Infection Prevention Report Q1 June 2022
Infection Prevention Team

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Blackburn with Darwen Borough Council

Lancashire County Council

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Introduction

The purpose of this report is to provide an update on the healthcare associated infections (HCAIs) which are subject to mandatory surveillance, and progress towards trajectories where appropriate. The work of the Infection Prevention Team from Lancashire County Council during Quarter 1 2022/23 is also included. The data includes the 8 Clinical Commissioning Groups (CCGs) in Lancashire and South Cumbria, prior to their dissolution, and the subsequent Integrated Care System (ICS).

It is recognised that some infections are inevitable as a result of healthcare, but the vision of the Infection Prevention Society is that no person is harmed by a preventable infection. HCAIs have a significant impact on morbidity and mortality whilst carrying a financial risk due to unscheduled care and prescribing costs. There are many HCAIs, but the national focus is on Meticillin resistant *Staphylococcus Aureus* (MRSA) blood stream infections; Meticillin Sensitive *Staphylococcus Aureus* (MSSA) blood stream infections; Gram-negative blood stream infections including *Escherichia coli* (*E. coli*), *Pseudomonas* and *Klebsiella*; and *Clostridioides difficile* infections (CDI).

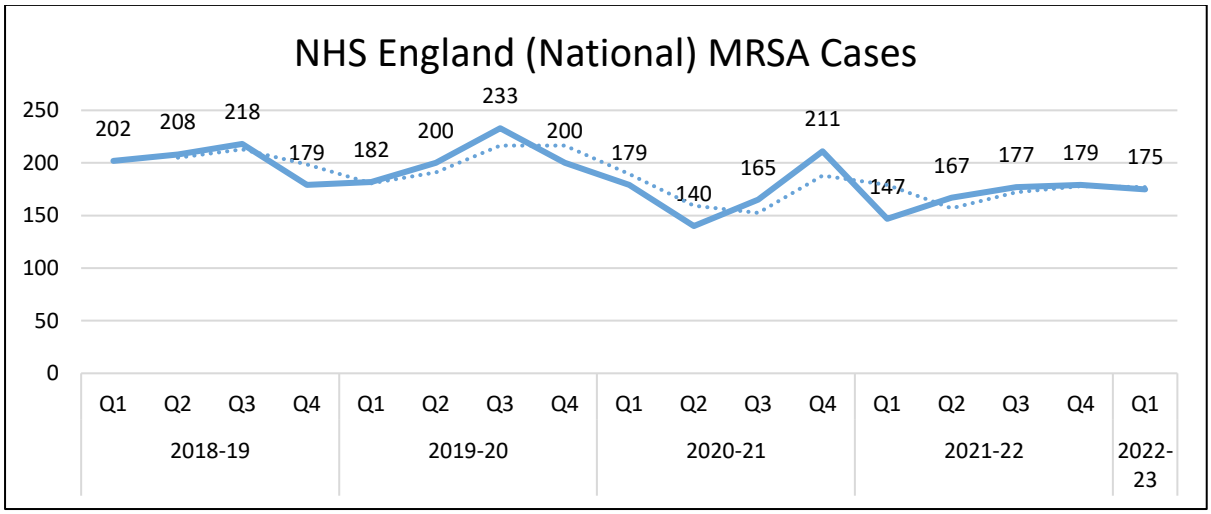
Laboratories within the Acute Trusts submit the data for reportable infections onto the Data Capture System (DCS) managed by the UK Heath Security Agency (UKHSA). This data is checked and locked down on the 15th of each month, but minor changes, especially linked to the rates, sometimes occur after this date. The data reported throughout this report is for the population registered with GPs in the CCGs and this may vary slightly from the residents' data.

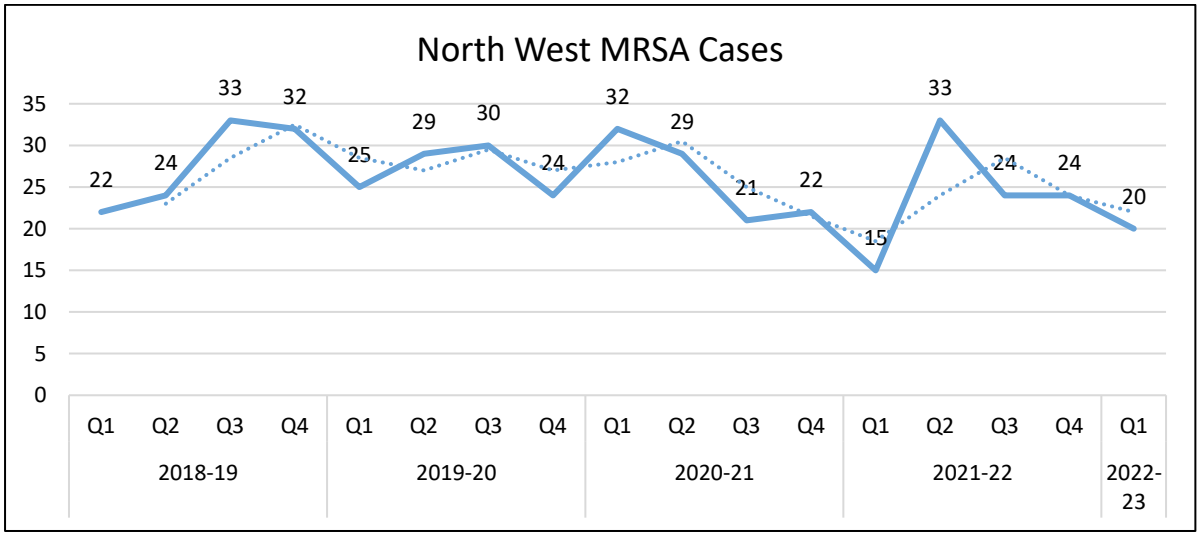
MRSA

The rate has remained stable since a considerable decrease between 2007 and 2014. A zero tolerance continues.

National data

The chart below shows the number of MRSA cases and the rolling average by month since April 2018.





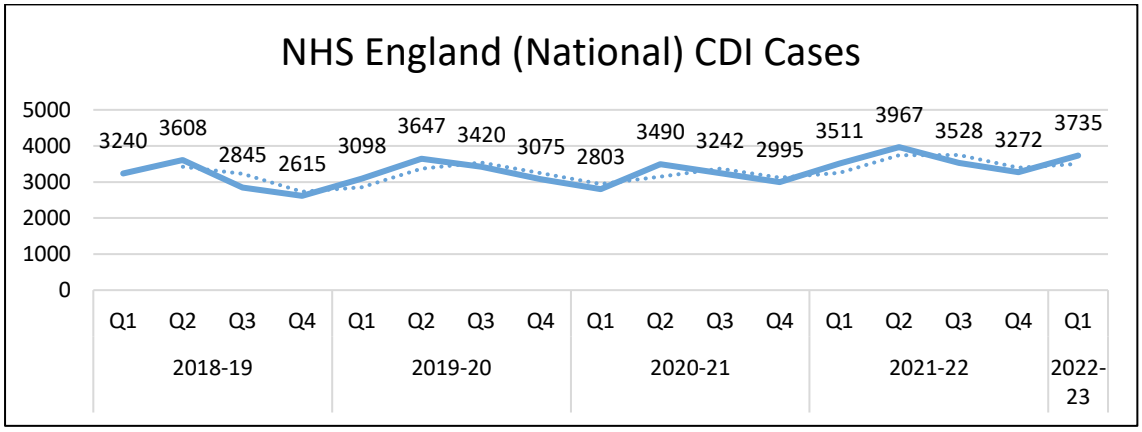
ICS & CCG data

There has been 1 MRSA blood stream infection reported in Q1. This was in a Blackburn with Darwen resident and is attributed to ELHT as a contaminant. In 2021-22 there were 4 cases in Q1, so there has been an 75% reduction on last years cases across the ICS.

