

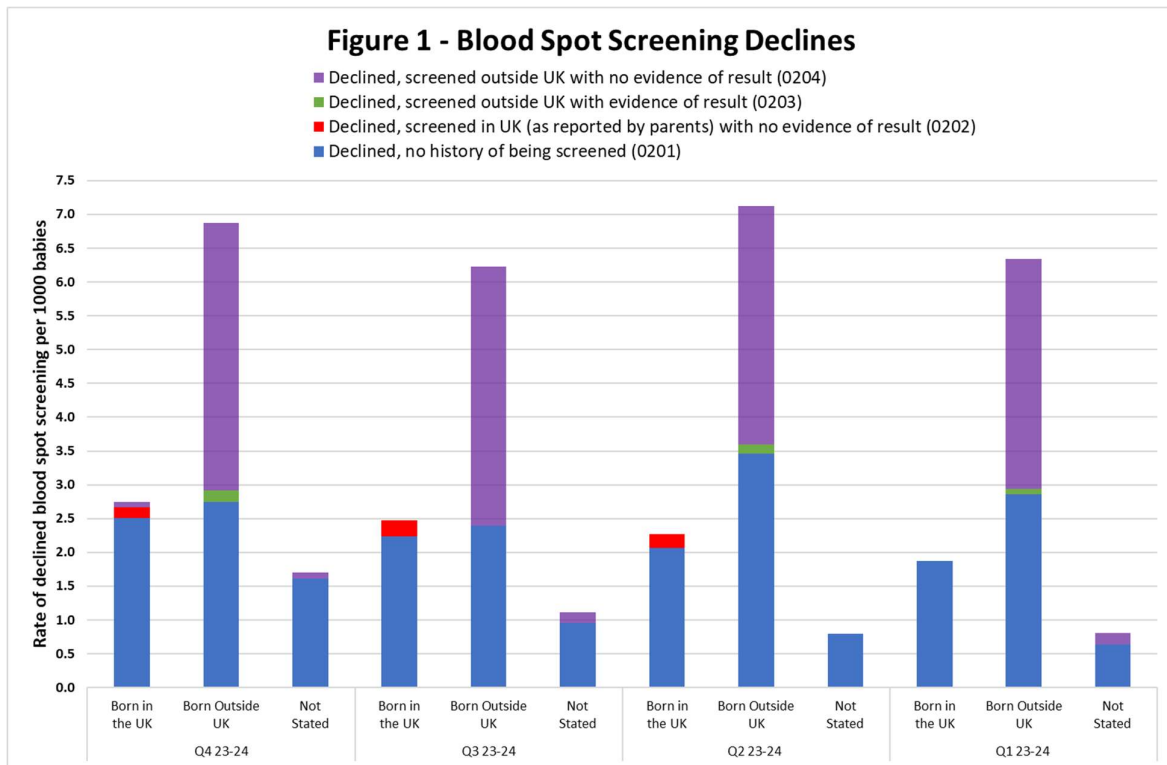
Manchester Newborn Screening Laboratory Quarterly Blood Spot Screening Report: Quarter 4 2023-24

Manchester Newborn Screening Laboratory, which serves babies born in Greater Manchester, Lancashire and South Cumbria, received 13,299 blood spot samples between 1st January 2024 and 31st March 2024. This report describes performance against the NHS Newborn Blood Spot Screening Programme Standards. Full details of the standards including definitions and exclusions can be found at <https://www.gov.uk/government/publications/standards-for-nhs-newborn-blood-spot-screening>. The appendix of this document contains the data for standards 3-7 in table form.

The data for the laboratory reportable standards is presented by maternity unit/NHS trust of the sample taker. For accurate figures, please ensure the trust code is written/stamped on the blood spot card.

Declines

In Quarter 4 the laboratory received 140 notifications of declined blood spot screening. Figure 1 shows the trends in declined screens over the past year, by place of birth (born in UK or born outside of UK). The laboratory should be notified of all declines, including those for babies screened elsewhere, rather than directly notifying Child Health.



Key to colour coding

Met achievable threshold
Met acceptable threshold
Within 10% of acceptable threshold
More than 10% below acceptable threshold

Standard 3 – The proportion of blood spot cards received by the laboratory with the baby’s NHS number on a barcoded label

Acceptable: ≥ 90.0% of blood spot cards are received by the laboratory with the baby’s NHS number on a barcoded label.

Achievable: ≥ 95.0% of blood spot cards are received by the laboratory with the baby’s NHS number on a barcoded label.

Figure 2 displays performance against standard 3.

Overall, 81.7% of samples received in quarter 4 of 2023/24 had a barcoded NHS number label, which is higher than the previous quarter (80.7%). Of the 11 maternity units, 2 met the acceptable standard and 1 met the achievable threshold.

