2

GOSH-acquired CVL infections for every 1,000 line days



Ward location of children with a surveillance definition of a GOS acquired CVC RB:

7.2 Data in the table below splits the rate and numerical count of the line infections by ward. It also includes the number of line days collected by that ward which is now automated from the Electronic Patient Record (EPR).

Directorate	Ward	GOSACVCRB	Total LineDays 21/22	Rate 21/22
Blood, Cells and Cancer	BADGER			0
Blood, Cells and Cancer	ELEPHANT	2	3306	0.6
Blood, Cells and Cancer	FOX	4	2844	1.4
Blood, Cells and Cancer	GIRAFFE	5	1783	2.8
Blood, Cells and Cancer	LION	5	2880	1.7
Blood, Cells and Cancer	PELICAN	1	2141	0.5
Blood, Cells and Cancer	PELICAN AMB		4	0
Blood, Cells and Cancer	ROBIN	5	2900	1.7
Blood, Cells and Cancer	SAFARI		13	0
Body, Bones and Mind	CHAMELEON	4	2685	1.5
Body, Bones and Mind	EAGLE	1	1404	0.7
Body, Bones and Mind	EAGLE HAEMOD		495	0
Body, Bones and Mind	GIU		2	0
Body, Bones and Mind	MCU			0
Body, Bones and Mind	SKY		861	0
Body, Bones and Mind	SQGASTRO	1	1966	0.5
Brain	KINGFISHER		94	0
Brain	KOALA	1	1446	0.7
Brain	NEUROPHYS		31	0
Brain	POSSUM		37	0
Brain	SQENDOMET	1	1166	0.9
Heart and Lung	ALLIGATOR	6	1793	3.3
Heart and Lung	BEAR	6	4667	1.3
Heart and Lung	CATS		32	0
Heart and Lung	CICU	17	8095	2.1
Heart and Lung	KANGAROO	0	546	0
Heart and Lung	LEOPARD	1	2330	0.4

Heart and Lung	NICU	2	923	2.2
Heart and Lung	PICU	3	3793	0.8
Heart and Lung	RSU		40	0
International and Private Patients	BUMBLEBEE	0	784	0
International and Private Patients	BUTTERFLY	1	2654	0.4
International and Private Patients	CATER AMB		22	0
Operations and Images	IR			0
Operations and Images	MSCB THEATRE			0
Operations and Images	NIGHTINGALE			0
Operations and Images	OBW THEATRE			0
Operations and Images	PICB THEATRE			0
Operations and Images	THEATRES		51	0
Operations and Images	VCB THEATRE			0
Operations and Images	WOODPECKER		1	0
Research and Innovation	CRF		21	0
Sight and Sound	HEDGEHOG			0
Sight and Sound	PANTHER	0	326	0
Sight and Sound	PANTHERURO		1024	0

Organisms associated with GOSACVCRB

7.3 GOSH central line surveillance programme is important because it monitors over time the infection rates of those with central lines across the trust, not just in ICU's as some national programmes do.

7.4 In 2021/22 66 episodes have been called GOSACVCRB (compared with 63 in 2020/21).

7.5 The table below shows the breakdown of species cluster. The top 3 species clusters identified were Gram positive cocci of which staphylococcus epidermidis (n48) and staphylococcus aureus (n15) were frequently identified. Enterococcus faecalis (n12) was also identified frequently. There was a significant rise in the GOSH CVCRB related to staphylococcus aureus compared to previous years.

Org	17/18	18/19	19/20	20/21	21/22	Grand Total
ANO2	1	0	2	0	1	4
Bacteroides sp.	1	0	0	0	0	1
Brevibacterium sp.	0	0	1	0	0	1
Clostridium perfringens	0	0	1	0	0	1
Clostridium sp.	0	0	0	0	1	1
FUNGI	4	10	7	3	2	26
Candida albicans	3	6	1	0	0	10
Candida krusei	1	0	0	0	0	1
Candida parapsilosis	0	3	4	3	2	12
Candida sp.	0	0	2	0	0	2
Fungus (undefined)	0	1	0	0	0	1
GNC	2	0	0	0	0	2
Moraxella catarrhalis	1	0	0	0	0	1
Neisseria sp.	1	0	0	0	0	1
GNR	14	15	26	17	11	83
Enterobacter cloacae	3	2	7	0	1	13
Enterobacter sp.	1	1	3	2	4	11