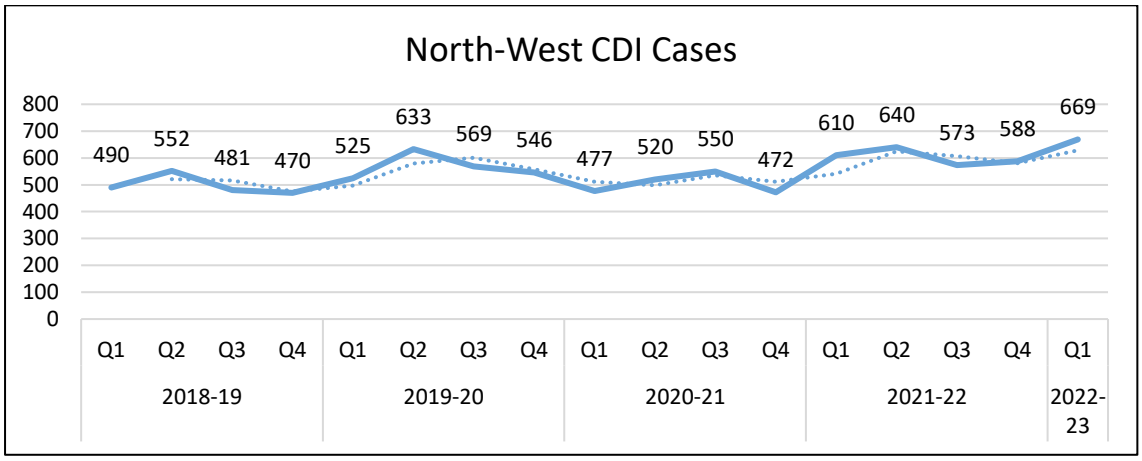
Clostridioides difficile infection

The NHS Standard Contract 2022/23 requires NHS trusts to minimise rates of Clostridioides difficile infections (CDI).

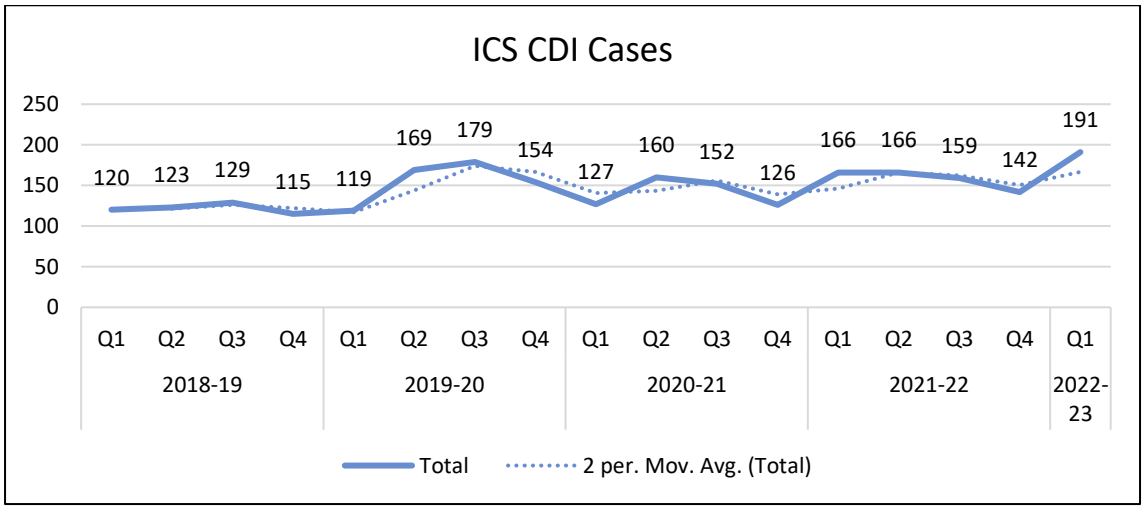
National data



North-West data



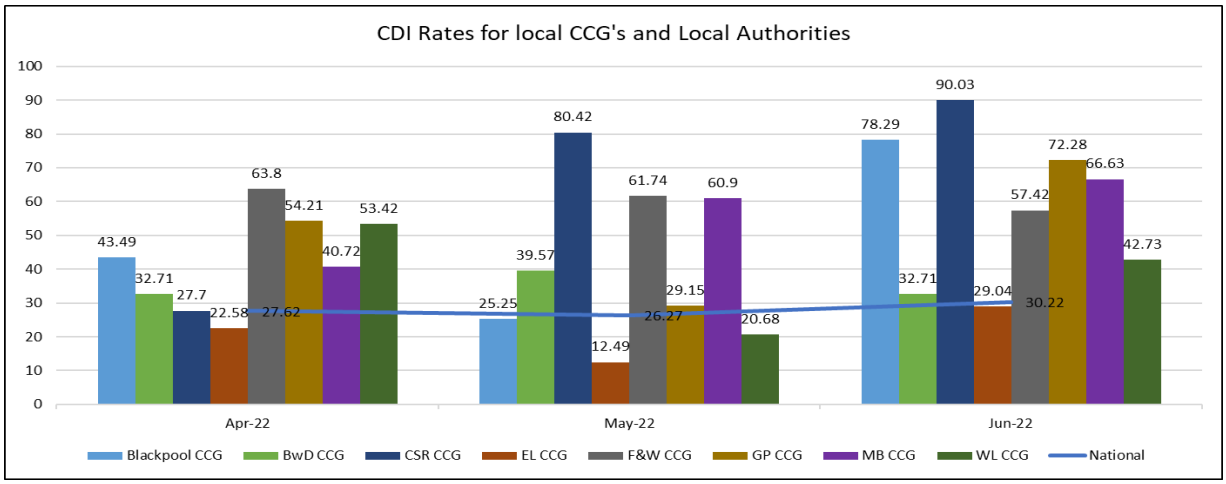
ICS data



The table below shows the number of cases by CCG for 2022-23 year to date, progress against their trajectory with a cumulative 25% breach across the ICS.

CDI data	Apr-22	May-22	Jun-22	Total	Objective to Date	Breach
B'pool CCG	5	3	9	17	21	
BwD CCG	4	5	4	13	9	+44%
CSR CCG	4	12	13	29	17	+71%
EL CCG	7	4	9	20	18	+11%
FW CCG	10	10	9	29	22	+32%
GP CCG	9	5	12	26	22	+18%
MB CCG	11	17	18	46	37	+24%
WL CCG	5	2	4	11	7	+57%
Total Hospital onset	36	32	48	116		
Total Community Onset	19	26	30	75		
Total	55	58	78	191	153	+25%
Cumulative Total	55	113	191	-		
Cumulative Total last year	32	81	142	-		
Percentage change from last year	50%	20%	17%	-		

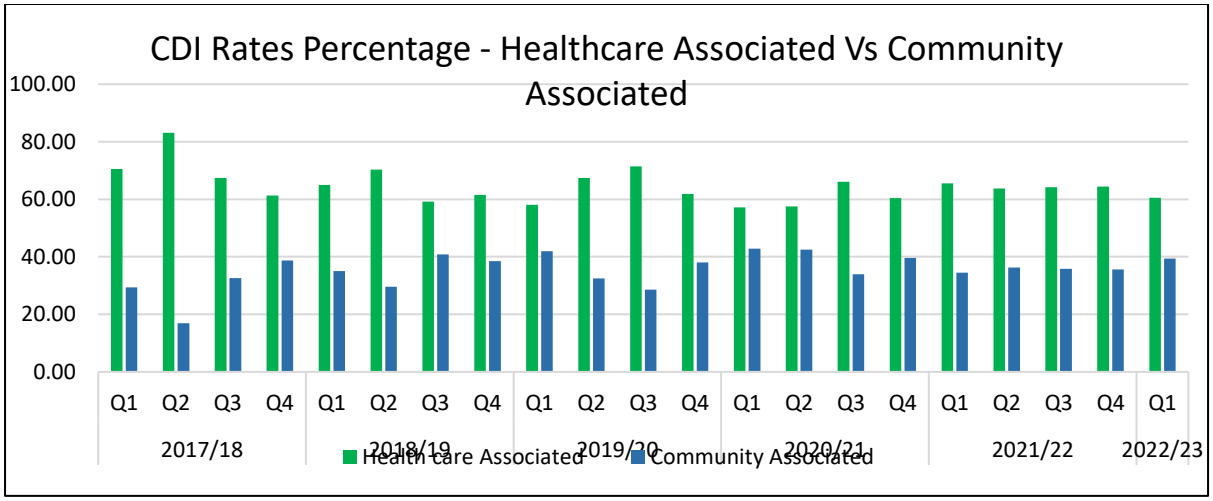
The graph below shows the CDI rates for the 8 CCGs compared to the national rate for the first 3 months of this year.



