Trust Board

Gateshead Health NHS Foundation Trust

Report Cover Sheet

Agenda Item: 10

Date of Meeting:	**29th January 2020**			
Report Title:	**Healthcare Associated Infection (HCAI) Performance Report**			
Purpose of Report:	To update and advise the Trust Board on the current performance of HCAI mandatory reporting for Gateshead Health NHS Foundation Trust throughout the 2019 – 20 period.			
	Decision: ☐	**Discussion:** ☐	**Assurance:** ☒	**Information:** ☐
Trust Goals that the report relates to: (Including reference to any specific risk)	**Goal 1** Working with partners, we will manage and improve the health of the population of Gateshead, promoting wellbeing and preventing the occurrence and progression of ill-health wherever possible. **Goal 2** All the services we deliver will be good or outstanding when assessed against being safe, effective, caring, responsive, and well-led. **Goal 3** In all locations and settings of delivery, our patients will experience excellent, timely and seamless care that meets their individual needs.			
Recommendations: (Action required by Board of Directors)	To note the Trust performance on mandatory HCAI reporting and other infection prevention activity as required.			
Financial Implications:	**Yes** - HCAI and treatment is costly across the whole healthcare economy, delays discharge and increases length of hospital stay. Financial sanctions may also be applied by NHS England and Commissioners.			
Risk Management Implications:	**Yes** - HCAI has implications for the whole healthcare economy. The expertise, advice and support of the IPC team are crucial in ensuring that the risk and spread of infection is minimised.			
Human Resource Implications:	**Yes** – organisational culture and behaviours, engagement, responsibility and ownership required across the whole healthcare economy.			
Trust Diversity & Inclusion Objective that the report relates to: (*including reference to any specific implications and actions*)	**Objective 1** All patients receive high quality care through streamlined accessible services with a focus on improving knowledge and capacity to support communication barriers.			
Author:	**Louise Caisley** - Head of Infection Prevention and Control			
Presented by:	**Hilary Lloyd** - Director of Nursing, Midwifery, AHPs & Quality Joint Director of Infection Prevention and Control (DIPC)			

1.0 EXECUTIVE SUMMARY

The Trust adopts the national aspiration of attaining a zero tolerance approach to all avoidable infections including MRSA blood stream infections.

To the end of Q3 The Trust has reported one (**1**) Hospital-onset Meticillin resistant *Staphylococcus aureus* (MRSA) blood stream infection (BSI) positive samples with a **0.57** rate per 100k bed days and two (**2**) Community-onset Meticillin resistant *Staphylococcus aureus* (MRSA) blood stream infection (BSI) positive samples.

The Trust CDI objective for 2019/20 is forty (**40**) set against healthcare associated samples and an annual rate of 23.6 per 100k bed days. The Trust has reported thirty two (**32**) healthcare associated CDI samples to the end of Q3. Nineteen (**19**) hospital onset healthcare associated (HOHA) and thirteen (**13**) community onset healthcare associated (COHA). Twenty nine (**29**) cases have been reviewed and twenty three (**23**), where no lapses in care identified, were successfully presented for appeal. Good practice and learning was identified and shared. Three (**3**) cases from Q3 are awaiting review. Therefore, the Trust currently reports nine (**9**) CDI positive samples against the objective of forty (**40**), although this may change following reviews. Eighteen (**18**) indeterminate/community associated samples have been reported.

The Trust continues to report the lowest incidence of Meticillin sensitive *Staphylococcus aureus* (MSSA) BSI in the North East region for Q3: reporting five (**5**) Hospital-onset MSSA cases/rate of 2.9 per 100k bed days demonstrating a significant reduction from the same period 2018/19; forty two (**42**) community-onset samples reflecting an increase from the same period 2018/19.

Reporting of Gram negative BSI became mandatory from April 2019, at the end of Q3:

- *Escherichia coli* (*E.coli*): The Trust reports thirty six (**36**) Hospital-onset samples with a rate of 20.5 per 100k bed days and one hundred and thirty three (**133**) Community-onset samples.
- *Pseudomonas aeruginosa*: The Trust reports seven (**7**) Hospital-onset samples with a rate of 4.0 per 100k bed days and eleven (**11**) Community-onset samples.
- *Klebsiella spp*: The Trust reports seven (**7**) Hospital-onset samples with a rate of 4.0 per 100k bed days and thirty seven (**37**) Community-onset samples.

During Q3 the Trust has experienced one (**1**) PII due to *C. difficile* on CCD and three (**3**) PII due to confirmed Norovirus infections affecting wards 4, 8 and 24. At the time of reporting all wards have been cleaned and re-opened.

Annual surveillance of Influenza activity has been implemented in the Trust since week 40. In week 46 PHE identified that although nationally influenza was not circulating, influenza activity in the North East had increased, with Influenza A positivity in respiratory samples substantially higher than the national average. This increased early onset of influenza is reflected in the positive samples with the Trust reporting three hundred and ninety five (**395**) positive samples of hospitalised Influenza A samples to end of Q3. Whereas, eighteen (**18**) confirmed positive A/B samples during the same period in 2018/19.

NHS England have identified that for many years the NHS standard contract has included targets relating to MRSA BSI and CDI, which have achieved year-on-year reductions in the rates of these infections. Proposed changes to the standard contract for 2020/21 indicate that NHS England and NHS improvement are to set additional annual Trust and CCG level BSI reductions for MSSA, E. coli, Klebsiella and Pseudomonas which will be reflected in the contract. Furthermore, NHS England also proposes removing the current financial sanctions for MRSA BSI and CDI, deeming them to be inconsistent with each other and no longer fit for purpose.