Escherichia coli	5	7	5	3	0	20
Klebsiella oxytoca	0	2	7	4	0	13
Klebsiella pneumoniae	5	3	4	8	6	26
GPR	1	4	4	1	0	10
Bacillus cereus	0	1	2	0	0	3
Bacillus sp.	1	1	0	0	0	2
Lactobacillus sp.	0	0	1	1	0	2
Microbacterium sp.	0	2	0	0	0	2
Tsukamurella sp.	0	0	1	0	0	1
MYCO	0	0	0	0	1	1
Mycobacteria sp.	0	0	0	0	1	1
PSEUDO	6	7	7	14	9	43
Achromobacter sp.	0	0	0	1	2	3
Burkholderia sp.	0	0	0	1	0	1
Pseudomonas aeruginosa	4	4	3	5	3	19
Pseudomonas sp.	0	0	1	1	2	4
Stenotrophomonas maltophilia	2	3	3	6	2	16
STAPH	57	38	57	43	68	263
Coagulase Negative Staphylococcus	10	5	2	2	1	20
Staphylococcus aureus	6	5	6	2	15	34
Staphylococcus epidermidis	29	22	37	33	48	169
Staphylococcus haemolyticus	3	2	7	4	4	20
Staphylococcus hominis	9	4	5	2	0	20
STREP	16	19	18	18	14	85
Enterococcus faecalis	6	4	5	5	12	32
Enterococcus faecium	5	8	7	4	0	24
Enterococcus sp.	0	1	2	5	0	8
Streptococcus sp.	0	1	0	2	0	3
viridans group Streptococci	5	5	4	2	2	18
Grand Total	101	93	121	96	106	517

Other bacteraemia and sensitivity data.

7.6 Blood culture surveillance is complicated due to mixed cultures and difficulty defined clinical episodes. In the year 21/22 there were:

11,629 separate blood culture sets sent (12,683 in 20/21)
681 were positive (815 in 20/21)

7.7 Removing repeat isolates (same species within 14 days of initial) there were

463 new clinical episodes with (535 in 20/21)

7.8 Regular surveillance has been undertaken of crude bacteraemia episodes defined by any positive blood culture in a child.

GOSH CVC infection reduction programme.

7.9 The programme to reduce GOS acquired CVC related bacteraemias (GOSACVCRB; 'line infections') has used an improvement process based on the universal or focussed introduction of care components combined with continuous process and outcome audit. Initially the 'saving lives' standard care bundle was implemented across the entire trust and significant reduction in line infection rate was seen year on year. However, this did not reach zero.

7.10 The main control is implementation of the standard care bundle, which, despite continuous attention has not reached 100%. Review of additional interventions was also undertaken and it was decided to introduce parafilm and biopatch in areas or situations associated with the greatest risk.

7.11 Compliance with good line care has remained lower than the required standard. Work is needed with Epic to improve the ability to document within the patient record but a

programme of education is also required to ensure all staff are carrying out line care to the correct standard.

8 Wider Infection Prevention and Control Service

8.1 The services below all submitted full annual reports to the IPCC. Key achievements and areas of risk are identified and brought to attention within this annual report for review by the board.

Estates & Facilities (including Decontamination)

8.2 Regular testing for legionella across the trust and pseudomonas aeruginosa in augmented care areas has taken place throughout the year with a focus on logging water quality failures and carrying out appropriate remedial actions and retesting.

8.3 Work is underway to improve the recording of Planned preventive maintenance (PPM) that takes place.

8.4 A new contractor has been appointed to carry out maintenance and treatment on the water towers following a period of omitted results in 2021.

8.5 The annual verification for specialist ventilation was not completed for all rooms that required air pressure testing and plating. This was added to the risk register by the estates team.

8.6 Following an audit completed in Sep 2021 it is noted that not all standard rooms within MSCB & PICB were commissioned to 6 a/c as requested by IPC. Risk assessments are in place and mitigations including an extended fallow time in these areas. Further SOPs are being developed by the team around the ventilation verification works and cleaning of chilled beams. A decant programme is underway to clean all chilled beams within inpatient areas and carry out any standard ventilation maintenance as well as a deep clean of the ward.

8.7 The trust holds a contract with BMI/Circle Health for the provision of sterile services for the reprocessing of surgical instruments. This contract is in the second year and has seen a steady increase in volumes since the start of the contract in 2020.

8.8 The service holds the required accreditation for delivering the service – ISO 13485 and is audited annually by the Notified Body (appointed by the MHRA) as well as the trust AE(D).

8.9 The trust is currently working with the BMI team on a number of projects including the introduction of a protein detection system post instrument wash to help support the introduction on the current NICE guidance as well as an annual instrument count to monitor the instrument trays and supplementaries that are currently in the system.

8.10 In August 2021 the service transferred from being one managed by OCS to one managed by the Facilities team directly. This has seen a lot of work to establish a suitable qualified management team to oversee the service as well as

the development of training material and training programmes as well as method statements, risk management processes and the development of monitoring systems to ensure the service is delivered in line with requirements such as the National Cleaning Standards.

8.11 Due to the pandemic and restrictions on movement PLACE inspections did not take place in 2021. However, the PLACE “Lite” audits are scheduled to resume in June 2022 with a full audit with full participation including patients scheduled to resume in September 2022.