Standard 4 - The proportion of first blood spot samples taken on day 5

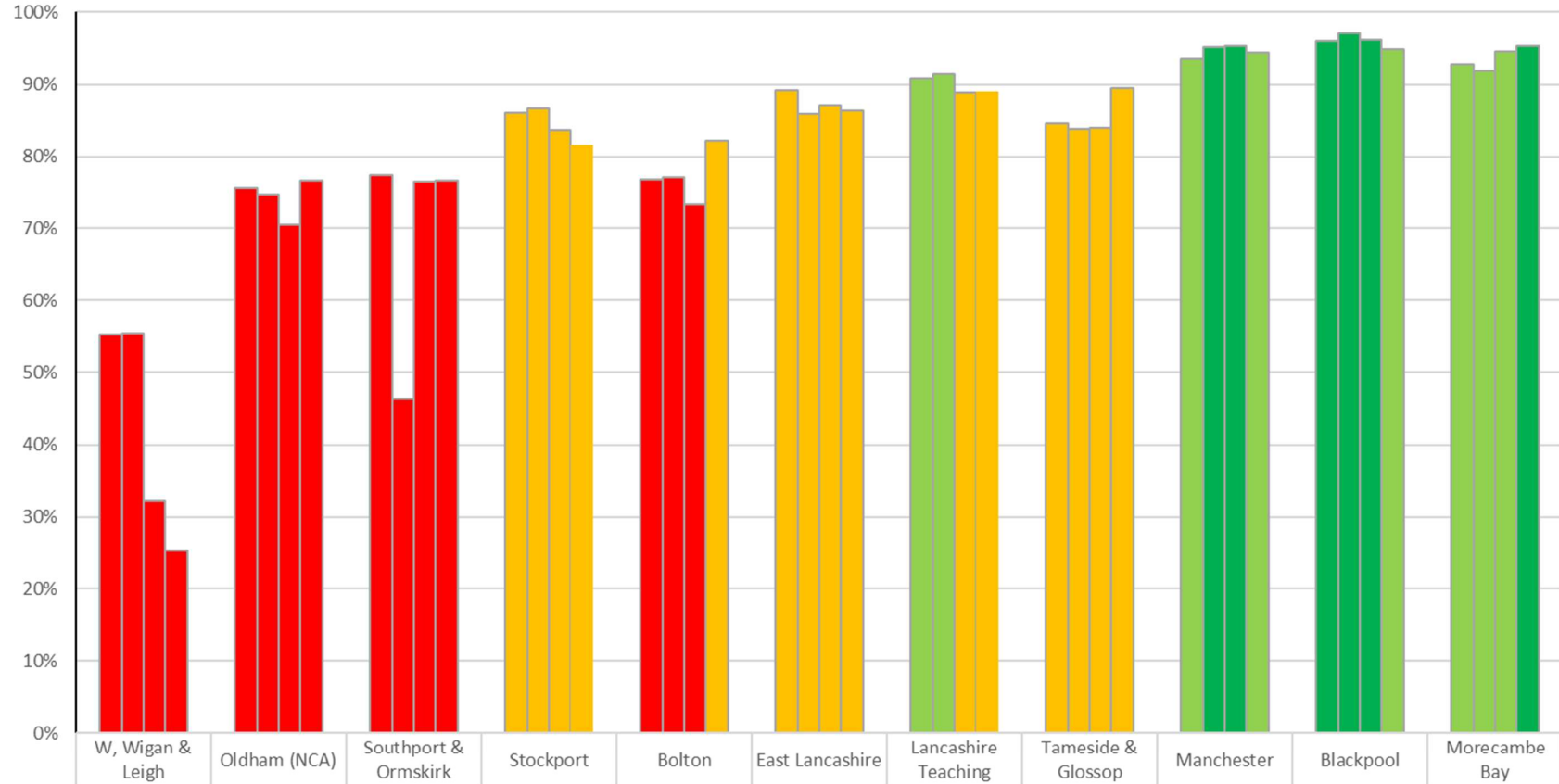
Acceptable: ≥ 90.0% of first blood spot samples are taken on day 5.

Achievable: ≥ 95.0% of first blood spot samples are taken on day 5.

Figure 3 displays performance against standard 4. Overall, 91.1% of samples received in quarter 4 of 2023/24 were collected on day 5, which is higher than the previous quarter (90.9%). 10 out of the 11 maternity units met standard 4, and 4 of these met the achievable threshold.

Figure 2: Standard 3 - The proportion of blood spot cards received by the laboratory with the baby's NHS number on a barcoded label

