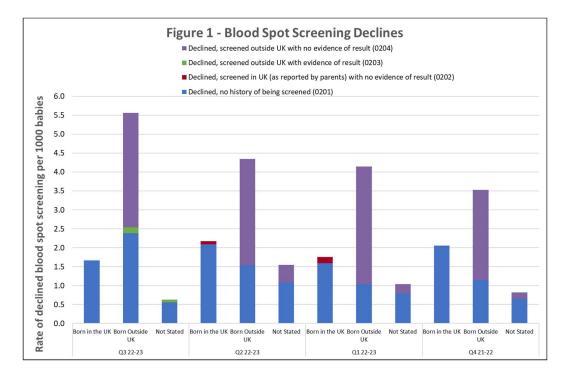
Manchester Newborn Screening Laboratory Quarterly Blood Spot Screening Report: Quarter 3 2022-23

Manchester Newborn Screening Laboratory, which serves babies born in Greater Manchester, Lancashire and South Cumbria, received 13655 blood spot samples between 1st October and 31st December 2022. 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 3 the laboratory received 99 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.

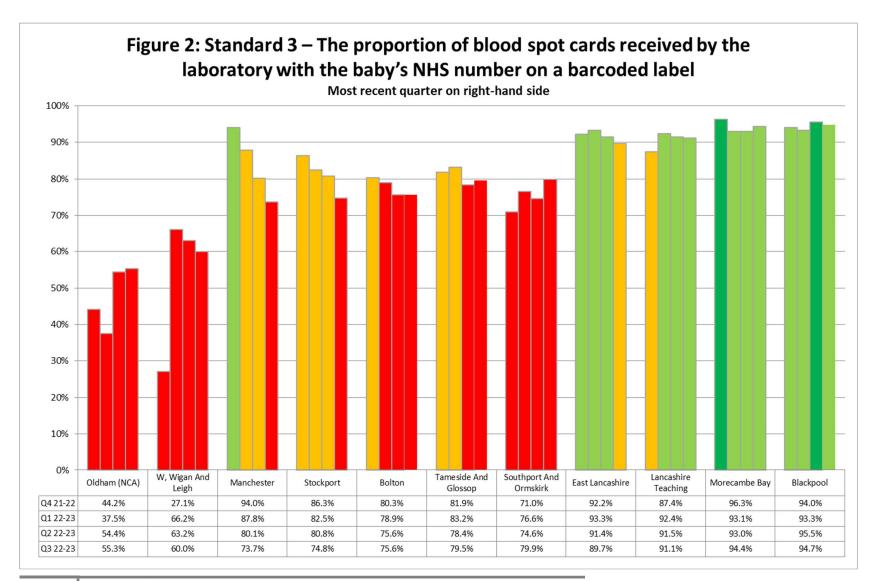
Figure 2 displays performance against standard 3.

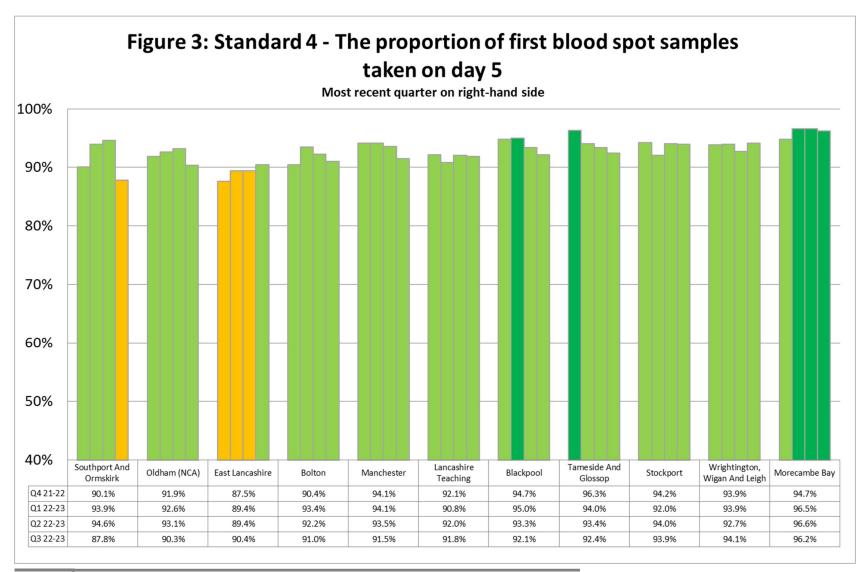
Overall, 75.2% of samples received in quarter 3 of 2022/23 had a barcoded NHS number label, which is lower than the previous quarter (78.1%). Of the 11 maternity units, 3 met the standard and none met the achievable threshold.