8.12 The Trust works in partnership with Elis who are contracted to provide a linen and laundry service. This contract is in the final year with the tender exercise due to be launched in May 2022 following the review of the service specification by stakeholders across the organisation.

8.13 The contract has a robust monitoring process which includes audits of areas where linen is stored and quality checks (monthly) , site visits (annually) and monthly contract meetings where the service that has been delivered and contractual KPIs are monitored.

Antimicrobial Stewardship

8.14 The terms of reference for the AMS committee and membership are in line with NICE guidance on antimicrobial stewardship and the Start Smart then Focus initiative. Our team continue to collaborate nationally via UK-PAS and our yearly START meeting. The Lead Antimicrobial Pharmacist is now on maternity leave and replacement maternity cover will be in place in June 2022

8.15 The AMS committee last met in June 2021. Disruption to quarterly meetings occurred due to COVID-19 pandemic, sick leave, and maternity leave for Lead Antimicrobial Pharmacist. Next AMS Committee scheduled for June 2022 and quarterly thereafter. There continues to be 4 main work streams identified (Policy, Resistance reporting, Education and Audit).

8.16 Policy

- The antibiotic policy group continue to meet monthly to ensure review and updating of all Trust guidelines pertaining to antimicrobials.
- Accessibility of policies has been highlighted as a continuing area for improvement. New Intranet rolled out May 2022 to improve functionality.
- Monthly dedicated fungal MDT meetings led by Professor Adilia Warris Paediatric Mycologist with implemented antifungal policy.

8.17 Prescribing audits

- External audits and CQUIN reporting were cancelled due to the COVID19 pandemic for all of financial year 21/22 and there are not yet any official communications about plans for 22/23 but CQUINS will be re-introduced. Impact in Paediatrics will be limited.
- We have downloaded all the Staphylococcal data and are looking at time series trends in this data over the last 20 years with a view to predict which patients develop/acquire MRSA in

hospital. This work has been approved by GOSH R&D via DRIVE and is taking place in partnership with the London School of Hygiene and Tropical Medicine.

- The AMS team are exploring the possibility and potential prescribing dashboards within Epic, this reduces the need for multiple platforms and would increase exposure of these dashboards to all Epic users.
- Audits are ongoing in vancomycin prescribing in neonates and teicoplanin prescribing.

8.18 Resistance reporting

- Individualised micro-susceptibility charts continue to be widely used in the trust; these are regularly reviewed in the AMS rounds
- A Trust-wide antibiogram has been developed which also continues to allow live data and important pre-emptive switches in antibiotic policy.
- Laboratory has implemented new EUCAST reporting guidance in May 2022 which will be closely monitored over next year
- An MSc student has passed her masters dissertation looking at the value of the antibiotic spectrum index. This has result in two posters accepted to ESPID and further publications planned.

8.19 Education and Research

- The START meeting in July 2021 was again a great success and attending by 70 delegates
 - a. Next START meeting arranged for June 24th 2022 as a hybrid meeting.
 - b. The meeting received sponsorship from Pfizer which will be ongoing.
 - c. Speakers with an international reputation for excellence were invited and attended from Hungary, USA, and the UK.
- The AMS team were instrumental in the organization of the Otto Wolf Lecture series.
 - a. Florian Krammer from Mount Sinai NY state presented his COVID virology work.
 - b. Chris Chiu presented his ground-breaking work on human infection trials.
 - c. Matthew Snape, Oxford Vaccine group presented work on mixed vaccines for COVID.
- The team have also been involved in other research projects including the following:
 - a. INHALE study which relates to the impact of rapid molecular results and antimicrobial stewardship in the intensive care environment.
 - b. Phase 1 PK/PD studies into Isavuconazole and ceftazidime/avibactam. Following a successful site visit for the Caz/Avi study in April 2021 we have now commenced recruitment.
 - c. FLARE: Favipiravir +/- Lopinavir: An RCT of early antivirals: a randomised, double blind, 2x2 factorial placebo-controlled trial of early antiviral therapy in COVID-19
 - d. LUNAR – GSK funded virological sub-study looking at viral dynamics following administration of sotrivumab.
 - e. PANORAMIC – NIHR funded virological sub study looking at viral dynamics following administration of molnupiravir or paxlovid.
- We continue to be involved in national educational efforts linked with Industry

- a. AMS team were asked to be part of a global podcast called 'Infectious Thinking' to bring together experts to discuss important Infection related topics. This is currently available on Spotify.
- b. We continue to be part of the National Schools Competition organised by Pfizer Ltd on 'Superbugs' to generate awareness of antimicrobial resistance.

