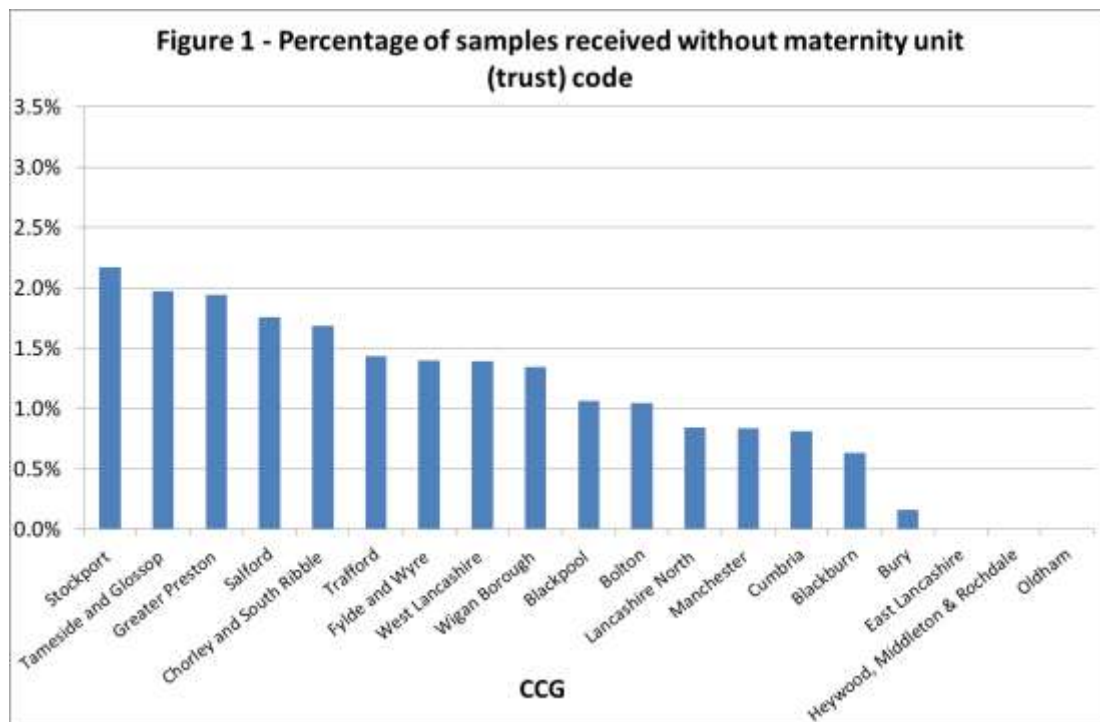


Manchester Newborn Screening Laboratory Quarterly Blood Spot Screening Report: Quarter 2 2020-21

Manchester Newborn Screening Laboratory, which serves babies born in Greater Manchester, Lancashire and South Cumbria, received 13429 blood spot samples between 1st July and 30th September 2020. 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.

In this document North Manchester and Oldham will be referred to as separate maternity units, although they are currently part of the same Trust.