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

Acceptable: \ge 90.0% of first blood spot samples are taken on day 5. **Achievable:** \ge 95.0% of first blood spot samples are taken on day 5.

Figure 3 displays performance against standard 4. Overall, 90.5% of samples received in quarter 3 of 2022/23 were collected on day 5, which is lower than the previous quarter (91.9%). 10 out of the 11 maternity units met standard 4, and 1 maternity unit met the achievable threshold.





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

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

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

Figure 4 displays performance against standard 5.

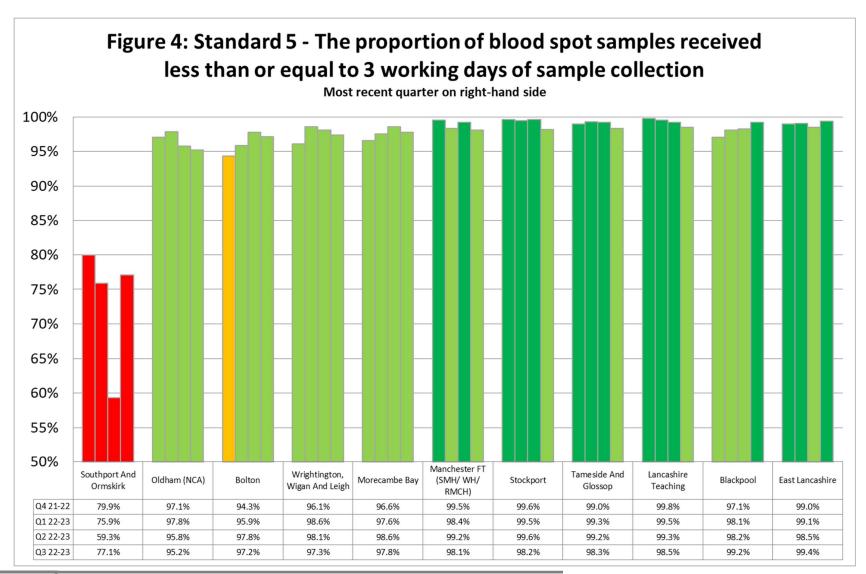
Overall, 97.1% samples were received within 3 working days. 10 Trusts met the standard, including 2 reaching the achievable threshold. Performance was similar to the previous quarter (97.6% samples received within 3 working days).

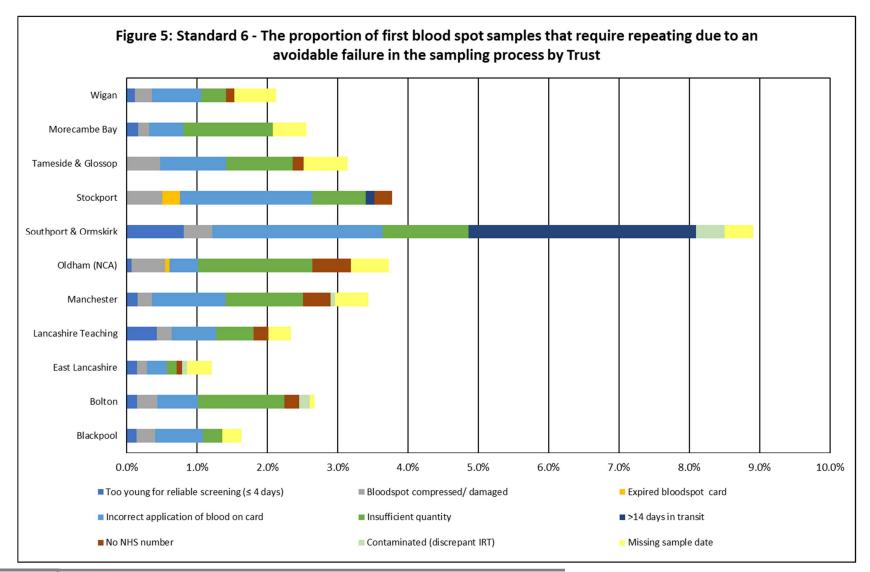
Standard 6 - The proportion of first blood spot samples that require repeating due to an avoidable failure in the sampling process