Sepsis

8.20 There was no named individual overseeing the running of the sepsis programme in 2021/22. Issues remained with the reporting and management of sepsis within Epic and the IPC team worked alongside the Epic team to create a new navigator to record the sepsis care bundle in. The sepsis clinical guideline and associated antimicrobial guidance was updated by the IPC team and a training programme to launch the new navigator and provide training on the new clinical guideline was designed by the lead practice educator for IPC.

Whilst there was no official lead the IPC team worked closely with the deteriorating child group to ensure that they were aware of the changes and approved them. Work needs to be undertaken this year to decide if sepsis will be formally managed as part of this group or if it will be a separate work stream within IPC.

Occupational Health

8.21 The Occupational Health Service is an in-house service. All applicants on receipt of a conditional job offer are assessed by occupational health prior to commencement to ensure that they fulfil the requirements around immunisation status for healthcare workers as per the Green Book. Applicants are not cleared as fit to commence in post until we have received this information or undergone the required screening. During 2021/22 OH screened 1,713 pre-placement forms and undertook 1,239 blood tests to ensure appropriate levels of immunity.

Influenza Vaccine

Final flu uptake figures for Healthcare Workers 2021/22 reached 57.5%. Whilst this was a drop from previous years it was acknowledged that across the NHS staff were vaccine weary. We had the second highest uptake amongst HCWs within NCL and were congratulated by the NHSE Immunisation Commissioning Manager.

Year	Percentage uptake of flu vaccinations for HCWs	Percentage increase/decrease
2015/16	48%	-
2016/17	62%	14% increase
2017/18	61%	1% decrease
2018/19	61%	0 change
2019/20	59%	1% decrease
2020/21	71.6%	12.6% increase
2021/22	57.5%	14.1% decrease

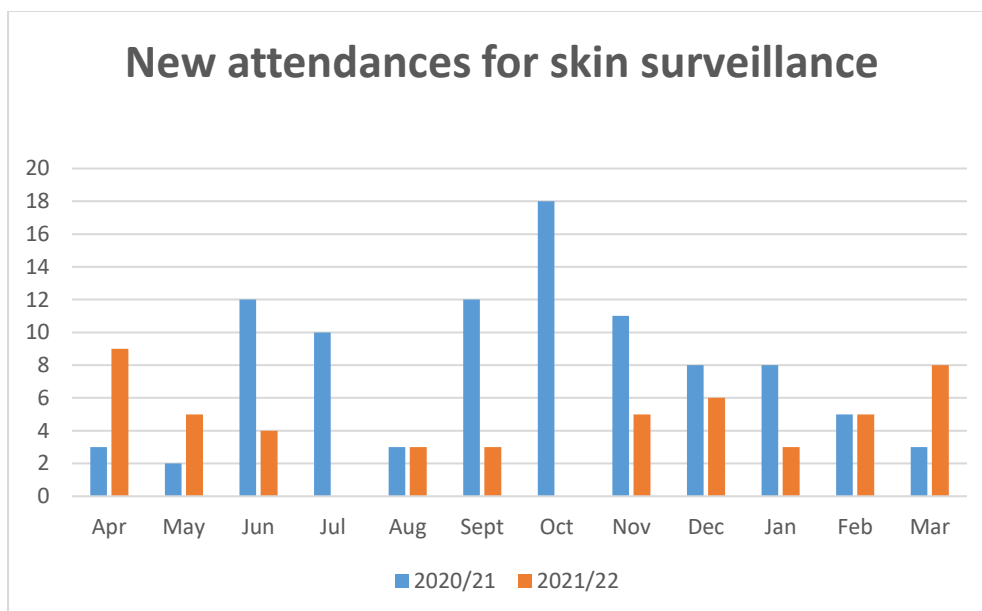
Exposure to Blood Borne Viruses

During 2021/22 there were 66 attendances at OH following a needlestick injury compared with 50 attendances 2020/21, 57 attendances for 2019/20, 65 attendances for 2018/19 and 91 attendances 2017/18.

It is disappointing to see an increase in needlestick injury exposures, particularly when so much work has taken place to ensure safer sharps are available within the Trust. The majority of incidents continue to occur during disposal.

Skin Surveillance

Dermatitis is an occupational hazard for health care workers. As such we review and advise all staff who have any skin reactions. Generally, the work-related skin reactions we see are linked to frequent handwashing and wearing of gloves. The wearing of gloves is classified as wet work. Overall attendances at OH with skin issues have reduced this year with 35 new attendees 2021/22 compared with 95 new attendees 2020/21.