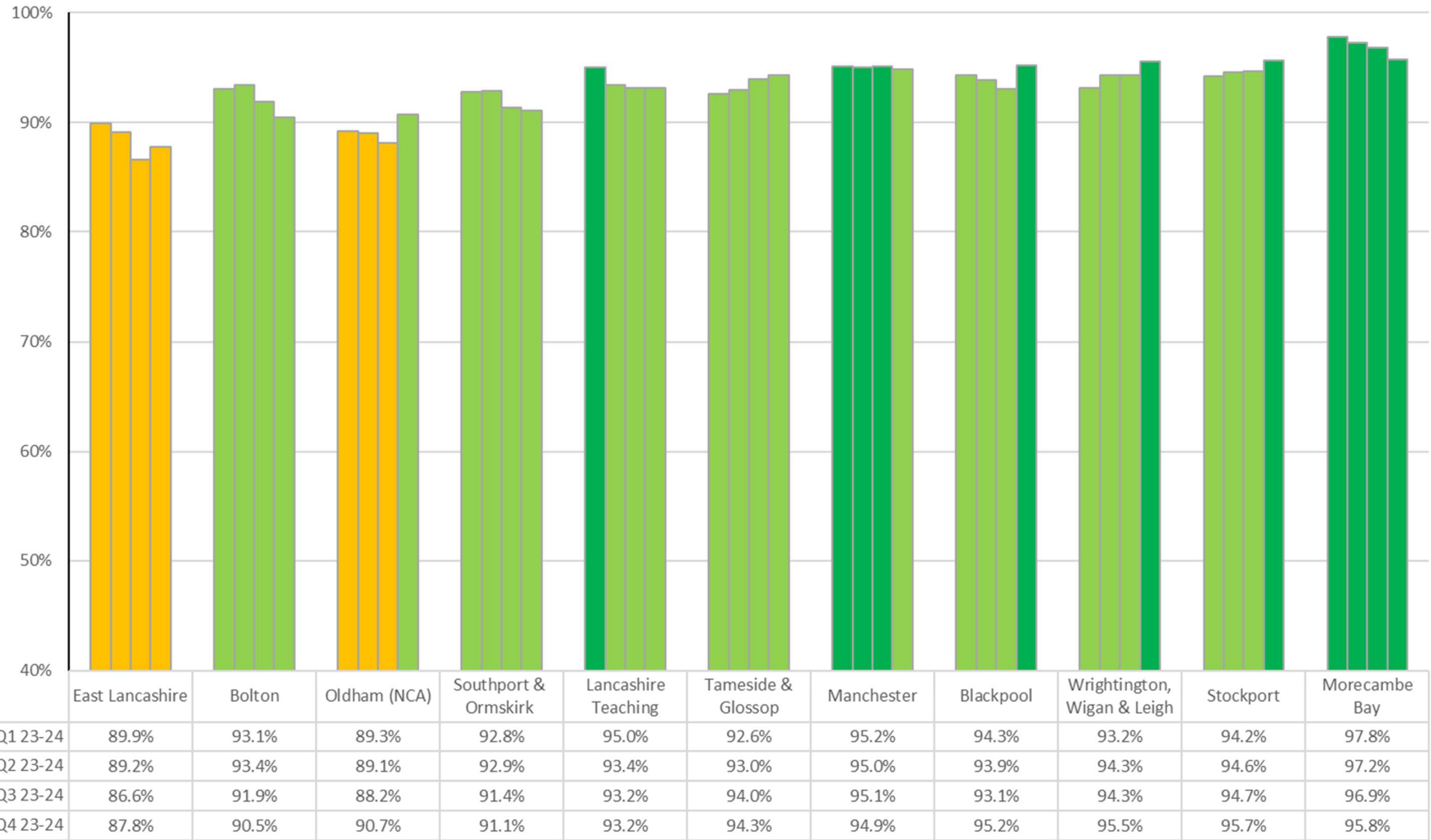
Most recent quarter on right-hand side



	W, Wigan & Leigh	Oldham (NCA)	Southport & Ormskirk	Stockport	Bolton	East Lancashire	Lancashire Teaching	Tameside & Glossop	Manchester	Blackpool	Morecambe Bay
Q1 23-24	55.2%	75.7%	77.4%	86.1%	76.9%	89.2%	90.8%	84.6%	93.5%	96.0%	92.8%
Q2 23-24	55.5%	74.7%	46.4%	86.7%	77.1%	85.9%	91.4%	83.8%	95.1%	97.1%	91.9%
Q3 23-24	32.2%	70.5%	76.5%	83.6%	73.4%	87.0%	88.8%	84.0%	95.2%	96.2%	94.5%
Q4 23-24	25.4%	76.7%	76.8%	81.6%	82.2%	86.4%	89.1%	89.4%	94.4%	94.8%	95.2%

Figure 3: Standard 4 - The proportion of first blood spot samples taken on day 5

Most recent quarter on right-hand side



Standard 5 - The proportion of blood spot samples received less than or equal to 3 working days of sample collection

Acceptable: $\geq 95.0\%$ of all samples received less than or equal to 3 working days of sample collection.

Achievable: $\geq 99.0\%$ of all samples received less than or equal to 3 working days of sample collection.

Figure 4 displays performance against standard 5.

Overall, 97.4% of samples were received within 3 working days. 8 Trusts met the standard, with 5 of these reaching the achievable threshold. Performance was similar to the previous quarter (97.2% samples received within 3 working days).

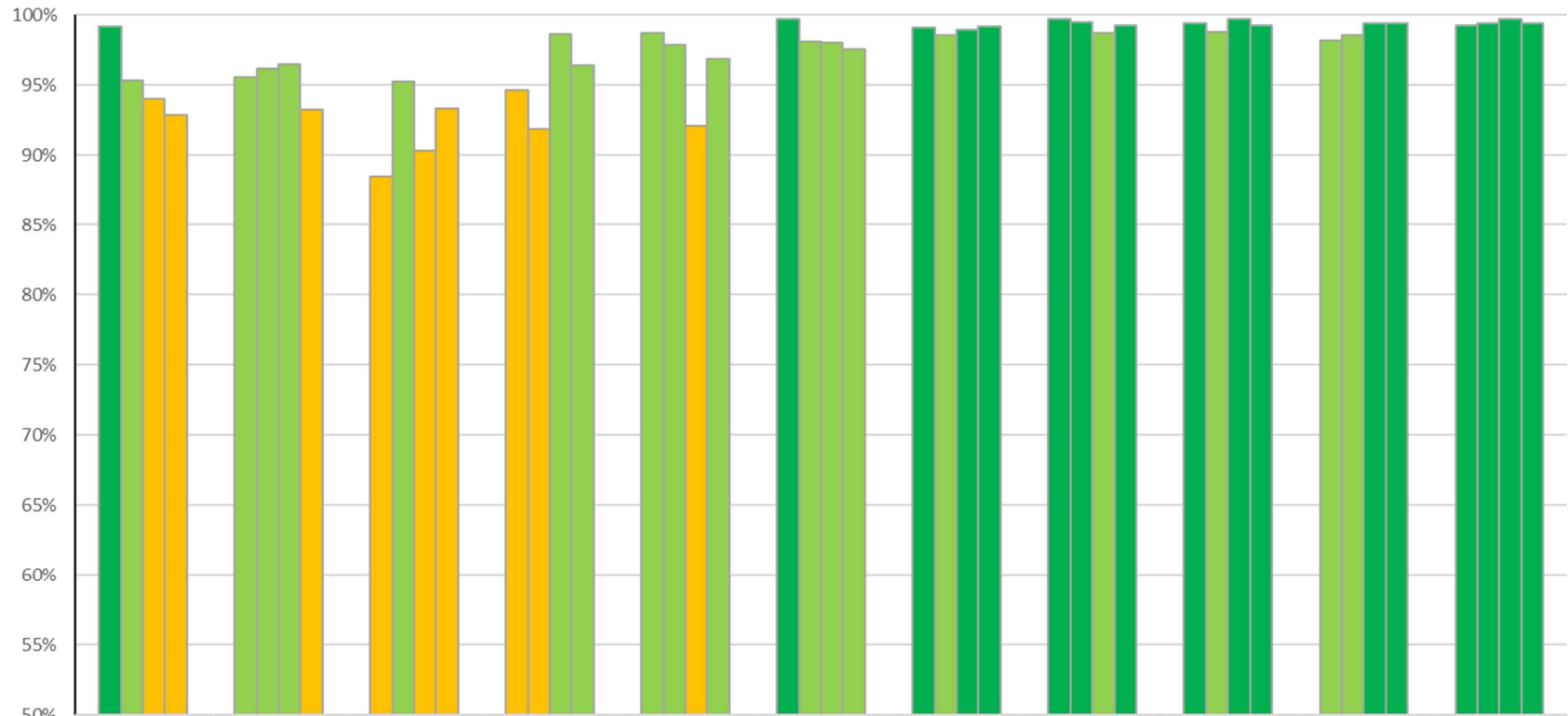
Standard 6 - The proportion of first blood spot samples that require repeating due to an avoidable failure in the sampling process