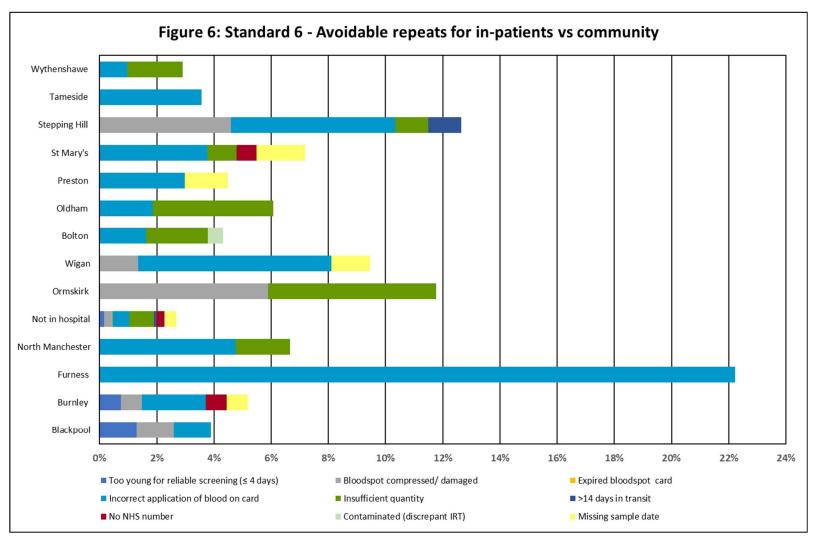
Acceptable: Avoidable repeat rate is ≤ 2.0%

Achievable: Avoidable repeat rate is ≤ 1.0%

The avoidable repeat rate for quarter 3 was 3.1%, which is higher than last quarter (2.7%). The main reason for an avoidable repeat was insufficient blood, followed by incorrect application of blood. The performance for each trust is displayed in figure 5. Two Trusts met the standard. Figure 6 compares the avoidable repeat rate for samples collected from inpatients with samples collected from babies at home/in the community. The rate was 2.7% for babies at home (2.2% in quarter 2) and 6.1% for samples collected from in-patients (7.4% in quarter 2).







There are no avoidable repeats for Royal Blackburn Hospital, Royal Lancaster Infirmary and RMCH.

Q3 22-23 Table 1 - Summar	y of perform	nance		
Trust	Standard 3	Standard 4	Standard 5	Standard 6
Blackpool Teaching Hospitals NHS FT	94.7%	92.1%	99.2%	1.6%
Bolton NHS FT	75.6%	91.0%	97.2%	2.7%
East Lancashire Hospitals NHS Trust	89.7%	90.4%	99.4%	1.2%
Lancashire Teaching Hospitals NHS FT	91.1%	91.8%	98.5%	2.3%
Manchester University NHS FT - SMH, RMCH, WH & NMGH	73.7%	91.5%	98.1%	3.4%
Oldham (NCA)	55.3%	90.3%	95.2%	3.7%
Southport & Ormskirk Hospital NHS Trust	79.9%	87.8%	77.1%	8.9%
Stockport NHS FT	74.8%	93.9%	98.2%	3.8%
Tameside And Glossop Integrated Care NHS FT	79.5%	92.4%	98.3%	3.1%
University Hospitals of Morecambe Bay NHS FT	94.4%	96.2%	97.8%	2.6%
Wrightington, Wigan and Leigh NHS FT	60.0%	94.1%	97.3%	2.1%

CB-REP-REP-10

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 3 there were 14 repeats for raised IRT (CF inconclusive). Of these, 79% were collected on day 21-24. CF inconclusive repeats are performed by Screening Link Health Visitors. The data is presented by local Child Health Records Department, in table 2.