These data show the significant increase in CDI this quarter. Whilst some CDI will be inevitable as a result of healthcare, others will be due to lapses in care, usually inappropriate prescribing of antibiotics and/or proton pump inhibitors, and cross infection due to a contaminated care environment or suboptimal hand hygiene practice. A reminder of the known causes has been sent to GPs. Some local NHS Trusts have had difficulties isolating patients with CDI and undertaking deep cleans and fogging post discharge. Both issues are due to the demands of COVID, but the increase is seen across both healthcare and community settings.

A snapshot of cases is being reviewed to determine if there are any new lessons to be learned. A review of the compliance with the updated guidance from July 2021, which changed the first line treatment antibiotic, was undertaken and this showed generally good compliance. NHSE/I colleagues are arranging a CDI awareness day to be held in October to understand further any possible causes that could be addressed.

The data year to date show 75 community associated (39%) and 116 (61%) healthcare associated. The ratio between healthcare and community cases is shown below and whilst the ratio changes from 57/43% to 83/17% the split has not shown any great movement over the last few quarters.

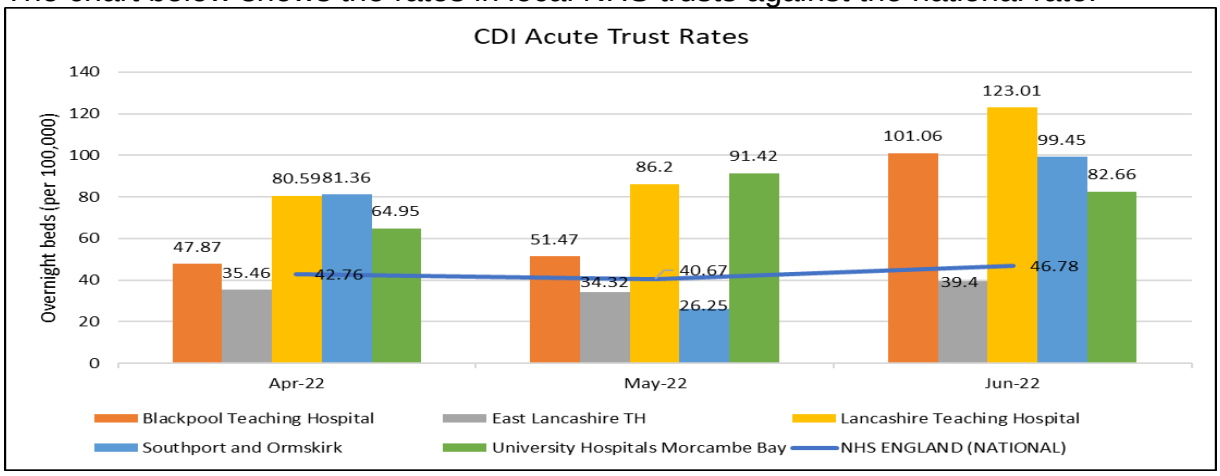


Acute Trust data

There were 117 healthcare associated CDI cases in Q1, against a combined trajectory of 105 for the acute trusts in the ICS. This numbers differs slightly from the earlier data, possibly as one case was registered to a CCG outside of the ICS.

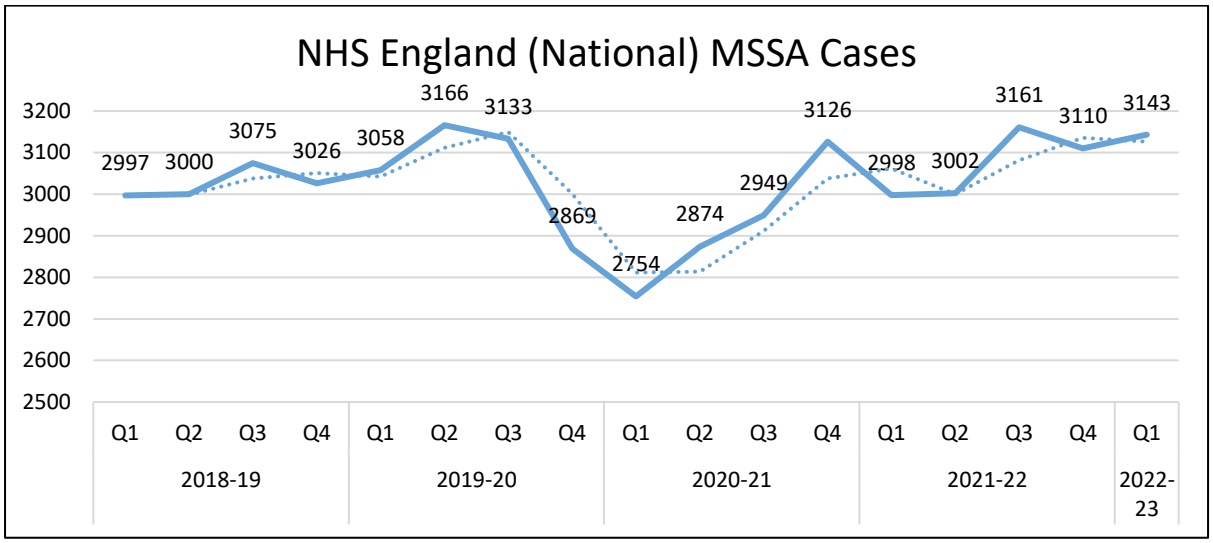
CDI data	Apr-22	May-22	Jun-22	Total	Objective to Date	Breach
BTH	7	5	10	22	27	
ELHT	5	6	3	14	14	
LTH	15	11	21	47	31	52%
SOHT	5	2	7	14	12	17%
UHMB	4	8	8	20	21	
Total	36	32	49	117	105	11%
Cumulative Total	36	68	117	-		
Cumulative Total previous year	34	73	117	-		
Percentage change from last year	6%	-7%	0%	-		

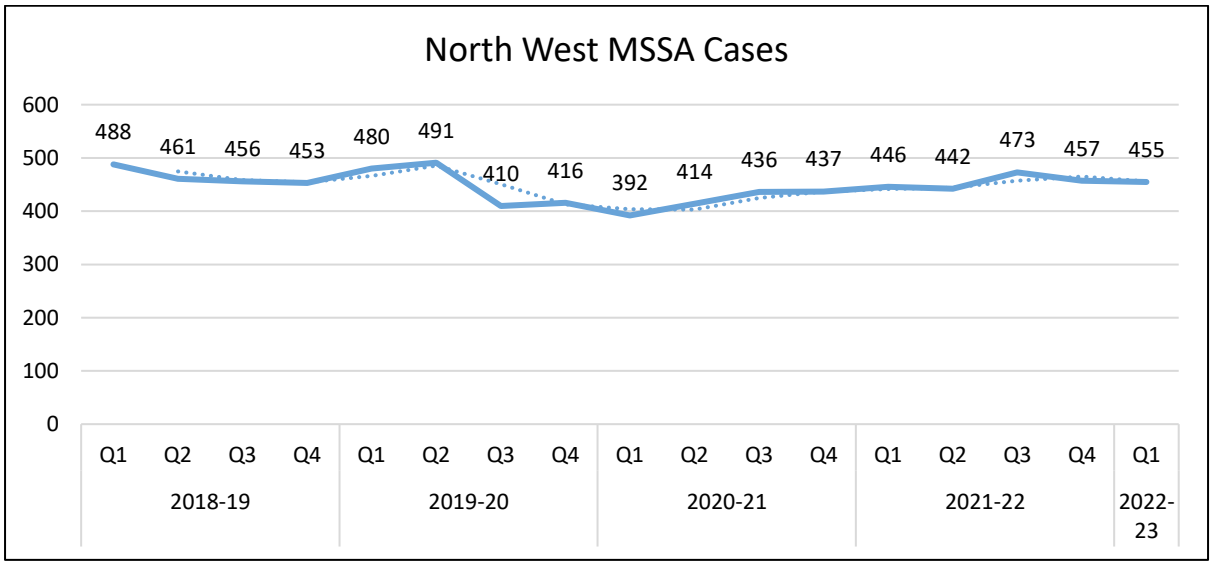
The chart below shows the rates in local NHS trusts against the national rate.