2.0 MANDATORY HCAI SURVEILLANCE

2.1 Meticillin Resistant *Staphylococcus aureus* (MRSA) Blood Stream Infections (BSI)

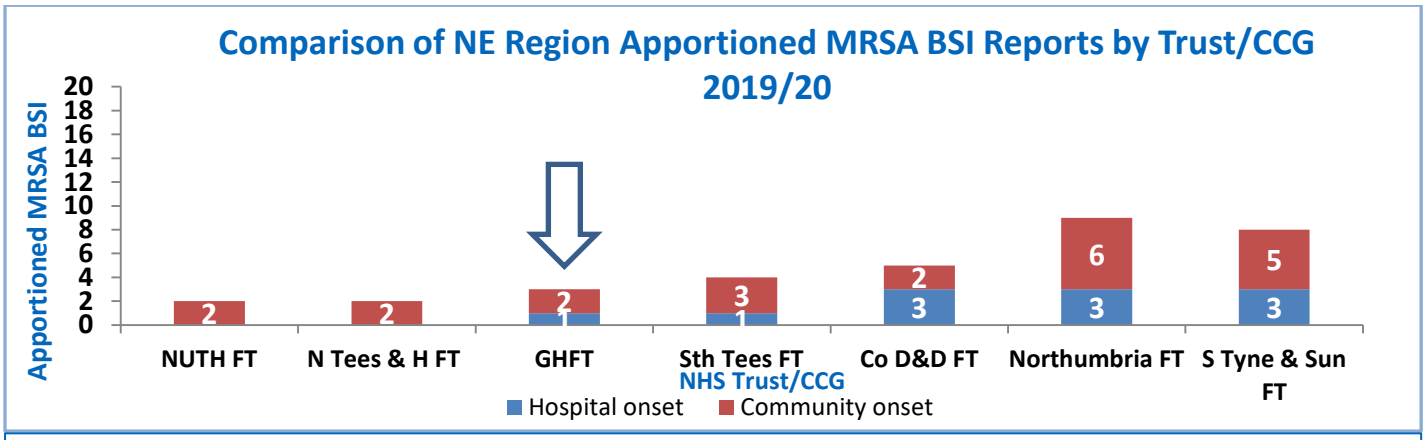
With regard to patient safety and quality the Trust adopts the national aspiration of attaining a zero tolerance approach to all avoidable infections including MRSA blood stream infections (BSI). All positive Community-onset MRSA samples are attributed to the Newcastle and Gateshead Clinical Commissioning Group (CCG).

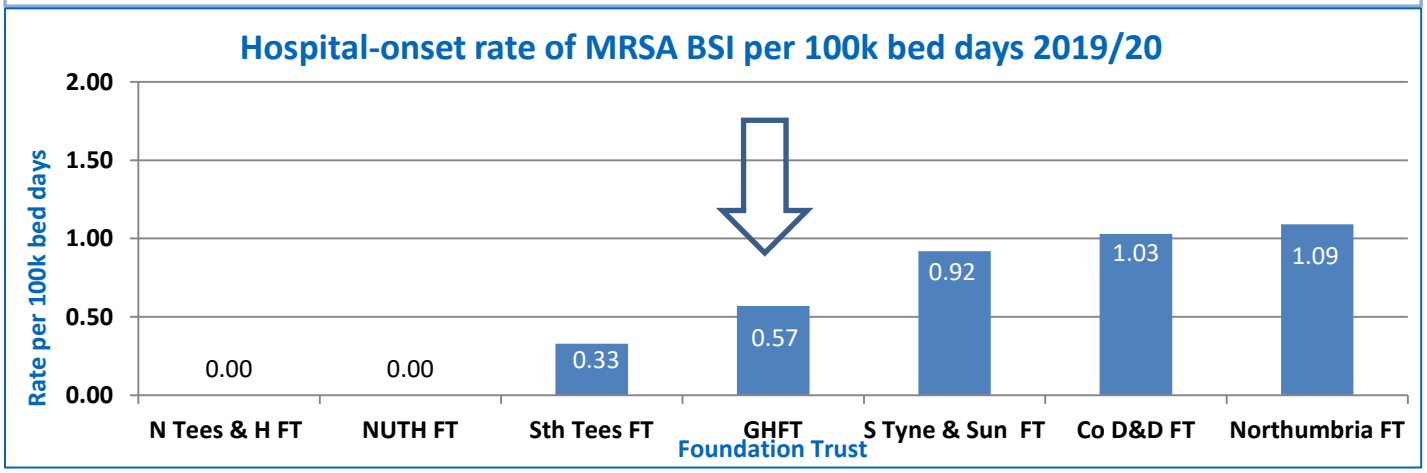
The Trust has reported one (**1**) Hospital-onset samples of MRSA BSI to end of Q3 with a rate of **0.57** per 100k bed days and two (**2**) Community-onset MRSA BSI identified in *table 1*.

The hospital-onset case from Q3 was investigated in line with revised post infection review (PIR) and identified to be linked to soft tissue damage in a patient colonised with MRSA.

Table 1 **- Acute Trust Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Hospital-onset MRSA BSI	0	0	0	0	0	0	0	1	0			
Cumulative YTD	**1**											
2018/19 data = **2/0**	0	0	0	0	0	0	0	2	0	0	0	0

Table 1 **- Community Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Community-onset *MRSA* BSI	0	0	0	0	1	0	0	0	1			
Cumulative YTD	**2**											
2018/19 data = **2/0**	0	0	1	0	1	0	0	0	0	0	0	0