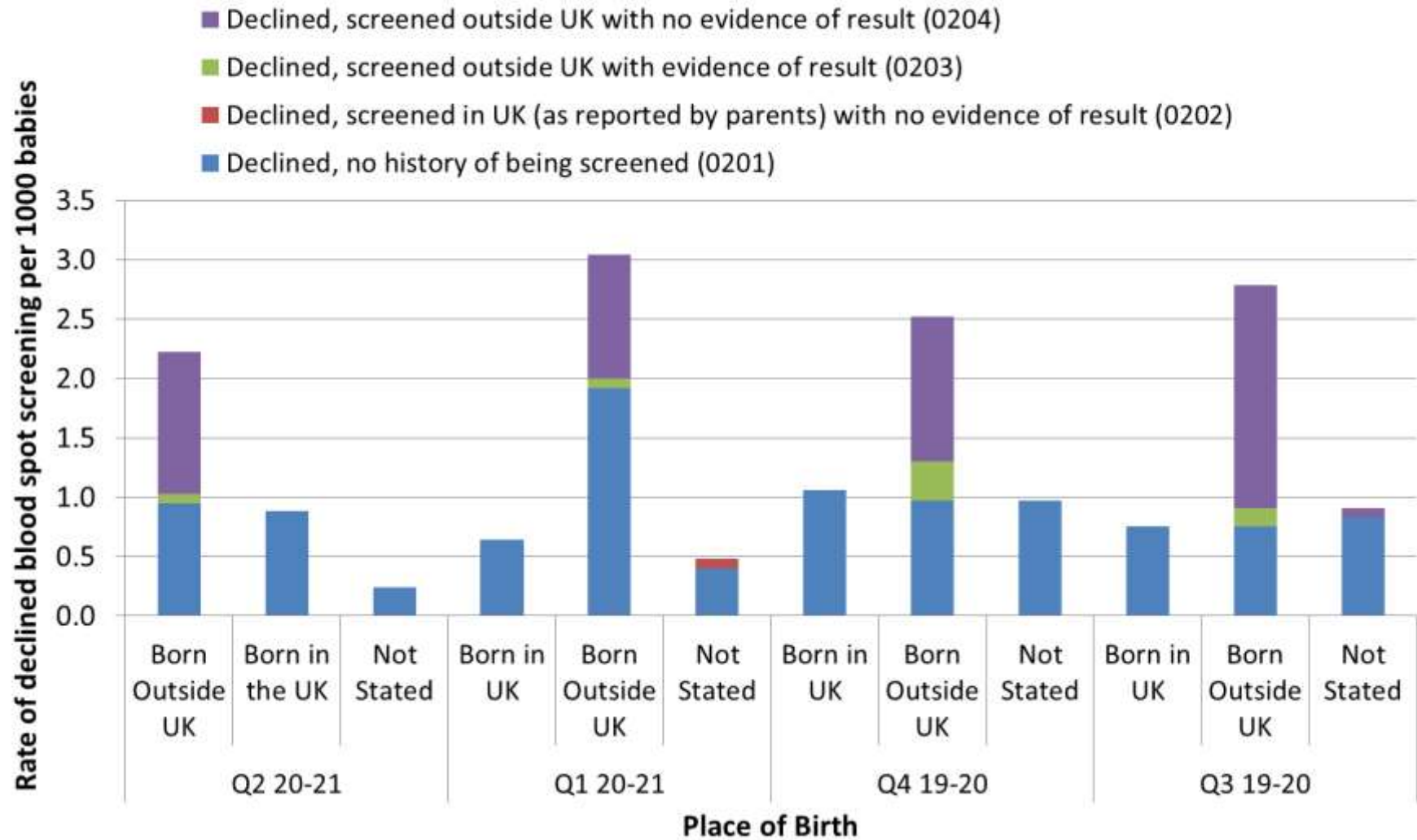
The data for the laboratory reportable standards is presented by maternity unit/NHS trust of the sample taker. For accurate figures, please ensure the trust code is written/stamped on the blood spot card (in the PCT field). The proportion of samples with a missing maternity unit/trust code is presented in figure 1 by CCG. Overall the maternity/ trust code was missing from 141 sample cards (1%).



Declines

In Quarter 2 the laboratory received 42 notifications of declined blood spot screening. Figure 2 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.

Figure 2 - Blood Spot Screening Declines



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 3 displays performance against standard 3.

Overall, 84.4% of samples received in quarter 2 of 2020/21 had a barcoded NHS number label, which is similar to the previous quarter (84.8%). Of 12 maternity units, 6 met the standard, including four reaching the achievable threshold (Blackpool, MFT, East Lancashire and Lancashire Teaching). Two units had poor performance for this standard: 25% (Wigan) and 69% (Stockport).