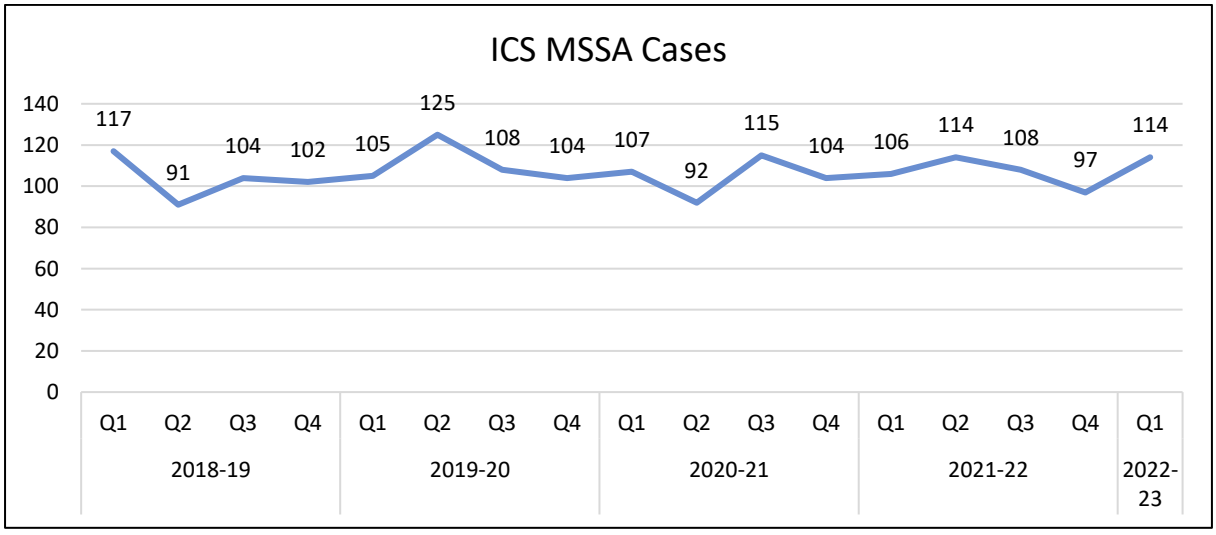


MSSA

Surveillance of MSSA blood stream infections is mandatory but there is no trajectory associated with it. In line with other HCAIs under mandatory surveillance, MSSA blood stream infections are divided into healthcare associated and community associated.



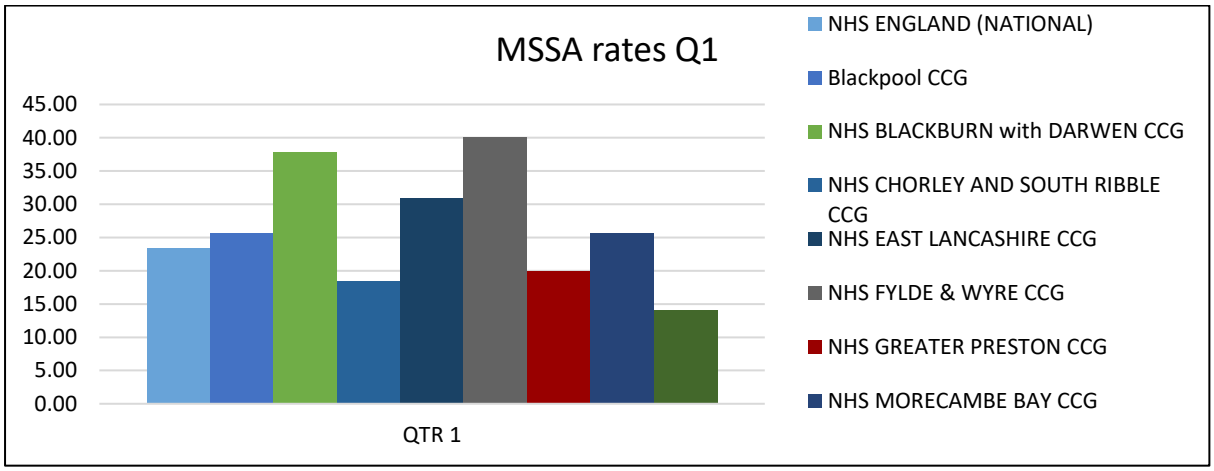




CCG data

MSSA data	Apr-22	May-22	Jun-22	Total	Difference to same time period 2021-22
B'pool CCG	1	5	3	9	-6
BwD CCG	5	4	5	14	+1
CSR CCG	3	1	5	9	+1
EL CCG	14	10	5	29	+12
FW CCG	4	5	10	19	+3
GP CCG	2	2	6	10	-2
MB CCG	7	8	6	21	+2
WL CCG	1	2	1	4	-2
Total Hospital onset	18	16	16	50	
Total Community Onset	19	21	24	64	
Total	37	37	40	114	
Cumulative Total	37	74	114	-	
Cumulative Total last year	23	66	106	-	
Percentage change from last year	60.87%	12.12%	7.55%	-	

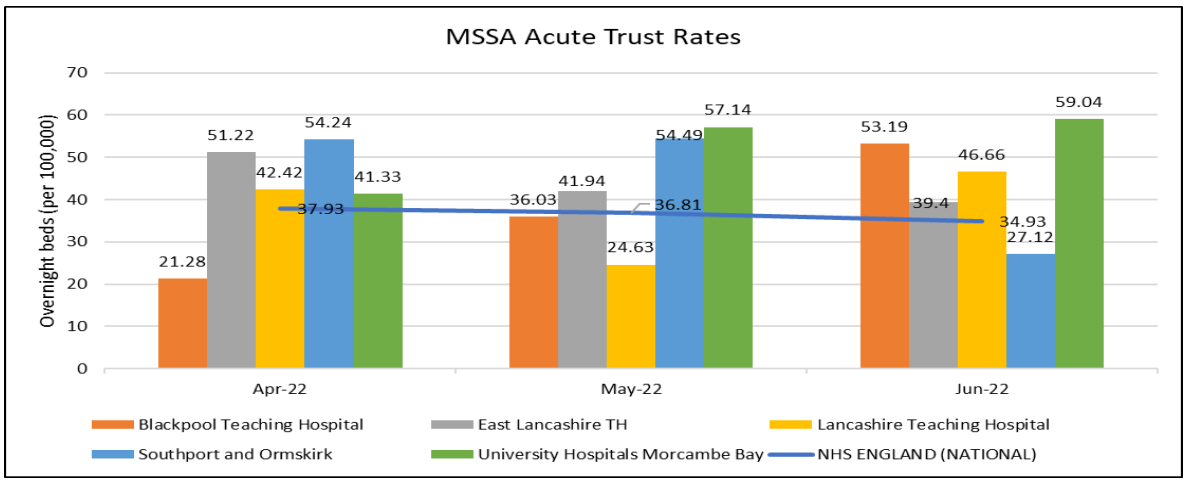
The chart below compares the rates of MSSA rate for the 8 CCGs to the national rate.