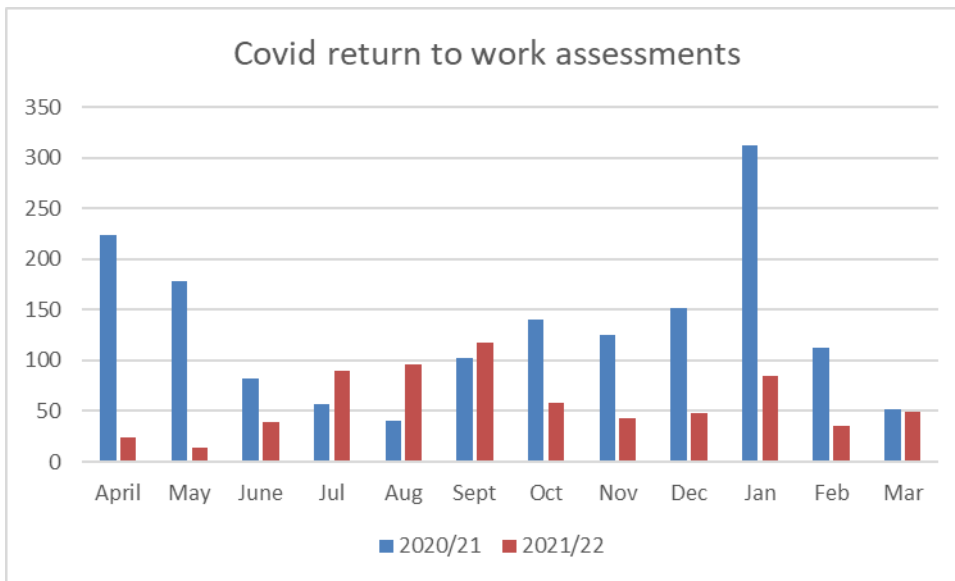


Covid 19

During the pandemic the OH team have taken on additional work. We have provided advice on shielding, self-isolating, getting tested, returning to work, travel abroad and other Covid related general enquiries that have been both work and non-work related. We have also provided advice around risk assessments.

Post Covid return to work assessments:

Early on in the pandemic a return-to-work pathway was developed by IPC for those with symptoms or a positive PCR test. OH undertook return to work assessments for all employees who had been self-isolating with symptoms or a positive PCR. This process ensured that staff only returned once they were well enough to do so.



Covid Vaccinations:

October 2020 saw the announcement that a Covid Vaccine roll out would commence in December. The Trust responded by setting up a Covid Vaccination planning group to oversee the planning and implementation of clinics to deliver the vaccine to all the staff that wished to be vaccinated.

Alternative routes to the vaccination have been set up for staff still requiring their second vaccines and new starters yet to be vaccinated.

9. COVID-19 response and Board assurance Framework (BAF)

Effective infection, prevention and control is fundamental to our efforts to respond to the COVID-19 pandemic. The purpose of this report is to provide assurance that Infection Prevention and Control (IPC) Measures have been reviewed in light of changes in national guidance to support management of Covid-19. The report provides assurance that the Trust meets the required standards, and that where there are gaps in performance, assurance, or mitigation there is a clear plan to manage this.

As our understanding of COVID-19 has developed, PHE and related guidance on required infection prevention and control measures has been published, updated and refined to reflect the learning. This continuous process will ensure organisations can respond in an evidence-based way to maintain the safety of patients, services users and staff.

NHS England developed and published a Board Assurance Framework to support providers to self-assess compliance with Public Health England (PHE) and other COVID-19 related IPC guidance. The use of the framework is not compulsory but is a useful source of internal assurance to support organisations to maintain quality standards at this time.

The Assurance Framework was first published on 4th May 2020 with several updates taking place since. Use of the framework is not compulsory, however its use as a source of internal assurance will support the organisation to maintain quality standards.

Legislative Framework

The assurance framework is developed from the existing 10 criteria in the Code of Practice on the

prevention and control of infection, which links directly to Regulation 12 of the Health and Social Care Act 2008 (Regulated Activities) Regulations 2014.

The other important legislation to note in this context is the Health and Safety at Work Act 1974 which places wide ranging duties on employers to protect the ‘health, safety and welfare’ at work of all their employees, as well as others on their premises, including temporary staff, visitors and the general public. The act also imposes a duty on staff to take reasonable care of health and safety at work for themselves and for others. Robust risk assessment is central to this. Where risk cannot be eliminated, it must be assessed, managed and mitigated. In the context of COVID-19 there is an inherent level of risk for NHS staff who are treating and caring for patients as well as for the patients themselves. All organisations must ensure that risks are identified, managed and mitigated effectively.

Response to SARS CoV2 (COVID-19)

A responsive IPC service has remained in place which has flexed up to cover 6/7 day a week service at the height of the pandemic. Essential IPC business has remained in place with quarterly audit days running and normal microbiology, virology, and appropriate investigation of healthcare associated infections.

In addition to this guidelines, flowcharts, FAQ’s and teaching sessions have been created and updated as guidance has been issued and subsequently amended in line with national policy. Testing has been established in the laboratory for symptomatic/asymptomatic patients, parents and symptomatic test.