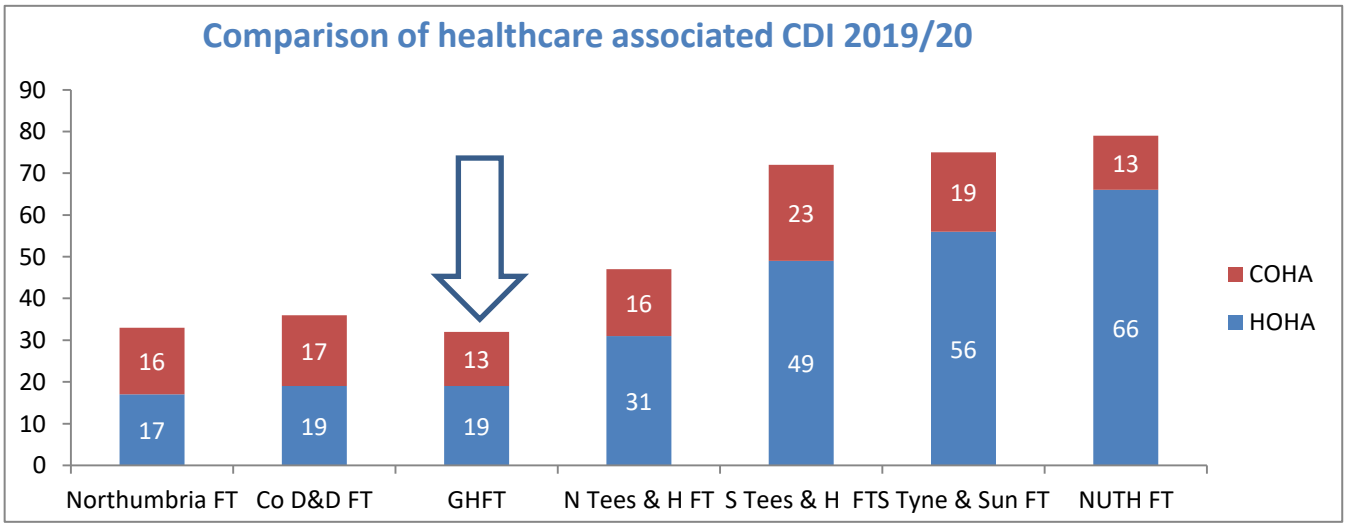
2.2 *Clostridium difficile* Infection (CDI)

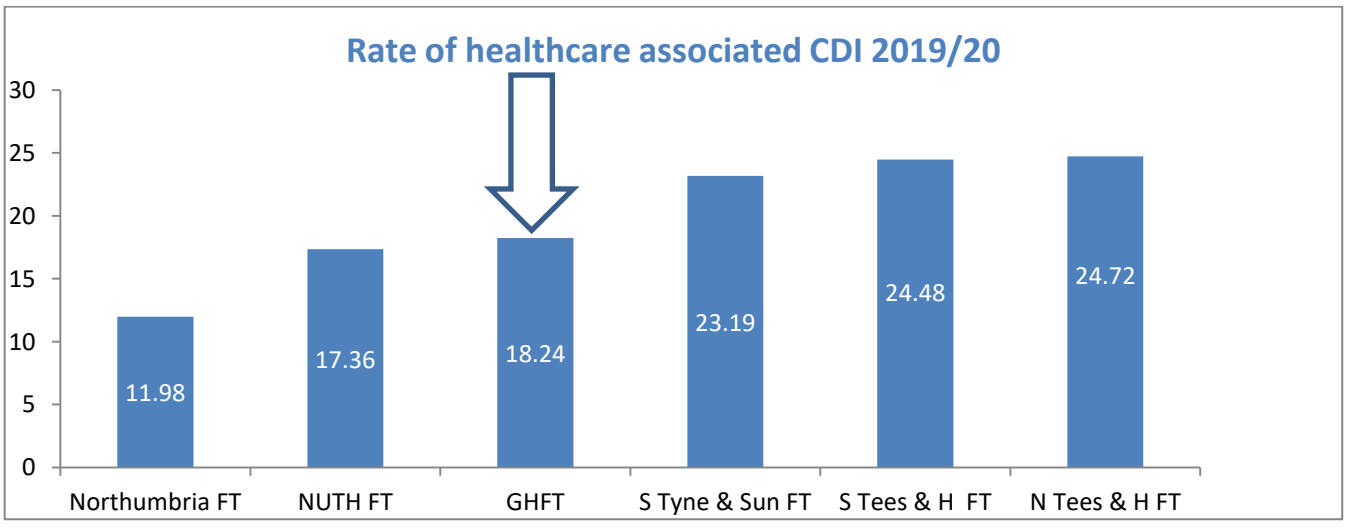
Clostridium difficile infection (CDI) is an unpleasant, and potentially severe or fatal infection that occurs mainly in elderly and other vulnerable patient groups, especially those who have been exposed to antibiotic treatment. Reduction of CDI continues to present a key challenge to patient safety across the Trust.

The Trust CDI objective for 2019/20 is forty (**40**) set against healthcare associated samples and an annual rate of 23.6 per 100k bed days. Indeterminate/community associated samples are allocated to the CCG.
To the end of Q3 the Trust has reported thirty two (**32**) healthcare associated samples

- nineteen (**19**) hospital onset healthcare associated (HOHA) *cases that are detected in the hospital two or more days after admission*
- thirteen (**13**) community onset healthcare associated (COHA) *cases that occur in the community (or within two days of admission) when the patient has been an inpatient in the Trust reporting the case in the previous four*
- twenty nine (**29**) cases have been presented for review and twenty three (**23**), where no lapses in care identified, successfully presented for appeal. Good practice and learning was identified and shared
- three (**3**) of Q3 cases are awaiting review.
- the Trust reports nine (**9**) CDI positive samples against the objective of forty (**40**).

To the end Q3 there have been eighteen (**18**) indeterminate/community associated samples.