Q	3 22-	23 T	able	2 - S	tand	lard :	7a	
Child Health		•			of CF (days		Total	% collected
Department	15	21	22	23	25	31		day 21-24
Ashton, Wigan & Leigh		2					2	100%
Central Lancashire			1				1	100%
Manchester		1		1	1		3	67%
Oldham		2					2	100%
Rochdale	1						1	0%
Stockport		3					3	100%
Trafford		1					1	100%
Salford						1	1	0%
Total	1	9	1	1	1	1	14	79%

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 3 there were 26 repeats for borderline TSH (CHT). Of these, 73% were collected 7-10 days after the original sample. T able 3 displays the information by Trust.

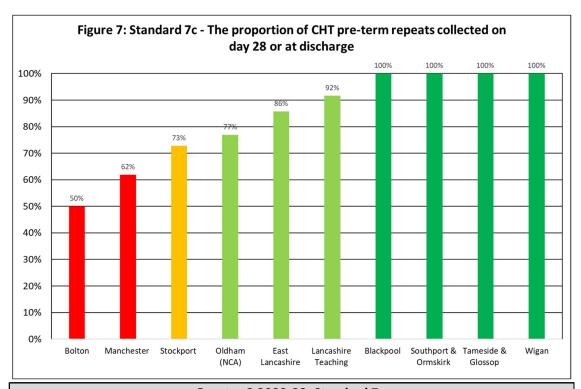
	Q3 T	able	3: St	anda	rd 7I)						
	Num	iber o	f days	tion		% collected 7-						
Trust	of repeat sample											10 days after
	5	6	7	8	9	10	11	12	13	15		original sample
Bolton NHS FT										1	1	0%
East Lancashire Hospitals NHS Trust					2				1		3	67%
Lancashire Teaching Hospitals NHS FT	1				1						2	50%
Manchester University NHS FT - SMH, RMCH, WH & NMGH			3	2	3	1		1			10	90%
Oldham (NCA)					1						1	100%
Southport & Ormskirk Hospital NHS Trust							1				1	0%
Stockport NHS FT					1						1	100%
Tameside And Glossop Integrated Care NHS FT				1	1			1			3	67%
University Hospitals of Morecambe Bay NHS FT		1			1						2	50%
Wrightington, Wigan and Leigh NHS FT				1	1						2	100%
Total	1	1	3	4	11	1	1	2	1	1	26	73%

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

Acceptable: \geq 75.0% of repeat blood spot samples taken as defined **Achievable:** \geq 85.0% of repeat blood spot samples taken as defined

During quarter 3, 143 CHT pre-term repeats were received (avoidable repeats and duplicates excluded). Performance by trust is displayed in figure 7. 75% were collected on day 28 or at discharge, 24% were collected after day 28.

Of note, 17 out of 34 babies with samples collected after day 28 had transfusions on days 25-28, which could account for the delayed sampling.



Quarter 3 2022-	23: Star	ndard 7c			
Trust		er of Pre-te samples co	_	Total	% Prem repeats collected on day
	EARLY	ON-TIME	LATE		28 or at discharge
Blackpool Teaching Hospitals NHS FT		8		8	100%
Bolton NHS FT		6	6	12	50%
East Lancashire Hospitals NHS Trust		18	3	21	86%
Health Visitor			1	1	0%
Lancashire Teaching Hospitals NHS FT		11	1	12	92%
Manchester University NHS FT - SMH, RMCH, WH & NMGH		26	16	42	62%
Oldham (NCA)	2	20	4	26	77%
Southport & Ormskirk Hospital NHS Trust		2		2	100%
Stockport NHS FT		8	3	11	73%
Tameside And Glossop Integrated Care NHS FT		5	•	5	100%
Wrightington, Wigan and Leigh NHS FT		3	•	3	100%
Grand Total	2	107	34	143	75%

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 3 for IMD in quarter 3. All were referred within 3 working days of sample receipt, except 1 CHT sample which was referred after 8 days due to an analyser failure (Incident 2339130).