Acute Trusts MSSA data

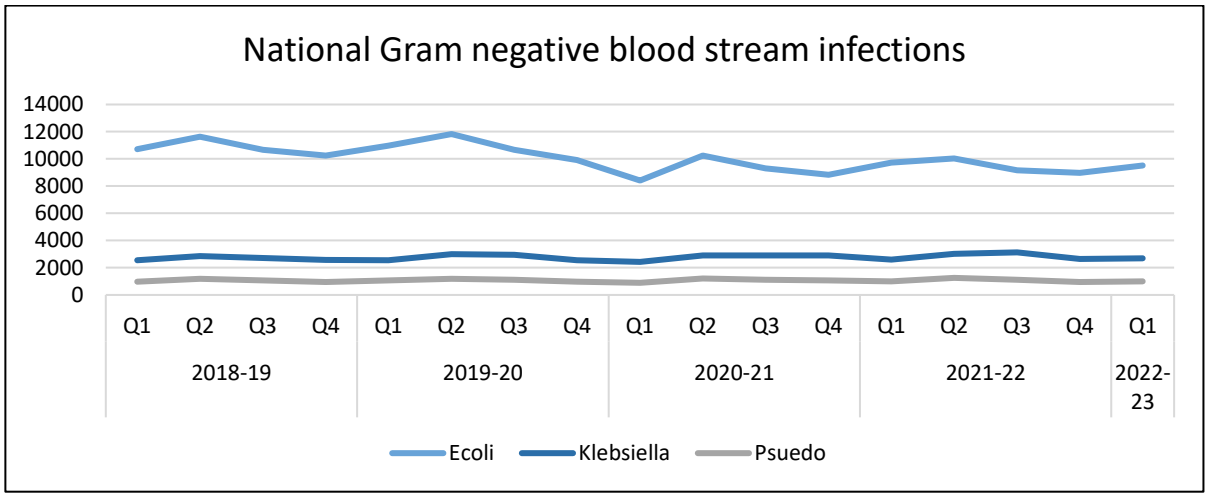
MSSA data	Apr-22	May-22	Jun-22	Total
BTH	2	5	4	11
ELHT	7	3	4	14
LTH	5	4	6	15
SOHT	2	4	2	8
UHMB	2	2	4	8
Total	18	18	20	56
Cumulative total	18	36	56	-
Cumulative total previous year	12	34	53	-
Percentage change from last year	50%	6%	6%	-

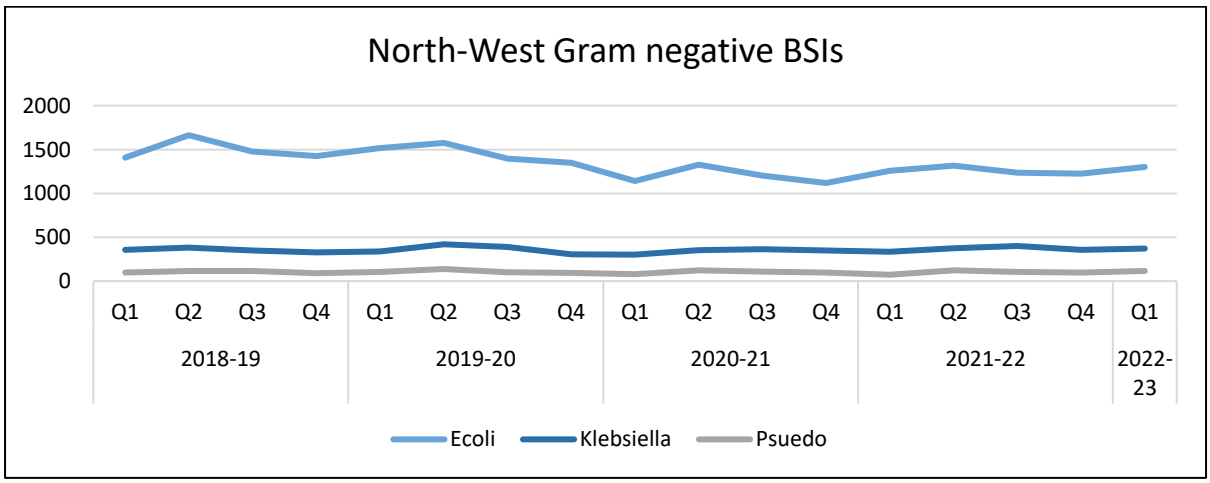
The chart below shows the acute trust rates against the national rate for MSSA in Q1.

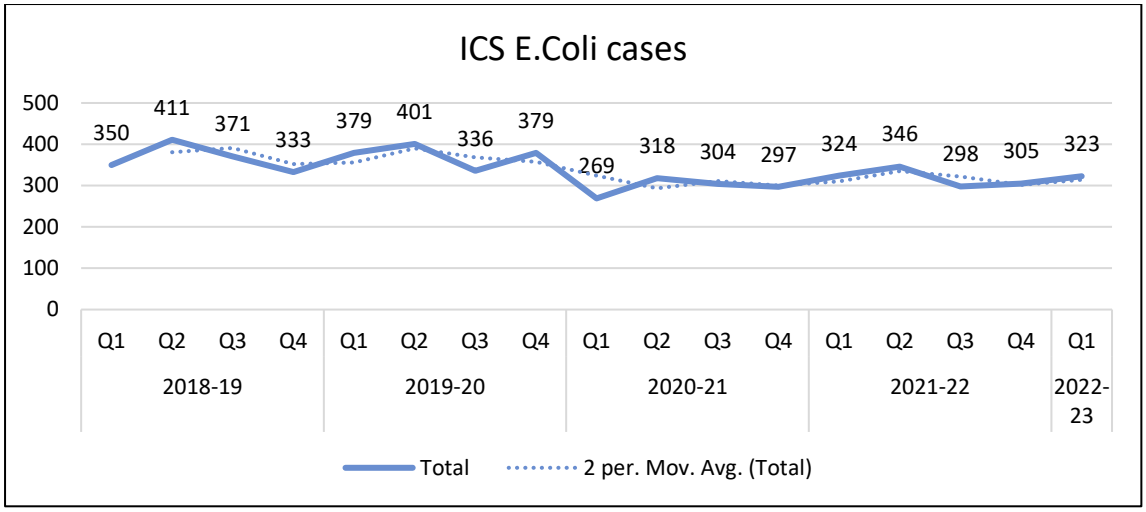


Gram negative

The reduction of Gram-negative bloodstream infections is a national priority as they are often linked to multi-drug resistant organisms. Escherichia coli (E. coli) is the causative agent for most of these infections and is the focus for the reduction plans.