2.3 Meticillin Sensitive *Staphylococcus aureus* (MSSA) Blood Stream Infections (BSI)

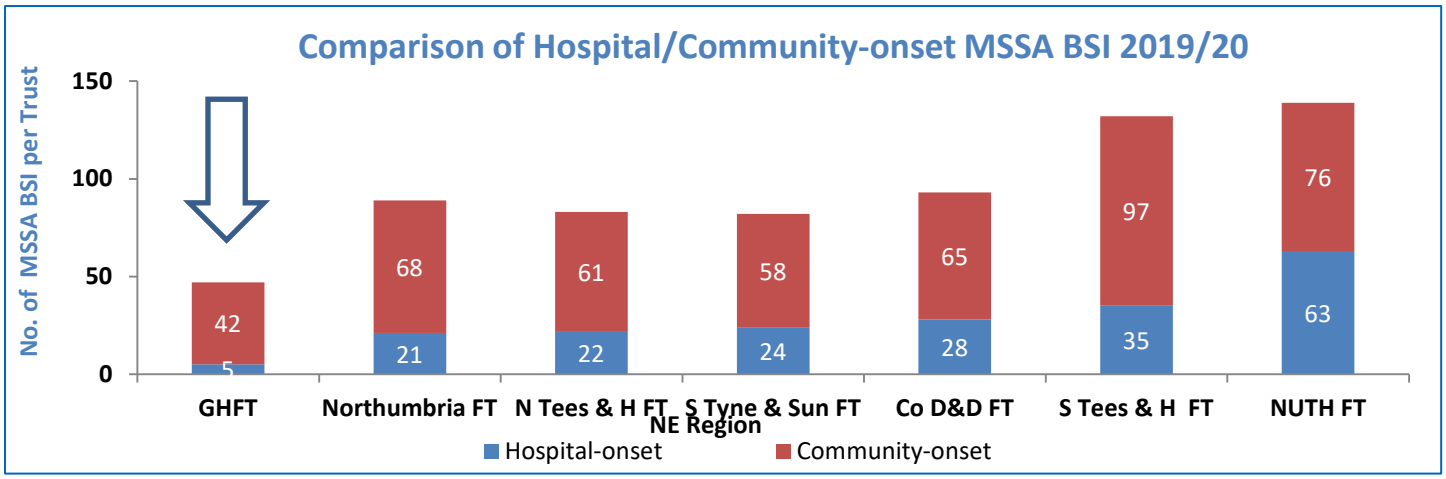
Reporting of MSSA BSI is a mandatory requirement and collated nationally by PHE for all Trusts although currently there are no established national improvement objectives to benchmark against, under the proposed changes to the NHS Standard Contract the Trust will be allocated a target for 2020/21.

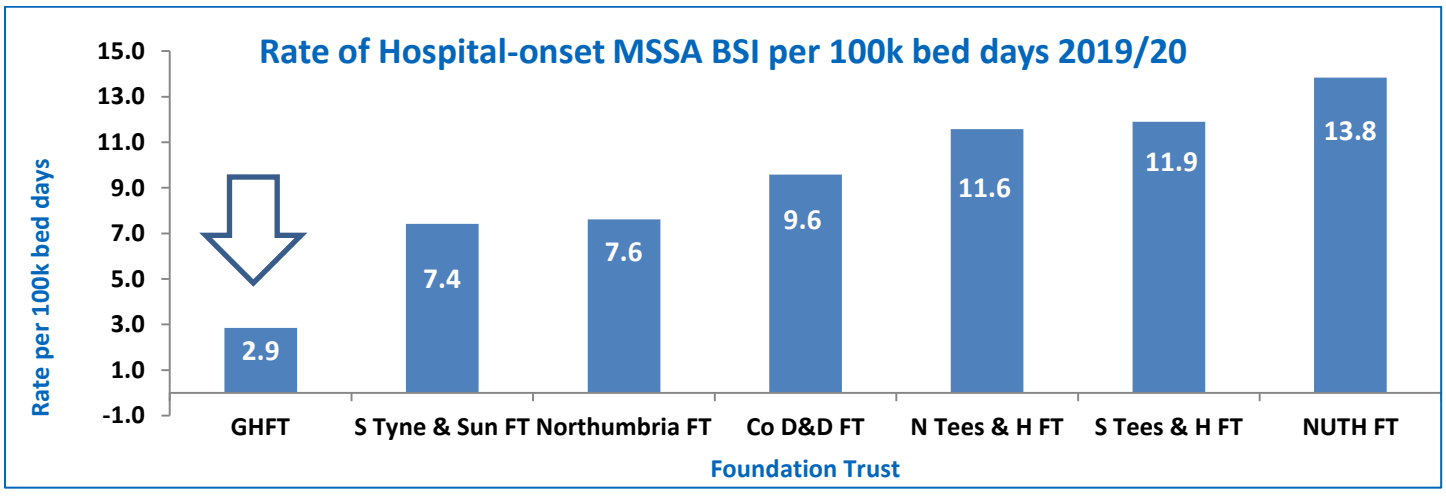
In terms of improving patient safety and continuous development a 10% internal performance improvement has been applied for 2019/20.

Table 3 indicates the number of apportioned MSSA BSI against 2018/19 as a comparison and reports five (**5**) Hospital-onset samples and forty two (**42**) Community-onset samples to date. The increase in the number of community-onset MSSA BSI is considered to be linked to the increased incidence of influenza in the preceding month

***Table 3* - Acute Trust Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Hospital-onset MSSA BSI	**0**	**0**	**2**	**1**	**0**	**0**	**2**	**0**	**0**			
Cumulative YTD	**5**											
2018/19 Actual = **17**	**0**	**1**	**0**	**2**	**2**	**2**	**1**	**2**	**2**	**4**	**0**	**1**

***Table 3* - Community Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Community-onset MSSA BSI	**7**	**3**	**3**	**2**	**5**	**3**	**3**	**4**	**12**			
Cumulative YTD	**42**											
2018/19 Actual = **45**	**2**	**4**	**4**	**4**	**5**	**0**	**5**	**4**	**9**	**2**	**2**	**5**





3.0 GRAM-NEGATIVE BLOOD STREAM INFECTIONS (GNBSI) - ENGLAND ONLY

A national ambition to reduce healthcare associated GNBSI by 50% by March 2021 was introduced from April 2017 across the whole health care economy in England. The objective has since been reviewed under the Governments 5 year Antimicrobial Strategy and has now advised a 25% reduction of E.coli by 2020/21 and the full 50% reduction by 2023/24. Under the proposed changes to the NHS Standard Contract, the Trust will be allocated a target for GNBSI for 2020/21.