Acceptable: Avoidable repeat rate is $\leq 2.0\%$

Achievable: Avoidable repeat rate is $\leq 1.0\%$

The avoidable repeat rate for quarter 4 was 3.3%, which is higher compared to quarter 3 (2.7%). The main reason for an avoidable repeat was insufficient blood, followed by incorrect application of blood and compressed/damaged sample. The performance for each trust is displayed in figure 5. 2 Trusts met the standard, with none reaching the achievable threshold. Figure 6 compares the avoidable repeat rate for samples collected from in-patients with samples collected from babies at home/in the community. The rate was 2.7% for babies at home (2.1% in quarter 3) and 8.1% for samples collected from in-patients (7.3% in quarter 3).

Figure 4: Standard 5 - The proportion of blood spot samples received less than or equal to 3 working days of sample collection
 Most recent quarter on right-hand side



	Warrington, Wigan & Leigh	Oldham (NCA)	Southport & Ormskirk	Morecambe Bay	Bolton	Stockport	Blackpool	East Lancashire	Lancashire Teaching	Manchester (SMH, RMCH, WH, NM)	Tameside & Glossop
Q1 23-24	99.2%	95.6%	88.5%	94.6%	98.7%	99.7%	99.1%	99.7%	99.4%	98.2%	99.3%
Q2 23-24	95.3%	96.2%	95.3%	91.9%	97.8%	98.1%	98.5%	99.5%	98.8%	98.6%	99.4%
Q3 23-24	94.1%	96.5%	90.4%	98.6%	92.1%	98.0%	99.0%	98.7%	99.7%	99.4%	99.7%
Q4 23-24	92.8%	93.3%	93.3%	96.4%	96.9%	97.6%	99.2%	99.2%	99.3%	99.4%	99.4%

Figure 5: Standard 6 - The proportion of first blood spot samples that require repeating due to an avoidable failure in the sampling process by Trust