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

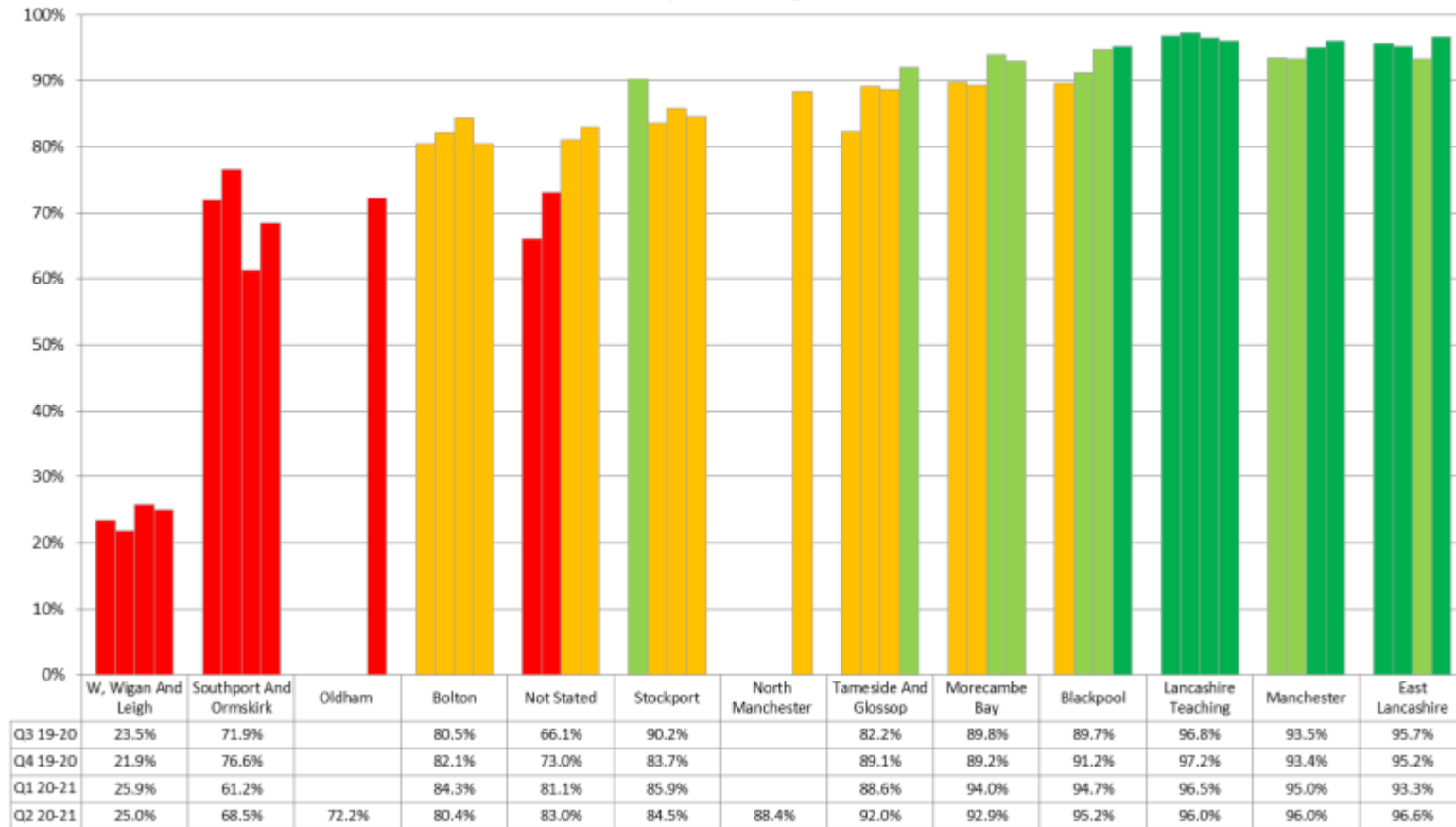
Acceptable: ≥ 90.0% of first blood spot samples are taken on day 5.

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

Figure 4 displays performance against standard 4. Overall, 93.5% of samples received in quarter 2 of 2020/21 were collected on day 5, which is slightly higher than quarter 1 (92.9%). All 12 maternity units met standard 4 and 2 met the achievable threshold (MFT and Morecambe Bay).