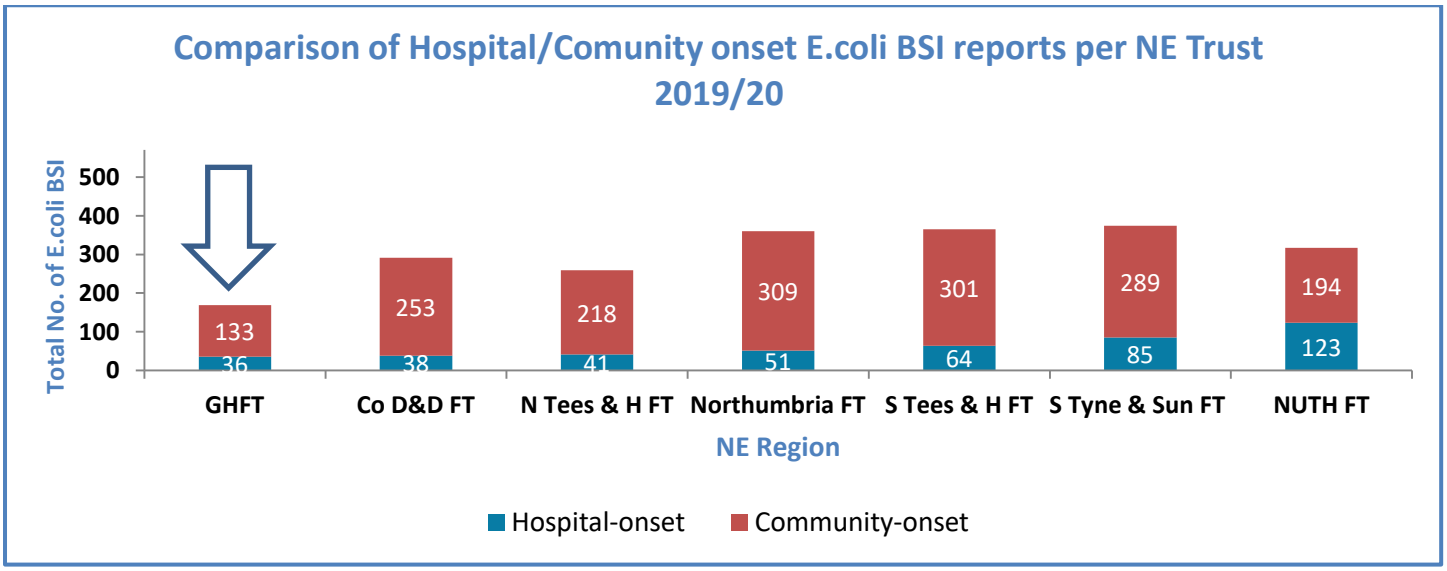
The following data representing *E. coli*, *Klebsiella* species and *Pseudomonas aeruginosa* blood stream infections (BSI) demonstrate that the main proportion of BSI occur within the primary and social care environment. A joint action plan has been formulated with Newcastle Gateshead CCG and is being reviewed for 2019/20.

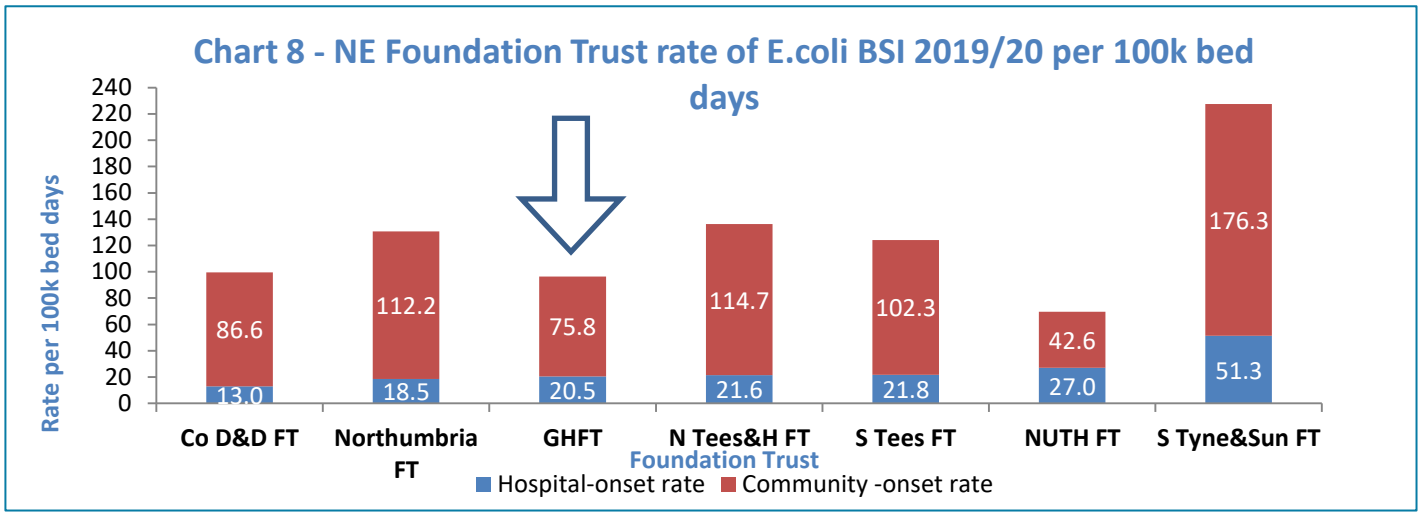
3.1 *Escherichia coli* BSI (E. coli)

The Trust aims for an annual ≥10% performance improvement in line with the current national ambition reporting thirty six (**36**) Hospital-onset samples and one hundred and thirty three (**133**) Community-onset *E.coli* BSI samples to end Q3 as indicated in *table 4*.