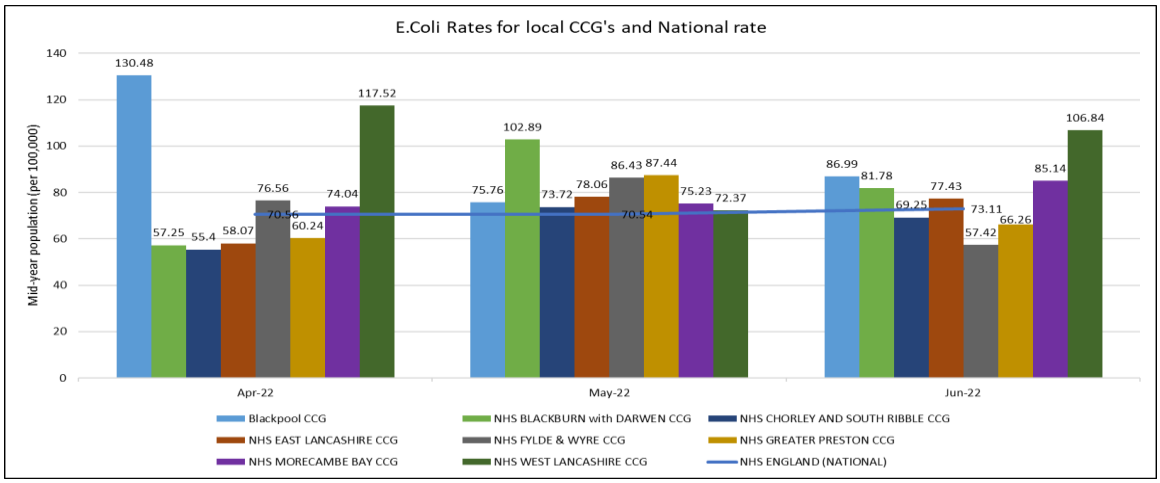


E. coli

There have been 323 cases of E. coli in Q1 across the ICS. The table below shows the cases of E. coli across the CCGs, progress against their reduction ambition, and the split between healthcare and community associated cases from April 2022.

E.Coli data	Apr-22	May-22	Jun-22	Total	Objective to Date	Breach
B'pool CCG	15	9	10	34	27	26%
BwD CCG	7	13	10	30	27	11%
CSR CCG	8	11	10	29	30	
EL CCG	18	25	24	67	69	
FW CCG	12	14	9	35	32	9%
GP CCG	10	15	11	36	32	13%
MB CCG	20	21	23	64	62	3%
WL CCG	11	7	10	28	22	27%
Total Hospital onset	35	48	44	127		
Total Community Onset	66	67	63	196		
Total	101	115	107	323	300	8%
Cumulative Total	89	190	282	-		
Cumulative Total last year	101	190	287	-		
Percentage change from last year	-12%	0%	-2%	-		

The chart below compares the CCGs rates of E coli BSI against the national rate.

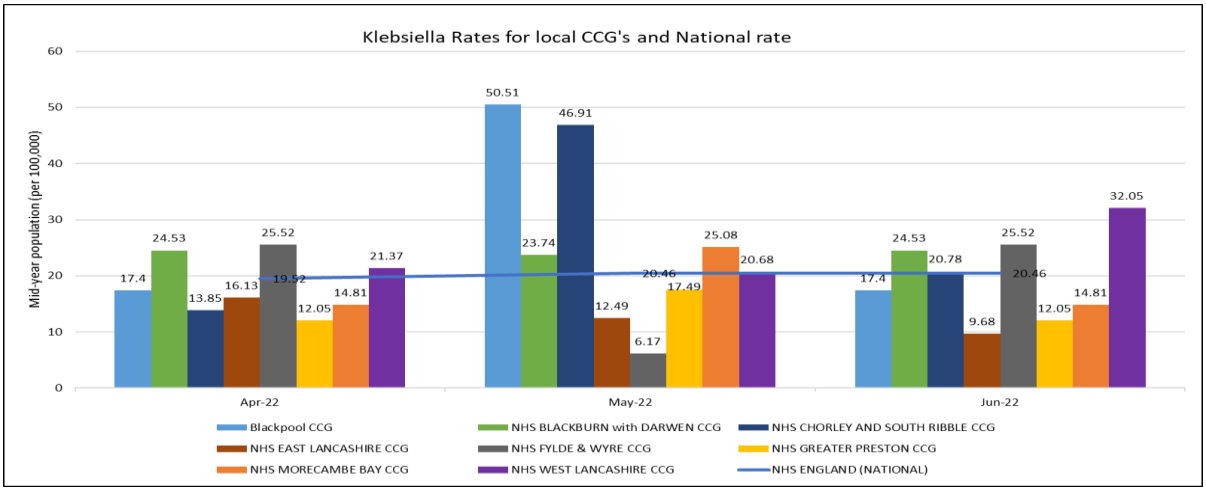


Klebsiella spp.

The table below shows the numbers of Klebsiella spp. blood stream infections in Q1 and the split between healthcare and community associated cases. Of note is the significant breach against the trajectory at Blackburn with Darwen, although the numbers are small.

Klebsiella data	Apr-22	May-22	Jun-22	Total	Objective to Date	Breach
B'pool CCG	2	6	2	10	9	11%
BwD CCG	3	3	3	9	3	200%
CSR CCG	2	7	3	12	7	71%
EL CCG	5	4	3	12	14	
FW CCG	4	1	4	9	10	
GP CCG	2	3	2	7	9	
MB CCG	4	7	4	15	13	15%
WL CCG	2	2	3	7	5	40%
Total Hospital onset	13	11	12	36		
Total Community Onset	11	22	12	45		
Total	24	33	24	81	70	16%
Cumulative Total	24	57	81	-		
Cumulative Total last year	27	47	69	-		
Percentage change from last year	11%	21%	17%	-		

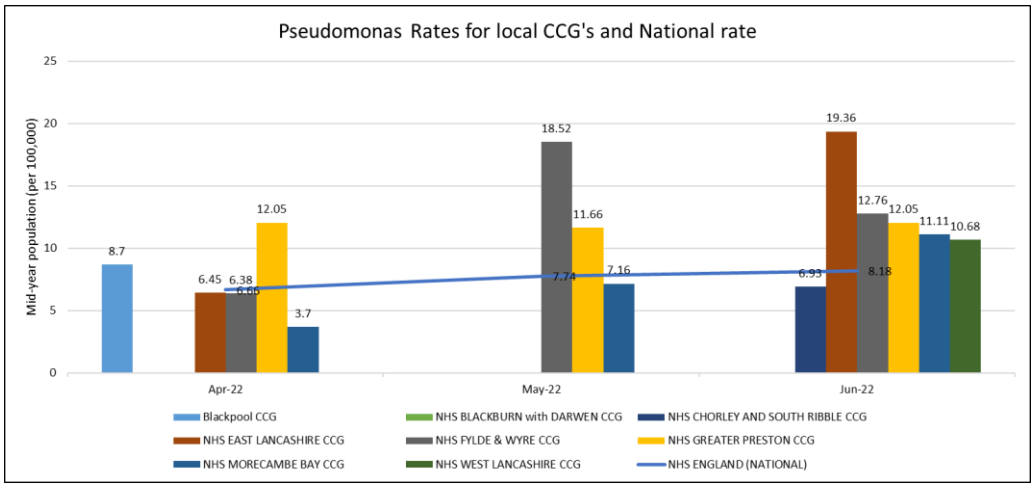
The chart below shows the CCGs rates against the and national rate



Pseudomonas Aeruginosa

Pseudomonas data	Apr-22	May-22	Jun-22	Total	Objective to Date	Breach
B'pool CCG	1	0	0	1	2	
BwD CCG	0	0	0	0	1	
CSR CCG	0	0	1	1	4	
EL CCG	2	0	6	8	4	100%
FW CCG	1	3	2	6	4	50%
GP CCG	2	2	2	6	2	200%
MB CCG	1	2	3	6	6	
WL CCG	0	0	1	1	2	
Total Hospital onset	2	6	10	18		
Total Community onset	5	1	5	11		
Total	7	7	15	29	23	
Cumulative Total	7	14	29	-		
Cumulative Total last year	4	10	19	-		
Percentage change from last year	75%	40%	53%	-		

The graph below compares the CCG Pseudomonas Aeruginosa rates against the national rate.