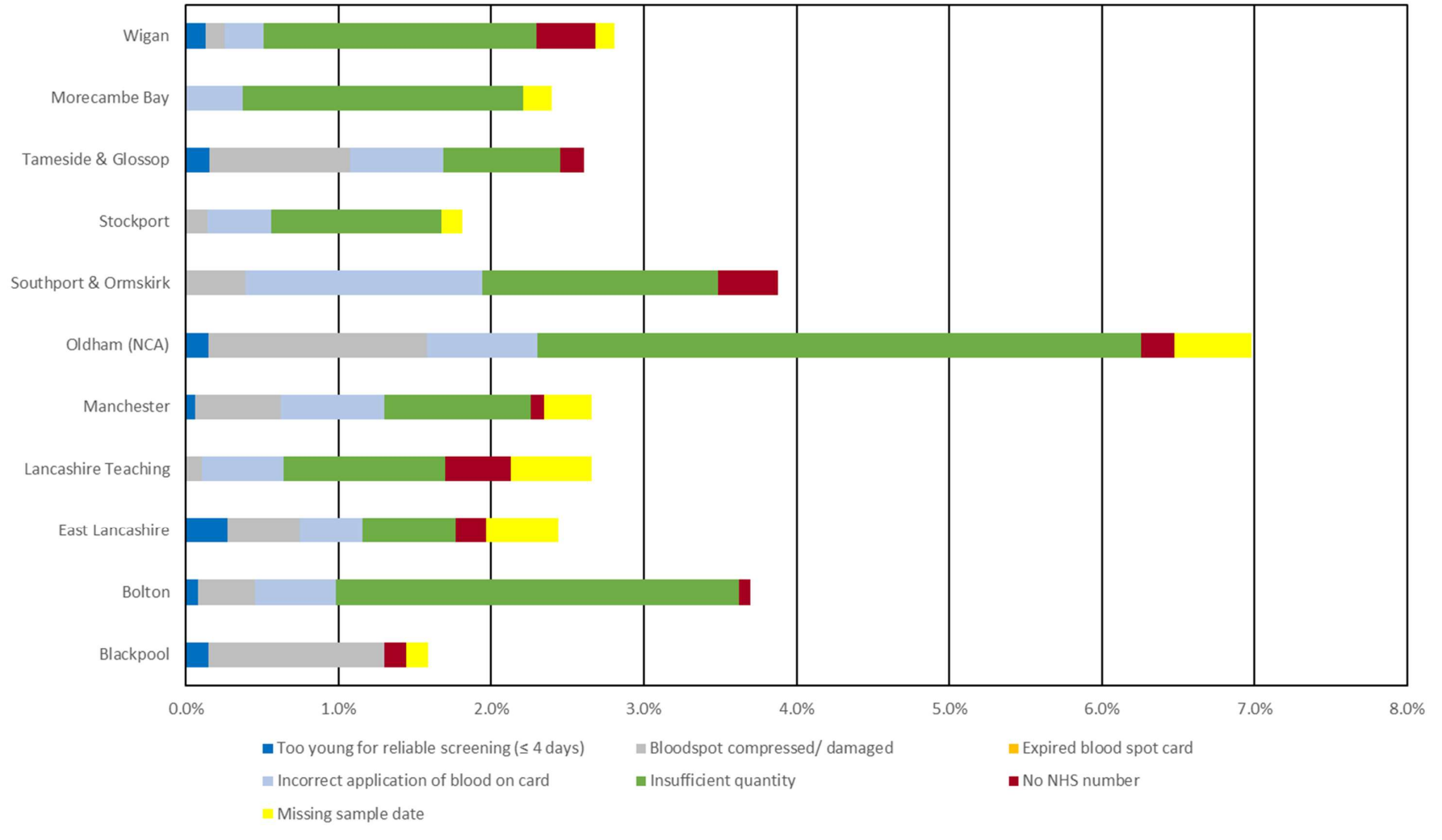
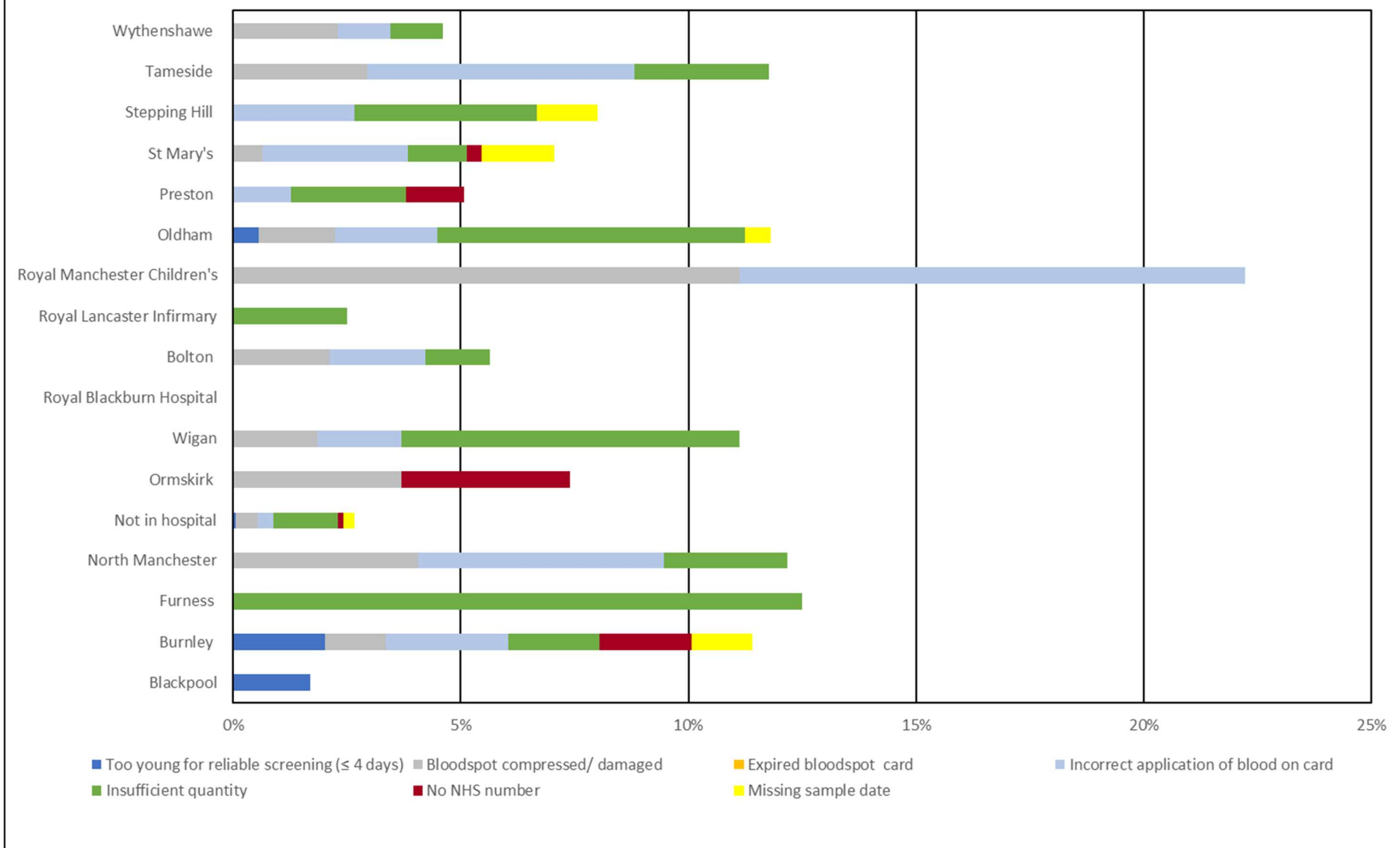


Figure 6: Standard 6 - Avoidable repeats for in-patients vs community



Q4 23-24 Table 1 - Summary of Performance				
Trust	Standard 3	Standard 4	Standard 5	Standard 6
Blackpool Teaching Hospitals NHS FT	94.8%	95.2%	99.2%	1.6%
Bolton NHS FT	82.2%	90.5%	96.9%	3.7%
East Lancashire Hospitals NHS Trust	86.4%	87.8%	99.2%	2.4%
Lancashire Teaching Hospitals NHS FT	89.1%	93.2%	99.3%	2.7%
Manchester University NHS FT - SMH, RMCH, WH & NMGH	94.4%	94.9%	99.4%	2.7%
Oldham (NCA)	76.7%	90.7%	93.3%	7.0%
Southport & Ormskirk Hospital NHS Trust	76.8%	91.1%	93.3%	3.9%
Stockport NHS FT	81.6%	95.7%	97.6%	1.8%
Tameside And Glossop Integrated Care NHS FT	89.4%	94.3%	99.4%	2.6%
University Hospitals of Morecambe Bay NHS FT	95.2%	95.8%	96.4%	2.4%
Wrightington, Wigan and Leigh NHS FT	25.4%	95.5%	92.8%	2.8%