Hospital Acquired COVID-19 Infections

There have been 21 COVID-19 infections in the Trust during the year 2021/22 which appear to be healthcare associated compared to 18 in the previous year. All hospital acquired cases were investigated by the IPC team. Many of the cases had confirmed positive parents, and this re-enforced the important of the hospital strategy to undertake parental screening as an important part of COVID-19 prevention.

The table below outlines the locations and dates of all infections over the course of the last year. There is no indication that these cases were linked.

Ward	Date of test	Days since admission tested positive	Classification
Elephant	02/08/2021	49	Hospital-Onset Healthcare-Associated
Pelican	16/09/2021	7	Hospital-Onset Indeterminate Healthcare-Associated
Eagle	09/11/2021	13	Hospital-Onset Probable Healthcare-Associated
Giraffe	11/12/2021	6	Hospital-Onset Indeterminate Healthcare-Associated
Squirrel Gastro	12/12/2021	83	Hospital-Onset Healthcare-Associated
Lion	24/12/2021	7	Hospital-Onset Indeterminate Healthcare-Associated
Eagle	24/12/2021	1	Community onset community acquired
Possum	26/12/2021	25	Hospital-Onset Healthcare-Associated
Eagle	28/12/2021	7	Hospital-Onset Indeterminate Healthcare-Associated
Elephant	30/12/2021	3	Hospital-Onset Indeterminate Healthcare-Associated
Giraffe	18/01/2022	5	Hospital-Onset Indeterminate Healthcare-Associated
Bear	21/01/2022	87	Hospital-Onset Healthcare-Associated
Robin	23/01/2022	35	Hospital-Onset Healthcare-Associated

Chameleon	16/02/2022	4	Hospital-Onset Indeterminate Healthcare-Associated
Bumblebee	16/02/2022	34	Hospital-Onset Healthcare-Associated
Seahorse PICU	22/02/2022	6	Hospital-Onset Indeterminate Healthcare-Associated
Flamingo CICU	27/02/2022	27	Hospital-Onset Healthcare-Associated
Leopard	03/03/2022	18	Hospital-Onset Healthcare-Associated
Squirrel Gastro	05/03/2022	281	Hospital-Onset Healthcare-Associated
Elephant	09/03/2022	3	Hospital-Onset Indeterminate Healthcare-Associated
Seahorse PICU	24/03/2022	5	Hospital-Onset Indeterminate Healthcare-Associated

Staff Testing and Risk Assessments

Lateral flow testing was rolled out across the Trust in December 2020. Staff continue to be able to access PCR testing in line with our staff testing guidance. Positive results lead to a robust risk assessment process being undertaken by the Infection Control Team (rather than Occupational Health) to ensure that all potential exposures are identified and managed in a way that minimises risks.

Outbreaks

There have been 2 outbreaks between 1st April 2021 and March 2022. .

The following services were affected:

Location	Number of positive staff/patients	Reported externally?
Anaesthetics	4	No
Mildred Creak Unit	4	Yes

The review of the cases has identified the following themes:

- Use of rest and break spaces
- Increased risk within MCU as patients frequently go home at the weekends as part of their therapy and then mix during the week.

Fit Testing

Fit testing is recognised as a key element of protection for staff. This is all recorded on a central database. The key challenges which we have faced are around consistency in the brand/make of FFP3 masks supplied centrally, particularly where this has meant we need to re-fit-test all relevant staff. There has also been a higher failure rate in some of the masks provided through the central system. A dedicated fit testing is in place providing fit testing to the organisation.

Infection Control Audits

The infection control team have continued the 'business as usual' approach to healthcare infections, and continue to run regular audits centrally as well as supporting infection control link audit days to ensure there is a continued focus on all aspects of infection control. There have been additional audits and programmes of work in response to COVID-19 including:

- Hands, Face, Space and Place Audits

Between October 2020 and March 2021, we ran regular bi-monthly audits to support best practice with our Hands Face Space Place Guidance in non-clinical areas.

They were audits facilitated by the Clinical Audit Manager with observations completed by directorate staff of their own workspaces. We saw progress, and our last audit results, in March 2021 were very positive, where we exceeded 95% in all standards.