***Table 4* - Acute Trust Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Hospital-onset *E-coli* BSI	**3**	**5**	**2**	**5**	**4**	**3**	**4**	**4**	**6**			
YTD 10% objective = **40**	**36**											
2018/19 Actual =**44**	**3**	**4**	**3**	**3**	**4**	**7**	**3**	**2**	**5**	**3**	**3**	**4**

***Table 4* - Community Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Community-onset *E-coli* BSI	**14**	**10**	**16**	**23**	**16**	**13**	**13**	**12**	**13**			
YTD 10% objective = **206**	**133**											
2018/19 Actual =**229**	**20**	**22**	**21**	**20**	**21**	**22**	**17**	**19**	**11**	**23**	**15**	**18**





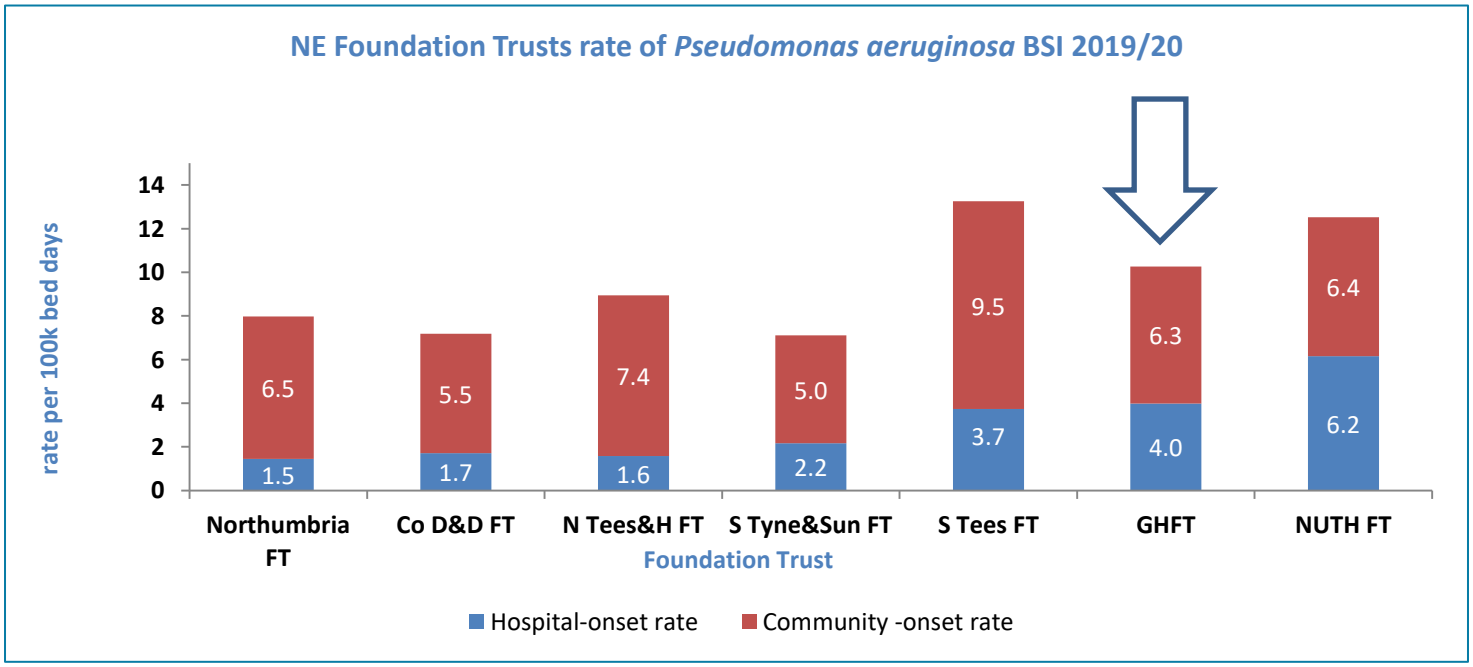
3.2 *Pseudomonas aeruginosa* BSI

Pseudomonas aeruginosa is a common opportunistic Gram-negative pathogen often found in soil and ground water. It rarely affects healthy individuals however can cause a wide range of infections, particularly in those with a weakened immune system. In hospitals, the organism can contaminate devices that are left inside the body, such as respiratory equipment and urinary catheters. *P. aeruginosa* is also resistant to many commonly-used antibiotics.

The Trust reports seven (**7**) Hospital-onset samples with a rate of **4.0** per 100k bed days and eleven (**11**) Community-onset samples to the end Q3

Table 5 **- Acute Trust Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Hospital-onset (HO) *P. aeruginosa BSI*	**2**	**0**	**2**	**0**	**1**	**0**	**1**	**1**	**0**			
Cumulative YTD	**7**											
HO *P. aeruginosa BSI 2018/19 = 5*	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**

Table 5 **- Community Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Community-onset (CO) *P. aeruginosa* BSI	**4**	**1**	**0**	**1**	**1**	**0**	**1**	**2**	**1**			
Cumulative YTD	**11**											
CO *P. aeruginosa* BSI 2018/19 = 15	**0**	**1**	**0**	**3**	**0**	**2**	**0**	**2**	**3**	**0**	**1**	**1**