Standard 7a - The proportion of second blood spots for raised IRT taken on day 21 to day 24

Acceptable: ≥ 80% of second blood spot samples taken on day 21 to day 24

Achievable: ≥ 90% of second blood spot samples taken on day 21 to day 24

During quarter 4 there were 6 repeats for raised IRT (CF inconclusive). Of these, 50% were collected on day 21-24. CF inconclusive repeats are performed by Screening Link Health Visitors. The data is presented by Maternity Unit in table 2.

Q4 23-24 Table 2 - Standard 7a						
Maternity Unit	Age at collection of CF				Total	% collected day 21-24
	20	21	22	25		
Bolton NHS FT	1			1	2	0%
Manchester University NHS FT - SMH, RMCH, WH & NMGH		2		1	3	67%
Wrightington, Wigan and Leigh NHS FT			1		1	100%
Total	1	2	1	2	6	50%

Standard 7b - The proportion of second blood spot samples for borderline TSH taken between 7 and 10 calendar days after the initial borderline sample

Acceptable: ≥ 80.0% of repeat blood spot samples taken as defined

Achievable: ≥ 90.0% of repeat blood spot samples taken as defined

During quarter 4 there were 32 repeats for borderline TSH (CHT). Of these, 84% were collected 7-10 days after the original sample. Table 3 displays the information by Trust.

Q4 Table 3: Standard 7b									
Trust	Number of days between original							Total	% collected 7-10 days after original
	4	6	7	8	9	10	20		
Bolton NHS FT			1	1	1			3	100%
East Lancashire Hospitals NHS Trust		2	3		2			7	71%
Lancashire Teaching Hospitals NHS FT					1	1		2	100%
Manchester University NHS FT - SMH, RMCH, WH	1	1	4	1	1	1		9	78%
Oldham (NCA)				1	2	1		4	100%
Tameside And Glossop Integrated Care NHS FT						1		1	100%
University Hospitals of Morecambe Bay NHS FT				1	1			2	100%
Wrightington, Wigan and Leigh NHS FT			1	1		1	1	4	75%
Grand Total	1	3	9	5	8	5	1	32	84%

Standard 7c - The proportion of CHT pre-term repeats collected on day 28 or at discharge

Acceptable: ≥ 75.0% of repeat blood spot samples taken as defined

Achievable: ≥ 85.0% of repeat blood spot samples taken as defined

During quarter 4, 172 CHT pre-term repeats were received (avoidable repeats and duplicates excluded). Performance by trust is displayed in table 4. 63% were collected on day 28 or at discharge, 27% were collected after day 28.

Q4 23-24 Table 4 - Standard 7c					
Trust	Number of Pre-term CHT second samples collected:			Total	% Prem repeats collected on day 28 or at discharge
	EARLY	ON-TIME	LATE		
Blackpool Teaching Hospitals NHS FT	0	1	1	2	50%
Bolton NHS FT	6	15	4	25	60%
East Lancashire Hospitals NHS Trust	3	10	15	28	36%
Lancashire Teaching Hospitals NHS FT	0	15	6	21	71%
Manchester University NHS FT - SMH, RMCH, WH & NMGH	1	31	14	46	67%
Oldham (NCA)	2	22	1	25	88%
Southport & Ormskirk Hospital NHS Trust	0	2	0	2	100%
Stockport NHS FT	0	5	0	5	100%
Tameside And Glossop Integrated Care NHS FT	0	2	5	7	29%
University Hospitals of Morecambe Bay NHS FT	1	2	1	4	50%
Wrightington, Wigan and Leigh NHS FT	3	4	0	7	57%
Grand Total	16	109	47	172	63%

Standard 9 - Timely processing of CHT and IMD (excluding HCU) screen positive samples

Acceptable: 100% of babies with a positive screening result (excluding HCU) have a clinical referral initiated within 3 working days of sample receipt

There were 13 screen positive samples for CHT and 2 for IMD in quarter 4. All were referred within 3 working days of sample receipt.

Standard 11 - Timely entry into clinical care

Data for standard 11 is displayed in table 5.

Table 5: Standard 11						
Condition	Criteria	Thresholds	Number of babies seen by specialist services by condition specific standard	Number of babies referred	Percentage seen by specialist services by condition specific standard	Comments
IMDs (excluding HCU)	Attend first clinical appointment by 14 days of age	Acceptable: 100%	2	2	100%	1 x PKU, 1 x MCAD
CHT (suspected on first sample)	Attend first clinical appointment by 14 days of age	Acceptable: 100%	4	6	67%	1 baby seen on day 21 (first sample was collected too soon after a TF), 1 baby seen on day 15 after Easter B/H
CHT (suspected on repeat following borderline TSH)	Attend first clinical appointment by 21 days of age	Acceptable: 100%	6	6	100%	
CF (2 CFTR mutations detected)	Attend first clinical appointment by 28 days of age	Acceptable: ≥ 95.0% Achievable: 100%	2	2	100%	
HCU	Attend first clinical appointment by 28 days of age	Acceptable: ≥ 95.0% Achievable: 100%	2	2	100%	
CF (1 or no CFTR mutation detected)	Attend first clinical appointment by 35 days of age	Attend first clinical appointment by 35 days of age	2	2	100%	
SCD	Attend first clinical appointment by 90 days of age	Attend first clinical appointment by 90 days of age	8	8	100%	1 additional baby has not been seen in clinic but has not yet reached 90 days of age