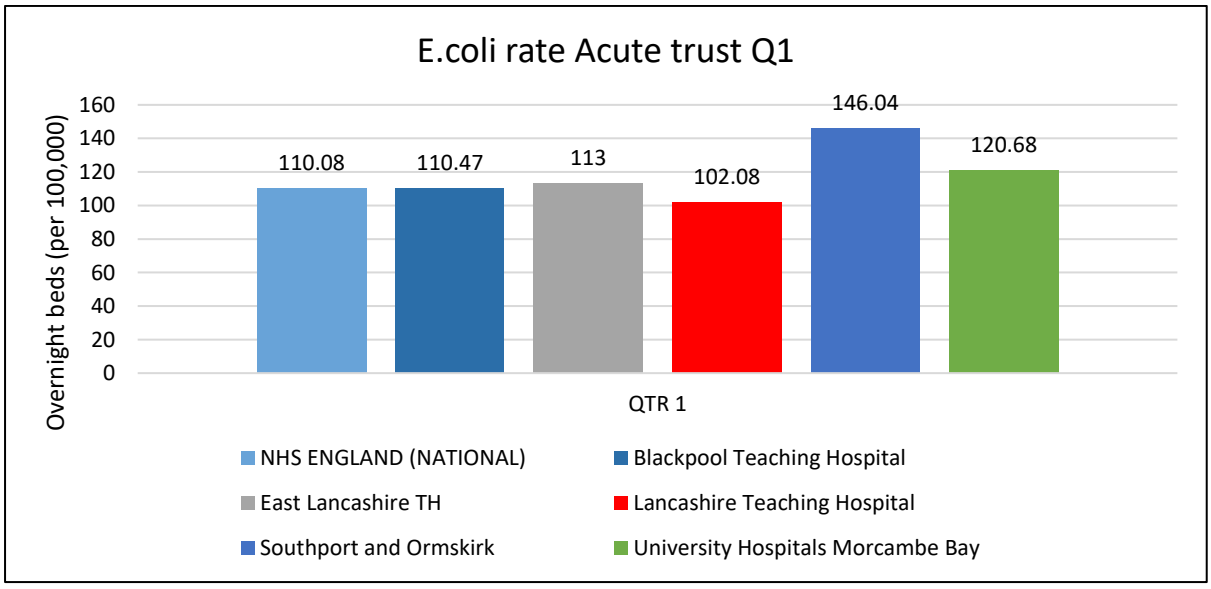
Acute Trust Data

E. coli

The table below shows the number of E. coli cases in local NHS trusts and their progress towards their reduction ambition.

E. coli data	Apr-22	May-22	Jun-22	Total	Objective to Date	Breach
BTH	10	10	10	30	23	30%
ELHT	7	14	10	31	34	
LTH	6	14	12	32	28	14%
SOHT	5	3	5	13	13	
UHMB	7	9	9	25	26	
Total	35	50	46	131	123	9%
Cumulative total	35	85	131	-		
Cumulative total previous year	46	81	125	-		
Percentage change from last year	-24%	+5%	+5%	-		

The chart below shows the acute trust rates against the national rate for E.coli in Q1.

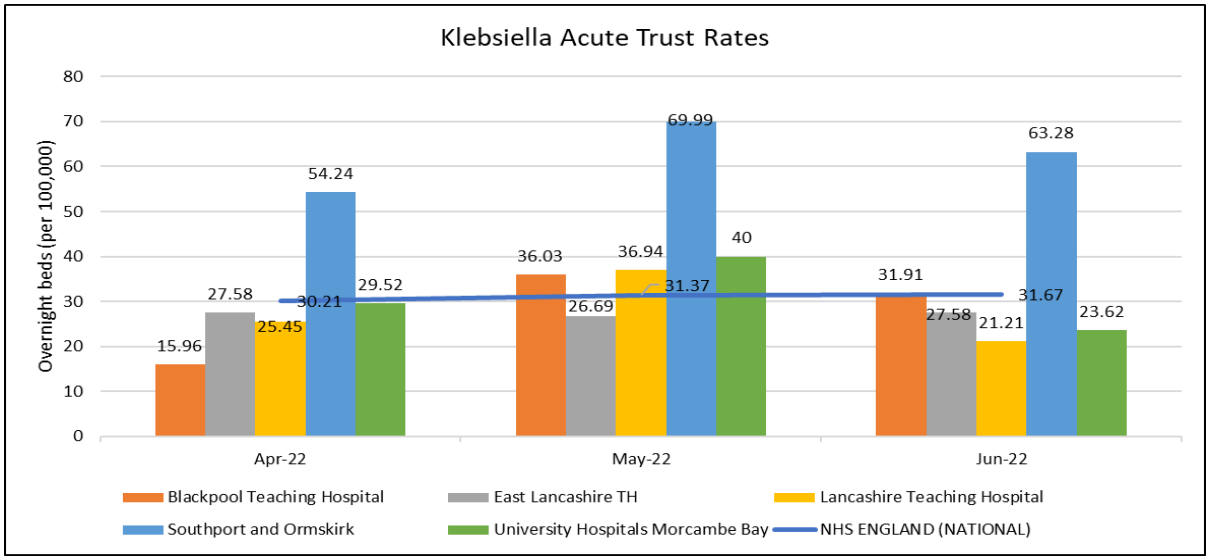


Klebsiella spp.

The table below shows the number of cases reported at NHS trusts and their progress towards their reduction ambition.

Klebsiella data	Apr-22	May-22	Jun-22	Total	Objective to Date	Breach
BTH	1	2	4	7	11	
ELHT	3	4	2	9	13	
LTH	4	1	0	5	7	
SOHT	4	2	3	9	4	125%
UHMB	2	2	3	7	5	40%
Total	14	11	12	37	40	
Cumulative Total	14	25	37	-		
Cumulative Total previous year	17	25	37	-		
Percentage change from last year	-18%	0%	0%	-		

The chart below shows the Klebsiella rates for the acute trust against the national rate



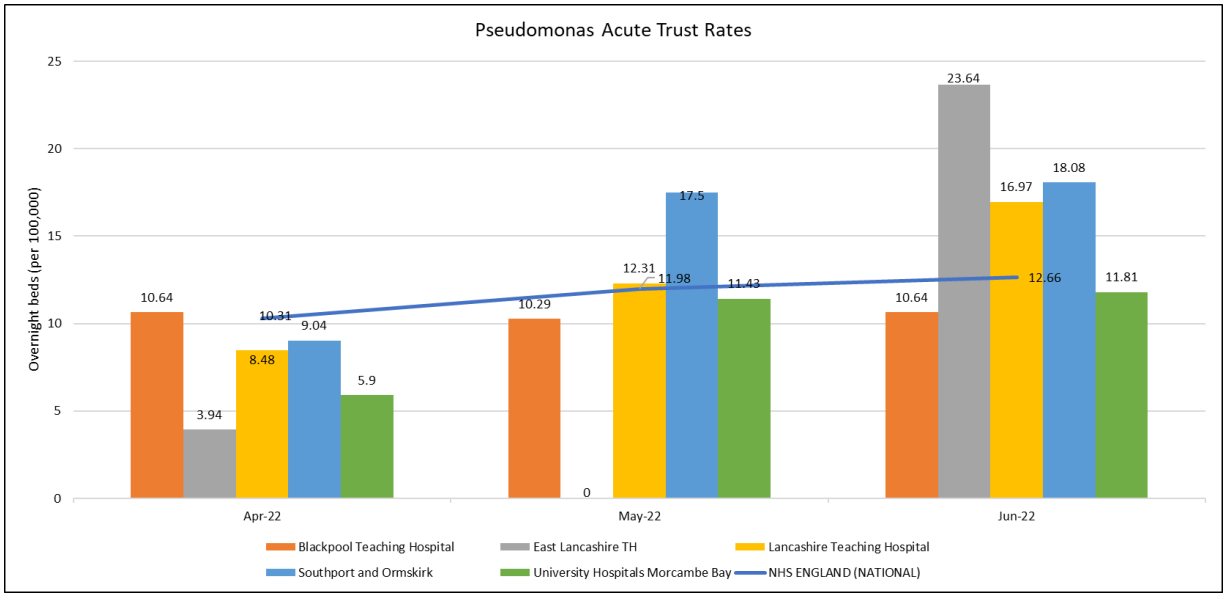
SOHT are significantly above the national rate, but this is probably due to their heightened screening following an outbreak.