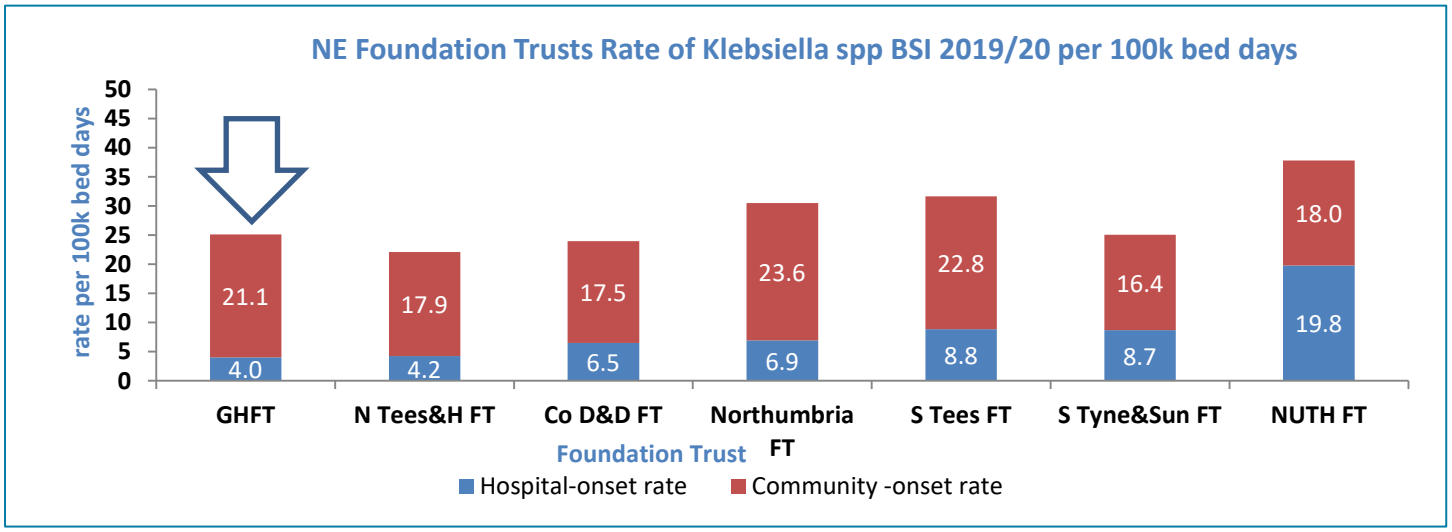
3.3 *Klebsiella species* BSI

Klebsiella species are a type of bacteria that are found ubiquitously in the environment and also in the human intestinal tract and are commonly associated with a range of HCAI. In healthcare settings, *Klebsiella* infections are seen in vulnerable, immunocompromised and unwell patients who have other co-morbidities and who are receiving treatment for other conditions.

The Trust reports seven (**7**) Hospital-onset samples with a **4.0** rate per 100k bed days and thirty seven (**37**) Community-onset samples to date.

***Table 6* - Acute Trust Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Hospital-onset (HO) *Klebsiella spp. BSI*	**0**	**0**	**0**	**0**	**1**	**2**	**1**	**2**	**1**			
Cumulative YTD	**7**											
HO *Klebsiella spp. BSI 2018/19* = ***16***	**0**	**1**	**2**	**0**	**0**	**3**	**1**	**1**	**1**	**2**	**4**	**2**

***Table 6* - Community Data**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Community-onset (CO) *Klebsiella spp.* BSI	**5**	**2**	**6**	**3**	**1**	**5**	**6**	**5**	**4**			
Cumulative YTD	**37**											
CO *Klebsiella spp.* BSI 2018/19 = **39**	**4**	**2**	**4**	**3**	**4**	**3**	**2**	**6**	**4**	**4**	**0**	**0**



4.0 PERIODS OF INCREASED INCIDENCE (PII) AND OUTBREAKS

An outbreak is the occurrence of two or more actual or potentially related infections within a ward/department/area of practice within the Trust. This is also referred to as a 'Period of Increased Incidence' (PII) for clusters of known/unknown infections.

The Trust has experienced four (**4**) PII to the end Q3.

In September the PII involved increased instance of *C difficile* on CCD. In October 2019 a MDT meeting considered the management of the CDI PII on CCD. Remedial actions taken included; enhanced cleaning of CCD and improvement work around hand sanitisers. Actions identified to prevent further cases suggested the need for an additional hand wash basin to increase hand hygiene facilities. The possibility of creating additional isolation cubicles on CCD and review of cleaning methodology.

The PII in October and November involved Norovirus on 3 wards. These PII were managed consistent with the outbreak policy and had minimal disruption to bed occupancy and patient flow.

Table 7 indicates the number of PII by month against 2018/19.

***Table 7* - Outbreaks & Periods of Increased Incidence (PII)**	**Q1**			**Q2**			**Q3**			**Q4**		
	Apr	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
2019/20	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**2**	**0**			
YTD	**4**											
2018/19 Actual = 11	**1**	**6**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**