Incidents

Details of incidents at level 3 or above, either detected by the laboratory or occurred at MFT

Incident Number	Incident Date	Incident Severity	Incident Harm	Summary of incident	Further details	MFT or external	Lab/ Ward/ Maternity Unit	Local Area Team	QA informed
2476882	18/02/24	2 - minor	1 - no harm	Blood spot collection error: delay/ failure to collect screening sample	Screen terminated (Movement In baby)	External	Bolton Health Visitors	Greater Manchester	Yes
2476886	25/02/24	2 - minor	1 - no harm	Blood spot collection error: delay/ failure to collect screening sample	Screen terminated (Movement In baby)	External	Rochdale Health Visitors	Greater Manchester	Yes

Appendix

Quarter 4 2023-24: Standard 3							
Trust	Number of all samples (including repeats)	Number of blood spot cards including baby's NHS number	Number of blood spot cards including ISB label barcoded baby's NHS number	Unreadable Barcodes	Percentage of all blood spot cards including babies' NHS number	Percentage of all blood spot cards including ISB bar-coded babies' NHS number	Percentage of all Unreadable Barcodes
Blackpool Teaching Hospitals NHS FT	709	708	672	14	99.9%	94.8%	2.0%
Bolton NHS FT	1534	1533	1261	106	99.9%	82.2%	6.9%
East Lancashire Hospitals NHS Trust	1591	1588	1374	21	99.8%	86.4%	1.3%
Health Visitor	334	334	7	0	100.0%	2.1%	0.0%
Lancashire Teaching Hospitals NHS FT	996	992	887	17	99.6%	89.1%	1.7%
Manchester University NHS FT - SMH & RMCH & WH & NMGH	3473	3470	3278	60	99.9%	94.4%	1.7%
Not Stated	11	11	9	1	100.0%	81.8%	9.1%
Oldham (NCA)	1577	1574	1209	11	99.8%	76.7%	0.7%
Southport & Ormskirk Hospital NHS Trust	271	270	208	8	99.6%	76.8%	3.0%
Stockport NHS FT	740	740	604	39	100.0%	81.6%	5.3%
Tameside And Glossop Integrated Care NHS FT	681	680	609	20	99.9%	89.4%	2.9%
University Hospitals of Morecambe Bay NHS FT	567	567	540	2	100.0%	95.2%	0.4%
Wrightington, Wigan and Leigh NHS FT	815	811	207	487	99.5%	25.4%	59.8%
Grand Total	13299	13278	10865	786	99.8%	81.7%	5.9%

Quarter 4 2023-24: Standard 4												
Trust	Number of first samples taken on or before day 4	5	6	7	8	9+	4 or earlier	5	6	7	8	9 or later
Blackpool Teaching Hospitals NHS FT	1	661	19	9	0	4	0.1%	95.2%	2.7%	1.3%	0.0%	0.6%
Bolton NHS FT	1	1204	85	14	5	22	0.1%	90.5%	6.4%	1.1%	0.4%	1.7%
East Lancashire Hospitals NHS Trust	4	1289	135	13	5	22	0.3%	87.8%	9.2%	0.9%	0.3%	1.5%
Health Visitor	0	5	0	0	0	242	0.0%	2.0%	0.0%	0.0%	0.0%	98.0%
Lancashire Teaching Hospitals NHS FT	0	874	50	5	2	7	0.0%	93.2%	5.3%	0.5%	0.2%	0.7%
Manchester University NHS FT - SMH, RMCH, WH & NMC	3	3068	93	11	12	47	0.1%	94.9%	2.9%	0.3%	0.4%	1.5%
Not Stated	0	2	0	1	0	1	0.0%	50.0%	0.0%	25.0%	0.0%	25.0%
Oldham (NCA)	5	1259	74	7	10	33	0.4%	90.7%	5.3%	0.5%	0.7%	2.4%
Southport & Ormskirk Hospital NHS Trust	0	236	16	3	1	3	0.0%	91.1%	6.2%	1.2%	0.4%	1.2%
Stockport NHS FT	0	686	25	3	1	2	0.0%	95.7%	3.5%	0.4%	0.1%	0.3%
Tameside And Glossop Integrated Care NHS FT	1	615	31	1	2	2	0.2%	94.3%	4.8%	0.2%	0.3%	0.3%
University Hospitals of Morecambe Bay NHS FT	0	521	17	1	0	5	0.0%	95.8%	3.1%	0.2%	0.0%	0.9%
Wrightington, Wigan and Leigh NHS FT	1	747	26	6	0	2	0.1%	95.5%	3.3%	0.8%	0.0%	0.3%
Grand Total	16	11167	571	74	38	392	0.1%	91.1%	4.7%	0.6%	0.3%	3.2%

Quarter 4 2023-24: Standard 5

Trust	Number of samples received in 3 or fewer working days of sample being taken	Number of samples received in 4 or fewer working days of sample being taken	Number of samples received in 5 or more working days of sample being taken	Total number of samples received	Percentage of samples received by laboratories in 3 or fewer working days of sample being taken	Percentage of samples received by laboratories in 4 or fewer working days of sample being taken	Percentage of samples received by laboratories on or after 5 working days of sample being taken
Blackpool Teaching Hospitals NHS FT	701	707	0	707	99.2%	100.0%	0.00%
Bolton NHS FT	1374	1402	16	1418	96.9%	98.9%	1.13%
East Lancashire Hospitals NHS Trust	1531	1539	4	1543	99.2%	99.7%	0.26%
Health Visitor	256	260	11	271	94.5%	95.9%	4.06%
Lancashire Teaching Hospitals NHS FT	976	983	0	983	99.3%	100.0%	0.00%
Manchester University NHS FT - SMH, RMCH, WH & NMGH	3348	3359	9	3368	99.4%	99.7%	0.27%
Not Stated	2	3	4	7	28.6%	42.9%	57.14%
Oldham (NCA)	1430	1505	28	1533	93.3%	98.2%	1.83%
Southport & Ormskirk Hospital NHS Trust	252	263	7	270	93.3%	97.4%	2.59%
Stockport NHS FT	721	737	2	739	97.6%	99.7%	0.27%
Tameside And Glossop Integrated Care NHS FT	675	677	2	679	99.4%	99.7%	0.29%
University Hospitals of Morecambe Bay NHS FT	542	562	0	562	96.4%	100.0%	0.00%
Wrightington, Wigan and Leigh NHS FT	753	803	8	811	92.8%	99.0%	0.99%
Grand Total	12561	12800	91	12891	97.4%	99.3%	0.71%