Pseudomonas aeruginosa

The table below shows the number of cases reported in local NHS trusts and the progress towards their reduction ambition.

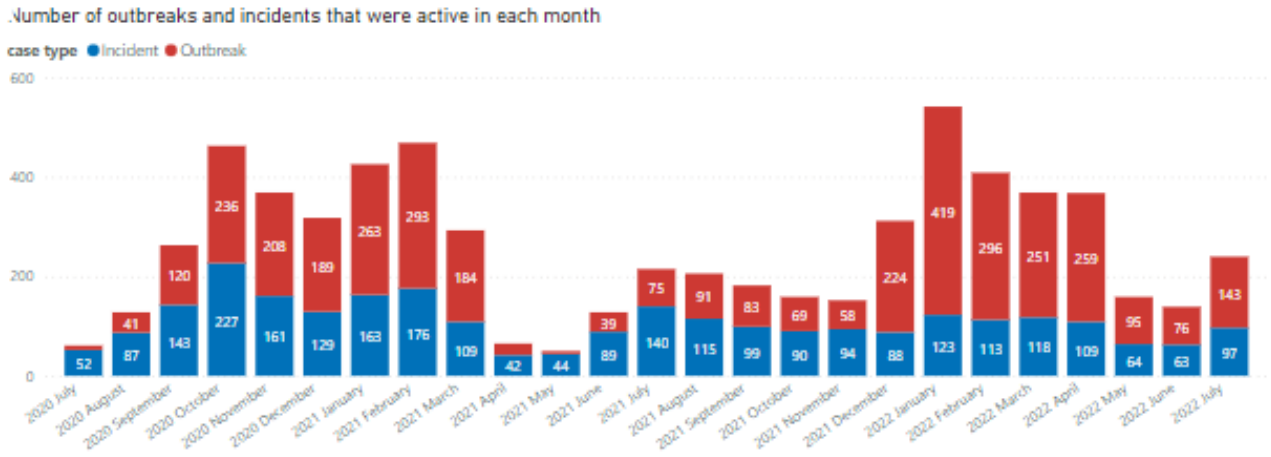
Pseudomonas data	Apr-22	May-22	Jun-22	Total	Objective to Date	Breach
BTH	0	0	3	3	5	
ELHT	0	2	3	5	2	150%
LTH	1	0	2	3	3	
SOHT	0	2	1	3	2	50%
UHMB	0	2	1	3	2	50%
Total	1	6	10	17	14	21%
Cumulative Total	1	7	17	-		
Cumulative Total previous year	2	5	7	-		
Percentage change from last year	-50%	40%	143%	-		

The chart below shows the rates of Pseudomonas Aeruginosa blood stream infections in local NHS trusts compared to the national rate.



Covid-19

The graph below shows the number of incident and outbreaks open by month and highlights the impact of the Omicron variant earlier in the year.



Care homes

New Referrals/Audits/Visits

23 care homes have been audited in Q1. These were across the ICS as demonstrated below.

CCG area	Number of Residential /Nursing Homes audited.
Blackburn with Darwen	5
Chorley & South Ribble	1
East Lancashire	5
Fylde and Wyre	5
Greater Preston	3
Morecambe Bay	1
West Lancashire	3

Hand Hygiene Awareness Sessions- Schools

Hand hygiene awareness sessions have taken place in schools across the county during Q1.

Area	Number of schools/colleges visited
Blackburn with Darwen	1
Chorley & South Ribble	3
East Lancashire	10
Fylde and Wyre	1
Greater Preston	4
Morecambe Bay	3
West Lancashire	4

Outbreaks and incidents

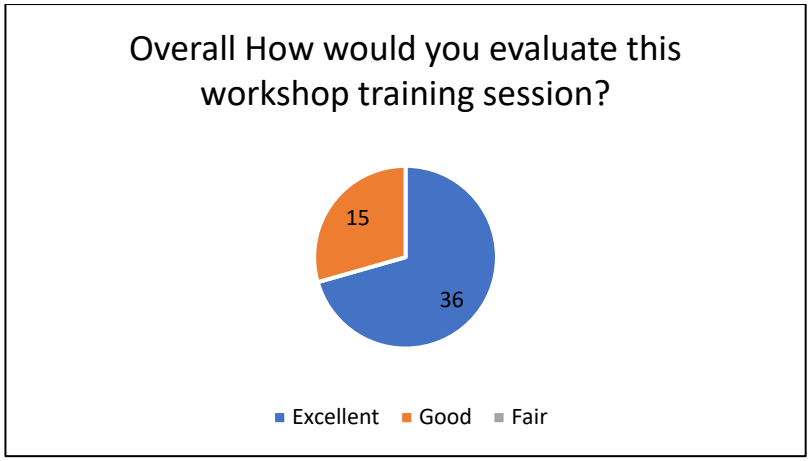
The IPC team have supported with the following non-COVID-19 outbreaks in care and education settings

Area		Illness
Fylde and Wyre	6	Norovirus
Fylde and Wyre	1	CDI
Blackburn with Darwen	3	Norovirus
Blackburn with Darwen	1	Scabies
Blackpool	3	Norovirus
Blackpool	1	Influenza
Chorley and South Ribble	7	Norovirus
East Lancashire	1	Scabies
East Lancashire	7	Norovirus
East Lancashire	1 (Education)	Scarlet Fever
East Lancashire	1 (Education)	Meningitis
Greater Preston	4	Norovirus
Morecambe Bay	2	Norovirus
West Lancashire	1	Influenza Type A
West Lancashire	5	Norovirus

Additional work streams

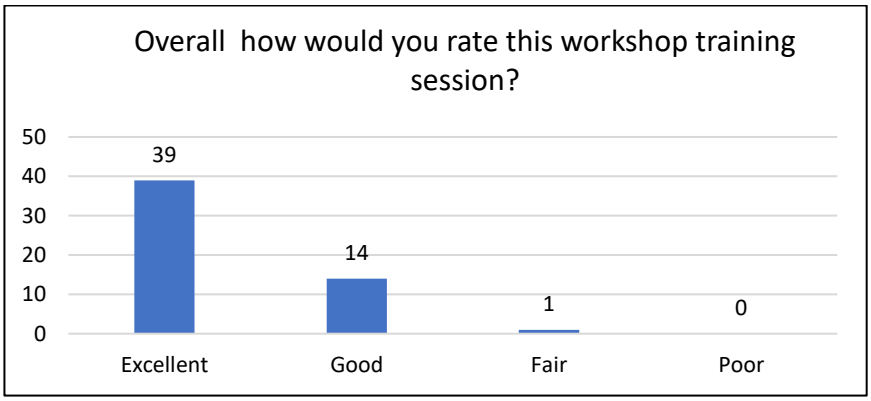
Infection Prevention Forums- Post Infection Reviews (PIR's)

The Post Infection Reviews (PIR) forum was held over 7 sessions in April & May 2022 at 5 locations across Lancashire. A total of 139 places were booked out of a possible 178 (78%) and there were 77 attendees in total (55% of booked places). The overall feedback was excellent.



Blackburn College- Introduction to IPC Session

The LCC IPC team developed and delivered an IPC session for Health and Social Care students at Blackburn college. This took place over 4 sessions on Monday 23rd May 2022. A total of 57 students attended over the 4 sessions, each one was 1.5 hours. The feedback from the students has been positive and has been collated and will be used to evaluate and develop further IPC sessions.



Supporting National Campaigns

The IPC team have supported the following national campaigns

- National Smile Month. The IPC team developed an information and activity pack for care homes that was distributed at an Oral Health improvement forum, presented by Age Well (BwD) and to all care homes in Lancashire and BwD.
- Hand Hygiene Day – Communications distributed
- Glove Awareness Week – Communications distributed

Recommendations

The Director of Public Health is asked to acknowledge and approve the content of this report.

Anita Watson, Lead Nurse Infection Prevention and Control