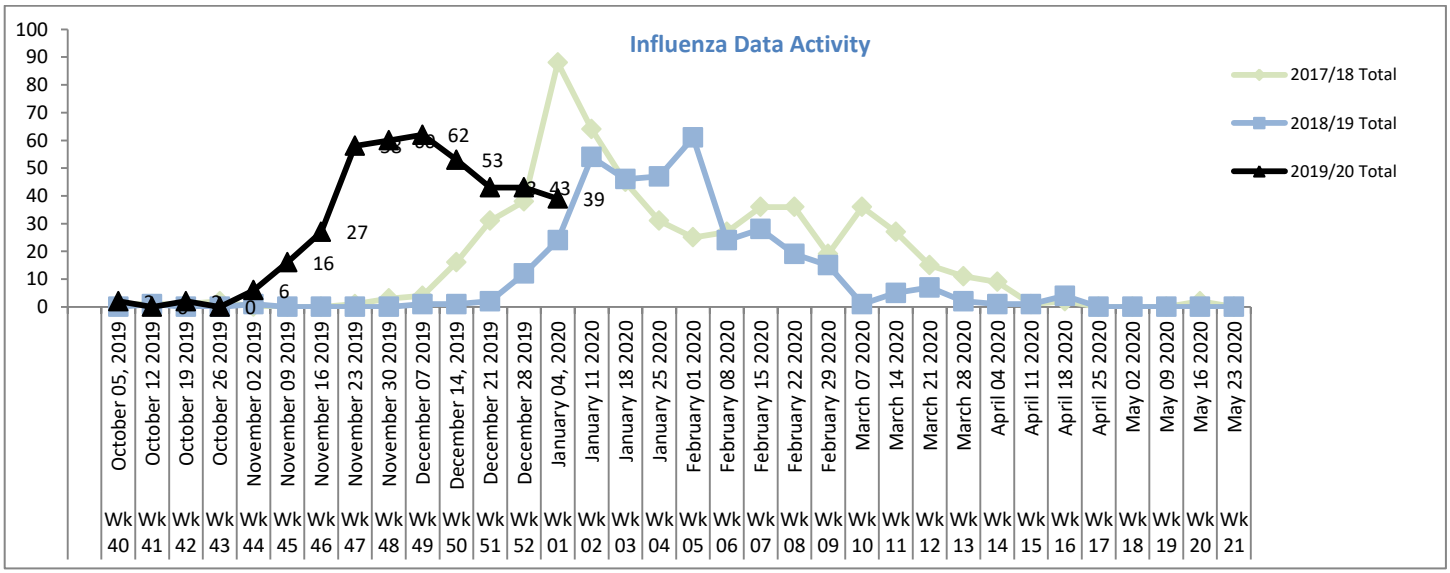
5.0 Influenza activity

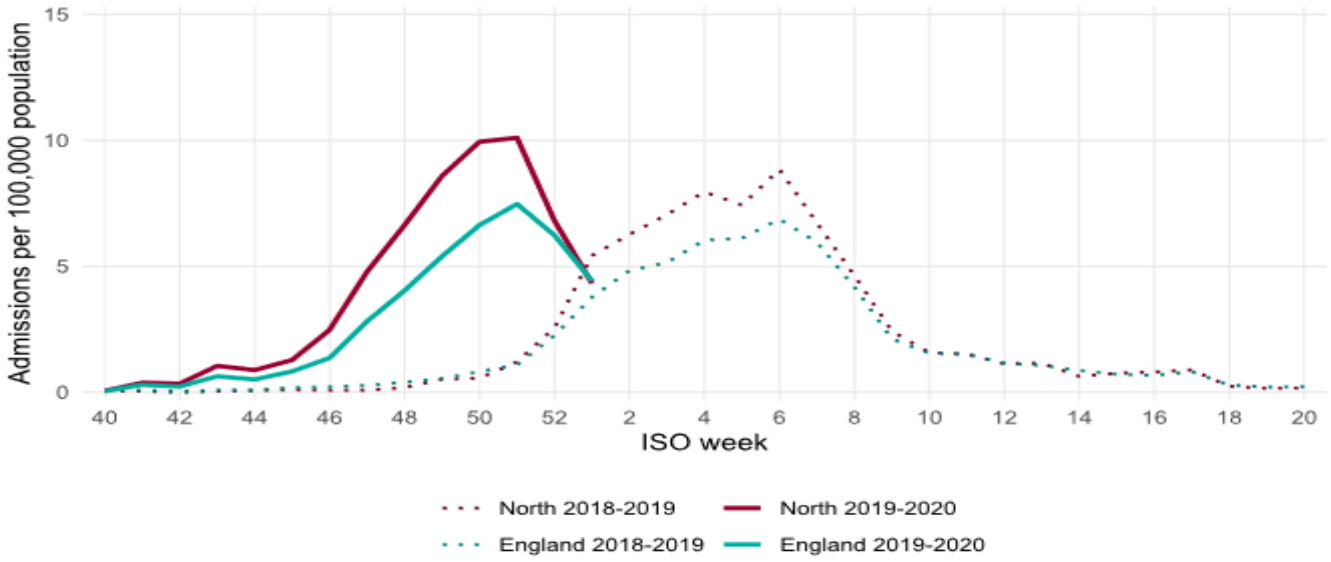
Influenza is a highly infectious, acute viral respiratory tract infection which has a usual incubation period of one to three days. There are two types of influenza virus (Type A and B) that affect people.

Annual surveillance of Influenza activity has been implemented in the Trust since week 40 (October 1st 2019). In week 46 PHE identified that although nationally influenza was not circulating, influenza activity in the North East had increased, with Influenza A positivity in respiratory samples substantially higher than the national average. This is reflected in the Trust reporting three hundred and ninety five (**395**) positive samples of hospitalised Influenza A/B samples to end of Q3. This is in comparison to eighteen (**18**) confirmed positive A/B samples for the same period 2018/19 one hundred and two (**102**) confirmed positive A/B samples during the same period in 2017/18.

Moving into Q4, in week 1 PHE highlighted that although nationally influenza activity remained high, the number of newly reported outbreaks of influenza-like illness in the North East was low.

The chart below demonstrates the current confirmed positive influenza samples against 2018/19 and 2017/18 data to date demonstration the influenza activity within the Trust, mirroring regional and national early onset presented in the PHE subsequent chart.





The Infection Prevention and Control Team and Consultant Clinical Microbiologists provide advice, guidance and daily monitoring with regard to patient flow and bed management to ensure patient and staff safety remains a top priority.

Louise Caisley
Head of Infection Prevention and Control