Standard 11 - Timely entry into clinical care

Data for standard 11 is displayed in table 5.

		Table 5: Sta	andard 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%	3	3	100%	2 x MCADD, 1 x IVA
CHT (suspected on first sample)	Attend first clinical appointment by 14 days of age	Acceptable: 100%	8	9	89%	1 baby seen at day 18. Result not available for 8 days due to analyser failure. Incident logged (2339130)
CHT (suspected on repeat following borderline TSH)	Attend first clinical appointment by 21 days of age	Acceptable: 100%	2	4	50%	2 samples had transport delays over the christmas period so not seen in clinic until day 25 and 26
CF (2 CFTR mutations detected)	Attend first clinical appointment by 28 days of age	Acceptable: ≥ 95.0% Achievable: 100%	2	2	100%	
нси	Attend first clinical appointment by 28 days of age	Acceptable: ≥ 95.0% Achievable: 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	3	67%	1 baby reviewed on day 41 due to poor health
SCD	Attend first clinical appointment by 90 days of age	Attend first clinical appointment by 90 days of age	4	8	50%	4 additional babies have not yet been seen

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
2319918	08/10/22	3 - moderate	1 - no harm	Blood spot labelling error: handwritten NHS number belonging to another baby (other demographic details correct)	Wrong NHS number (handwritten)	MFT	SMH Community Midwives	Greater Manchester	Yes
2323008	13/09/22	3 - moderate	1 - no harm	Late referral for treatment of a screen positive baby due to a failing anywhere in the pathway	Delayed referral of SCID baby	MFT		Greater Manchester	Yes
2323163	18/10/22	3 - moderate	1 - no harm	Blood spot labelling error: demographic sticker contained errors e.g. another baby's NHS number (some details correct)	Wrong NHS number on barcoded demographic sticker	MFT	SMH Community Midwives	Greater Manchester	Yes
2324182	25/10/22	3 - moderate	1 - no harm	Blood spot collection error: delay/ failure to collect screening sample	Screen terminated due to failure to collect a repeat sample	External	Bolton Health Visitors	Greater Manchester	Yes
2326704	25/10/22	3 - moderate	1 - no harm	Blood spot labelling error: another baby's bar-coded demographic sticker and reported against wrong baby.	Wrong sticker	External	Bolton NNU	Greater Manchester	Yes
2339130	09/12/22	2 - minor	1 - no harm	Late referral for treatment of a screen positive baby due to a failing anywhere in the pathway	CHT screen positive baby seen on day 18 due to analyser downtime.	MFT	NBS Lab	Greater Manchester	Yes
2337199	05/12/22	3 - moderate	1 - no harm	Blood spot collection error: delay/ failure to collect screening sample	Screen terminated due to failure to collect a valid screening sample	External	Bolton Health Visitors	Greater Manchester	Yes
2343392	28/12/22	3 - moderate	1 - no harm	Blood spot collection error: delay/ failure to collect screening sample	Screen terminated due to failure to collect a valid screening sample	External	Salford Health Visitors	Greater Manchester	Yes
2344193	16/12/22	3 - moderate	1 - no harm	Blood spot labelling error: handwritten NHS number belonging to another baby (other demographic details correct)	Wrong NHS number (handwritten)	External	Bolton Maternity Unit	Greater Manchester	Yes