Quarter 4 2023-24: Standard 6 by Trust														
Status code and description of avoidable repeat	Blackpool Teaching Hospitals NHS FT	Bolton NHS FT	East Lancashire Hospitals NHS Trust	Health Visitor	Lancashire Teaching Hospitals NHS FT	Manchester University NHS FT - SMH & RMCH & WH & NMGH	Not Stated	Oldham (NCA)	Southport & Ormskirk Hospital NHS Trust	Stockport NHS FT	Tameside And Glossop Integrated Care NHS FT	University Hospitals of Morecambe Bay NHS FT	Wrightington, Wigan and Leigh NHS FT	Grand Total
0301: too young for reliable screening (≤ 4 days)	1	1	4	0	0	2	0	2	0	0	1	0	1	12
0302: too soon after transfusion (<72 hours)	0	7	10	0	2	8	0	6	0	0	0	0	1	34
0303: insufficient sample	0	35	9	8	10	31	0	55	4	8	5	10	14	189
0304: unsuitable sample (blood quality): incorrect blood application	0	7	6	6	5	22	0	10	4	3	4	2	2	71
0305: unsuitable sample (blood quality): compressed/damaged	8	5	7	3	1	18	0	20	1	1	6	0	1	71
0306: Unsuitable sample: day 0 and day 5 on same card	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0307: unsuitable sample for CF: possible faecal contamination	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0308: unsuitable sample: NHS number missing/not accurately recorded	1	1	3	0	4	3	0	3	1	0	1	0	3	20
0309: unsuitable sample: date of sample missing/not accurately recorded	1	0	7	2	5	10	0	7	0	1	0	1	1	35
0310: unsuitable sample: date of birth not accurately matched	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0311: unsuitable sample: expired card used	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0312: unsuitable sample: >14 days in transit, too old for analysis	0	0	0	1	0	0	0	0	0	0	0	0	0	1
0313: unsuitable sample: damaged in transit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Avoidable Repeat Requests	11	49	36	20	25	86	0	97	10	13	17	13	22	399
Number of first samples received/ babies tested	694	1326	1474	205	941	3236	3	1390	258	718	652	543	783	12223
Avoidable Repeat Requests Rate	1.6%	3.7%	2.4%	9.8%	2.7%	2.7%	0.0%	7.0%	3.9%	1.8%	2.6%	2.4%	2.8%	3.3%

Transfusion Repeats are not included in the Avoidable Repeat calculation

Quarter 4 2023-24: Standard 6 by Current Hospital																		
Status code and description of avoidable repeat	Blackpool Victoria Hospital	Burnley General Hospital	Furness General Hospital	North Manchester General Hospital	Not in hospital	Ormskirk & District General	Royal Albert Edward Infirmary	Royal Blackburn Hospital	Royal Bolton Hospital	Royal Lancaster Infirmary	Royal Manchester Childrens Hospital	Royal Oldham Hospital	Royal Preston Hospital	St Mary's Hospital	Stepping Hill Hospital	Tameside General Hospital	Wythenshawe Hospital	Grand Total
0301: too young for reliable screening (≤ 4 days)	1	3	0	0	7	0	0	0	0	0	0	1	0	0	0	0	0	12
0302: too soon after transfusion (<72 hours)	0	10	0	1	0	0	1	0	7	0	0	6	2	7	0	0	0	34
0303: insufficient sample	0	3	1	2	153	0	4	0	2	1	0	12	2	4	3	1	1	189
0304: unsuitable sample (blood quality): incorrect blood application	0	4	0	4	38	0	1	0	3	0	1	4	1	10	2	2	1	71
0305: unsuitable sample (blood quality): compressed/damaged	0	2	0	3	52	1	1	0	3	0	1	3	0	2	0	1	2	71
0306: Unsuitable sample: day 0 and day 5 on same card	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0307: unsuitable sample for CF: possible faecal contamination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0308: unsuitable sample: NHS number missing/not accurately recorded	0	3	0	0	14	1	0	0	0	0	0	0	1	1	0	0	0	20
0309: unsuitable sample: date of sample missing/not accurately recorded	0	2	0	0	26	0	0	0	0	0	0	1	0	5	1	0	0	35
0310: unsuitable sample: date of birth not accurately matched	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0311: unsuitable sample: expired card used	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0312: unsuitable sample: >14 days in transit, too old for analysis	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
0313: unsuitable sample: damaged in transit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Avoidable Repeat Requests	1	17	1	9	291	2	6	0	8	1	2	21	4	22	6	4	4	399
Number of first samples received/ babies tested	59	149	8	74	10895	27	54	1	142	40	9	178	79	312	75	34	87	12223
Avoidable Repeat Requests Rate	1.7%	11.4%	12.5%	12.2%	2.7%	7.4%	11.1%	0.0%	5.6%	2.5%	22.2%	11.8%	5.1%	7.1%	8.0%	11.8%	4.6%	3.3%

Transfusion Repeats are not included in the Avoidable Repeat calculation