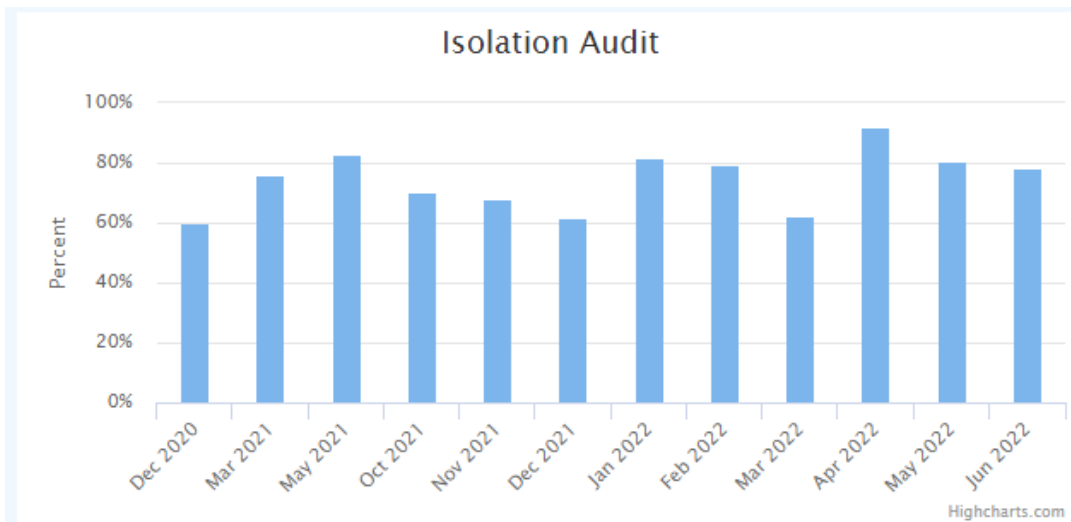
In 2021-22 audits continued with a different approach to the audits to support oversight of standards with a focus on the wearing of face masks and social distancing in non-clinical areas.

	June 2021	October 2021	November 2021	December 2021	January 2022
Type of audit	walk around was completed across the Trust on Monday 21st June by the Clinical Audit Manager	Health and Safety Team led reviews of individual office spaces			A request was made to review one specific building due to feedback from member of staff.
Compliance with standards					
	Findings	% of areas where all staff met this standard			
Face We must all wear a fluid repellent surgical mask everywhere in the hospital and everywhere on the hospital estate. There are only three exceptions: 1.If you are in an office on your own and the door is closed. 2.If you are eating or drinking and have arranged staggered breaks with colleagues so that people nearby will not remove their masks at the same time. 3.If you are outside and socially distanced.	Two hundred and fifty-two observations were undertaken in the main thoroughfare of the hospital over three separate time points. 249/252 (99%) of staff were wearing a fluid repellent surgical mask. Thirteen office areas were randomly reviewed with a walk round. 95% of staff in those areas were observed to be meeting the standard for wearing fluid repellent surgical masks	12/19 63%	7/11 64%	9/10 90%	0/5 (0%)
Space We must all practice good social distancing.	Not measured	16/19 84%	4/11 36%	8/10 80%	2/4 (50%)

<p>Keep 2m away from others wherever possible. Follow one-way systems and signage. And only use those workstations that are appropriately distanced from your colleagues.</p>					
<p>Key message</p>	<p>High level of compliance with face mask wearing was noted. It should be noted that staff responded positively when challenged about wearing of face masks. These felt like cases where masks had slipped or people had forgot to put them on, rather than specific or deliberate intentions not to wear them, through a lack of awareness or disagreement of policy.</p>	<p>There is significant relaxation of adherence to wearing face masks in our office spaces compared to our audit data and experience earlier in the pandemic. There has been some waning in compliance, perhaps reflecting lower public wearing of face masks in wider society and the relaxation of the requirement to do this in public spaces</p> <p>We are not consistently meeting our requirements to ensure that staff wear face masks in non-clinical areas. Social distancing was not well evident in the November 2021 walk around. This was prominent in the Dental department – where there were too many staff working in office spaces.</p>	<p>Level of compliance with wearing of face masks wearing is significantly higher than those reported to the H&S Committee and SLT in October and November.</p>	<p>Results shared back to the management teams for the relevant areas where face masks were note being worn</p>	

- Red-Amber-Green Pathway Audit

The red-amber-green pathways have been updated to become the viral respiratory pathways. Regular audits of the pathways are undertaken on the IPC quarterly audit days. The results show good compliance broadly. Use of the pathways has improved and the audit days are always an opportunity to identify any further areas of improvement.



Covid-19 Mandatory Training

A new online training module was rolled out in January 2021 to support staff in understanding how to keep safe and manage infection control risks.

90% of substantive staff have completed this training.

	GOSH: COVID19 Training Level 1 - No Specified Renewal	GOSH: COVID19 Training Level 2 - No Specified Renewal	Overall
Substantive staff	87%	93%	90%
All staff groups	62%	82%	74%

Board Assurance Framework (BAF)

The BAF is a live document and has been presented regularly to the trust board and executive management team since it was published in May 2020. Based on our self-assessment against the Assurance Framework, we identified a programme of work to support further implementation and improvement in our ways of working in response to COVID-19. This programme of work is regularly updated and any gaps in compliance or areas of risk are highlighted appropriately.