Appendix

	Quarte	er 3 2022-23: S	tandard 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	759	759	719	7	100.0%	94.7%	0.9%
Bolton NHS FT	1563	1559	1182	83	99.7%	75.6%	5.3%
East Lancashire Hospitals NHS Trust	1521	1519	1364	28	99.9%	89.7%	1.8%
Health Visitor	244	241	4	1	98.8%	1.6%	0.4%
Lancashire Teaching Hospitals NHS FT	990	988	902	17	99.8%	91.1%	1.7%
Manchester University NHS FT - SMH & RMCH & WH &NMGH	3628	3613	2675	213	99.6%	73.7%	5.9%
Not Stated	9	9	5	0	100.0%	55.6%	0.0%
Oldham (NCA)	1645	1637	910	37	99.5%	55.3%	2.2%
Southport & Ormskirk Hospital NHS Trust	278	278	222	4	100.0%	79.9%	1.4%
Stockport NHS FT	834	831	624	75	99.6%	74.8%	9.0%
Tameside And Glossop Integrated Care NHS FT	669	668	532	27	99.9%	79.5%	4.0%
University Hospitals of Morecambe Bay NHS FT	643	643	607	3	100.0%	94.4%	0.5%
Wrightington, Wigan and Leigh NHS FT	872	871	523	221	99.9%	60.0%	25.3%
Grand Total	13655	13616	10269	716	99.7%	75.2%	5.2%

			Quarter 3	2022-23: St	andard 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	677	43	4		10	0.1%	92.1%	5.9%	0.5%	0.0%	1.4%
Bolton NHS FT	2	1263	86	8	6	23	0.1%	91.0%	6.2%	0.6%	0.4%	1.7%
East Lancashire Hospitals NHS Trust	5	1267	93	15	3	18	0.4%	90.4%	6.6%	1.1%	0.2%	1.3%
Health Visitor	0	4	0	0	0	178	0.0%	2.2%	0.0%	0.0%	0.0%	97.8%
Lancashire Teaching Hospitals NHS FT	5	865	46	12	3	11	0.5%	91.8%	4.9%	1.3%	0.3%	1.2%
Manchester University NHS FT - SMH, RMCH, WH & NI	5	3061	159	34	20	67	0.1%	91.5%	4.8%	1.0%	0.6%	2.0%
Not Stated	0	2	0	0	0	0	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Oldham (NCA)	1	1327	82	22	6	31	0.1%	90.3%	5.6%	1.5%	0.4%	2.1%
Southport & Ormskirk Hospital NHS Trust	2	215	15	3	2	8	0.8%	87.8%	6.1%	1.2%	0.8%	3.3%
Stockport NHS FT	1	743	32	7	3	5	0.1%	93.9%	4.0%	0.9%	0.4%	0.6%
Tameside And Glossop Integrated Care NHS FT	0	584	29	4	3	12	0.0%	92.4%	4.6%	0.6%	0.5%	1.9%
University Hospitals of Morecambe Bay NHS FT	1	600	20	1		2	0.2%	96.2%	3.2%	0.2%	0.0%	0.3%
Wrightington, Wigan and Leigh NHS FT	1	793	36	5	1	7	0.1%	94.1%	4.3%	0.6%	0.1%	0.8%
Grand Total	24	11401	641	115	47	372	0.2%	90.5%	5.1%	0.9%	0.4%	3.0%

	Quarter 3 2	2022-23: Stan	dard 5				
Maternity Unit	Number of samples received in 3 or fewer working days of sample being taken	Number of samples received in 4 or fewer	Number of samples	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	748	753	1	754	99.2%	99.9%	0.13%
Bolton NHS FT	1406	1426	21	1447	97.2%	98.5%	1.45%
East Lancashire Hospitals NHS Trust	1444	1449	4	1453	99.4%	99.7%	0.28%
Health Visitor	162	171	30	201	80.6%	85.1%	14.93%
Lancashire Teaching Hospitals NHS FT	968	980	3	983	98.5%	99.7%	0.31%
Manchester University NHS FT - SMH, RMCH, WH & NMGH	3458	3488	38	3526	98.1%	98.9%	1.08%
Not Stated	3	3	2	5	60.0%	60.0%	40.00%
Oldham (NCA)	1498	1556	17	1573	95.2%	98.9%	1.08%
Southport & Ormskirk Hospital NHS Trust	212	233	42	275	77.1%	84.7%	15.27%
Stockport NHS FT	819	831	3	834	98.2%	99.6%	0.36%
Tameside And Glossop Integrated Care NHS FT	653	660	4	664	98.3%	99.4%	0.60%
University Hospitals of Morecambe Bay NHS FT	625	639	0	639	97.8%	100.0%	0.00%
Wrightington, Wigan and Leigh NHS FT	842	860	5	865	97.3%	99.4%	0.58%
Grand Total	12838	13049	170	13219	97.1%	98.7%	1.29%

CB-REP-REP-10

				Q	uarter 3 2	022-23: Sta	ndard 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	2	2	0	4	5	0	1	2	0	0	1	1	19
0302: too soon after transfusion (<72 hours)	0	5	6	0	2	7	0	3	0	0	0	0	0	23
0303: insufficent sample	2	17	2	5	5	37	0	24	3	6	6	8	3	118
0304: unsuitable sample (blood quality): incorrect blood application	5	8	4	8	6	35	0	6	6	15	6	3	6	108
0305: unsuitable sample (blood quality): compressed/damaged	2	4	2	4	2	7	0	7	1	4	3	1	2	39
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	2	1	0	0	2	0	0	1	0	0	0	0	6
0308: unsuitable sample: NHS number missing/not accurately recorded	0	3	1	2	2	13	0	8	0	2	1	0	1	33
0309: unsuitable sample: date of sample missing/not accurately recorded	2	1	5	2	3	16	0	8	1	0	4	3	5	50
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	1	0	2	0	0	0	3
0312: unsuitable sample: >14 days in transit, too old for analysis	0	0	0	2	0	0	0	0	8	1	0	0	0	11
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	12	37	17	23	22	115	0	55	22	30	20	16	18	387
Number of first samples received/ babies tested	737	1385	1405	144	943	3347	1	1476	247	795	637	626	849	12592
Avoidable Repeat Requests Rate	1.6%	2.7%	1.2%	16.0%	2.3%	3.4%	0.0%	3.7%	8.9%	3.8%	3.1%	2.6%	2.1%	3.1%
Transfusion Reapeats are not included	in the Avoid	able Repea	t calculation											

					(Quarter 3	2022-23:	Standard	6 by Curr	ent Hosp	ital							
Status code and description of avoidable repeat	Blackpool Victoria Hospital	Burnley General Hospital	Furness General Hospital	North Manchest er 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	1	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	19
0302: too soon after transfusion (<72 hours)	0	6	0	0	0	0	0	0	5	0	0	3	2	7	0	0	0	23
0303: insufficent sample	0	0	0	2	96	1	0	0	4	0	0	9	0	3	1	0	2	118
0304: unsuitable sample (blood quality): incorrect blood application	1	3	2	5	64	0	5	0	3	0	0	4	2	11	5	2	1	108
0305: unsuitable sample (blood quality): compressed/damaged	1	1	0	0	31	1	1	0	0	0	0	0	0	0	4	0	0	39
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	5	0	0	0	1	0	0	0	0	0	0	0	0	6
0308: unsuitable sample: NHS number missing/not accurately recorded	0	1	0	0	30	0	0	0	0	0	0	0	0	2	0	0	0	33
0309: unsuitable sample: date of sample missing/not accurately recorded	0	1	0	0	42	0	1	0	0	0	0	0	1	5	0	0	0	50
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	3	0	0	0	0	0	0	0	0	0	0	0	0	3
0312: unsuitable sample: >14 days in transit, too old for analysis	0	0	0	0	10	0	0	0	0	0	0	0	0	0	1	0	0	11
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	3	7	2	7	298	2	7	0	8	0	0	13	3	21	11	2	3	387
Number of first samples received/ babies tested	77	135	9	105	11124	17	74	2	185	43	2	214	67	292	87	56	103	12592
Avoidable Repeat Requests Rate	3.9%	5.2%	22.2%	6.7%	2.7%	11.8%	9.5%	0.0%	4.3%	0.0%	0.0%	6.1%	4.5%	7.2%	12.6%	3.6%	2.9%	3.1%
Transfusion Reapeats are not include					2.1/0	11.0/6	3.3/0	0.076	4.370	0.076	0.076	0.1/0	4.370	1.2/0	12.076	3.076	2.570	3.1%