The largest area of risk currently identified is the around the lack of assurance around ventilation within the organisation and the identification that not all standard bedrooms in the trust were commissioned to 6 air changes when they were opened despite them being designed to 6 air changes. Mitigations in place include extended fallow times in these areas.

Care Quality Commission (CQC)

The CQC carried out a visit of the Dental Department in 2021. There were no IPC issues raised.

10. Recommendation

The Trust Board is asked to receive this report and note the content.

Part B - Programme of work

New projects:

Programme of Work of new project	Lead	Time frame	Progress to date	Complete/ Action required	Hygiene code
Plating following ventilation verification	IPC Team/Space & Place	Complete by Jan 2023	Business case approved	New	1, 2, 8
Surveillance-creation of a trust wide surveillance oversight group which will monitor all aspects of the surgical pathway	IPC Team	Commence ASAP	Held up due to COVID-19	Yes	1, 6
Ventilation- the team will work closely with the estates/ commissioning teams to create a standard user manual relating to ventilation forward staff to use on occupation of wards	IPC team/ Commissioning	commence April 2018	Manuals and user guides in place on an ad hoc basis across the trust. Format and content to be standardised in 19/20 Delayed due to COVID-19- will be rolled out in August 2022	Yes	1, 9
Relaunch of hospital intranet- IPC webpages	IPC Team	Commence April 2022	Update IPC webpages for and following launch of new intranet	New	4, 6, 9

Review the electronic filing system to ensure the system is clearly labelled and data is robustly stored	IPC PA	Commence Aug 2018	Commenced and ongoing but delayed due to COVID-19 and recruitment of new PA	Yes	1
Surveillance- All required data reported to PHE. RCA's currently taking place for HCAI Staphylococcus aureus infections To be expanded to Gram negatives in 19/20	IPC team/ Divisions	Commence Summer 2019	Delayed due to COVID-19. To be rolled out Summer 2022		1,3,5,8
Sepsis update and launch of new navigator	Lead PE/DIPC	Launch May 2022	Launch of new guideline and updated sepsis navigator.		1, 3, 9

Programme of work: Ongoing

Programme of ongoing Work	Lead	Time frame	Progress to date	Action required	Hygiene code
Audits- monitor wards/departments compliance with the annual audit plan for hand hygiene. Support divisions with improving compliance as and when needed.	IPC Team	On-going	Undertaken quarterly	No	1, 6, 9, 10
Audits- High impact and CVL infections are monitored on a monthly basis. Update the care bundles to reflect any improvements made in care since they were introduced	IPC Team	Ongoing	Undertaken quarterly	No	1, 6, 9, 10
Audits- conduct regular audits with the facilities and clinical users to assess the environment and standard of cleaning	IPC Team/Facilities	Ongoing	Undertaken quarterly Not undertaken due to covid demands and development of audit tool. Tool created and ready to launch Summer 2022.	Yes	1, 2
Audit- the team/IPC Links will audit compliance against policies in place across the trust should be monitored through audit. Examples of this include the isolation audit.	IPC team	Completed as part of IPC Link audit days	Undertaken quarterly	No	1, 7

Training- The IPC team will monitor and feedback training compliance with level 1 & 2 training	IPC Team	On-going	Feedback monthly at IPCC	No	6
Information dissemination- The team will update/create patient/staff infection leaflets pertinent to infection prevention control	IPC team	On-going	Updated bi-annually	Yes-ensure up to date	3
Information dissemination- the team will review and update policy and guidelines to ensure they reflect new evidence and best practice	IPC team	On-going	Updated as required	Yes-ensure up to date	1, 5, 6, 9
Surveillance- The team will continue to report and collect information on mandatory surveillance categories required by PHE. Where the infections are healthcare associated a root cause analysis +/- RCA review meeting will take place.	IPC Team	On-going	Updated in and submitted to PHE Targets for 21/22: Cdiff <8 E-coli <8 Pseudomonas aeruginosa <8 Klebsiella sp <12	No	1, 5, 9
Work with the EPR teams to ensure the successful development and rollout of EPIC and RL solutions	IPC team/ EPR	Ongoing	Regular twice monthly meeting	No-ongoing	1, 2, 4, 9
Water management- the team will ensure	IPC team	On-going	Monthly monitoring meeting and	No	1, 8, 9

that the Space & Place Team co-ordinate the testing and management of appropriate water outlets for pseudomonas aeruginosa and legionella in close collaboration with the wards and the IPC Team. The team will access and provide guidance on any other waterborne pathogens which may cause disease in patients/staff.			quarterly water safety group		
Divisional IPC support- the team will provide infection control support to the divisions at divisional infection control meeting and on a day to day basis. In order to facilitate this the team will each lead on certain divisions.	IPC Team	On-going.	Monthly meetings	No	1
The team will continue to manage the fit testing service which sits within Core Clinical Services	IPC Team	On-going	Compliance reported to the IPCC.	No	10