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

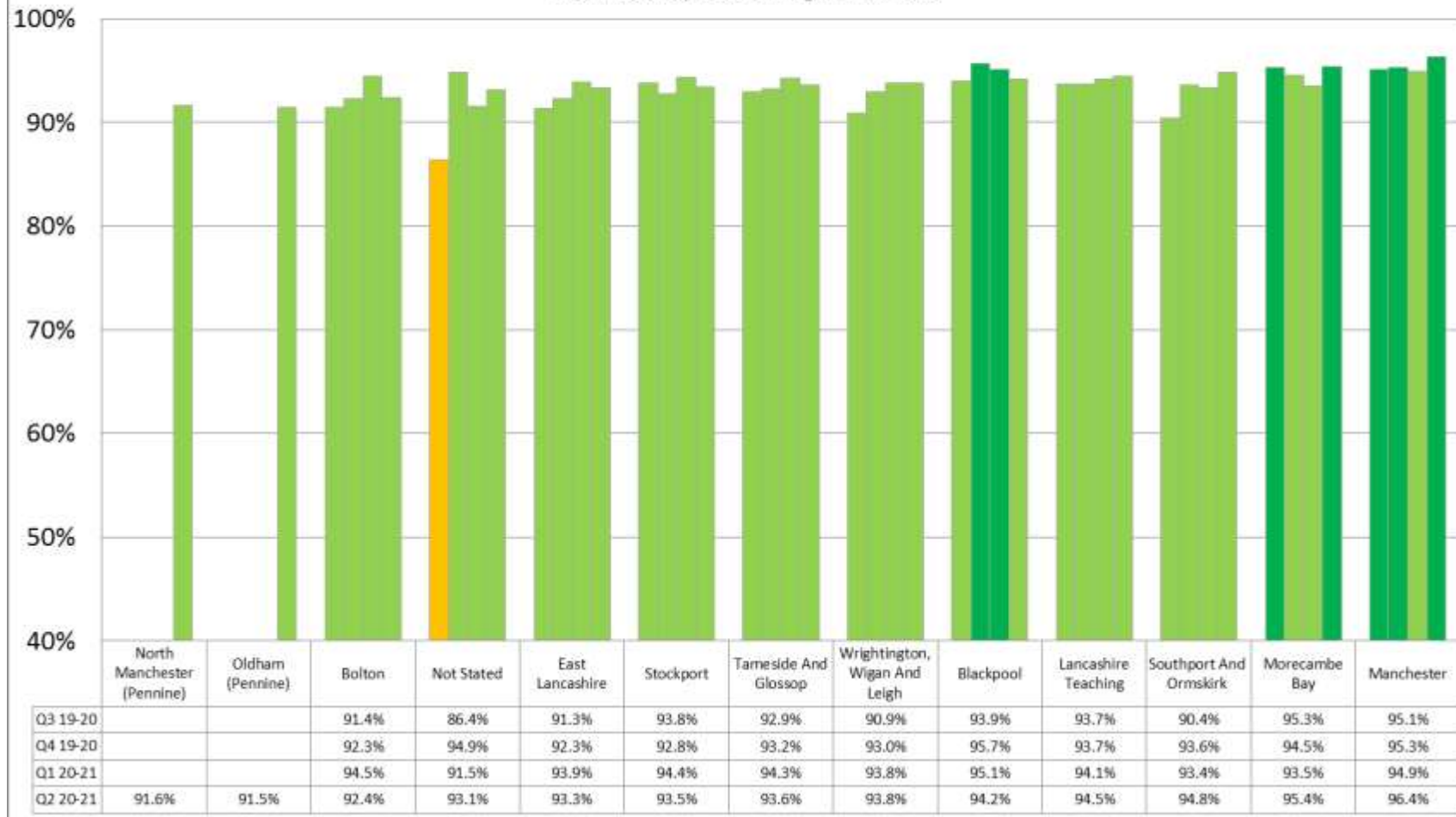
Most recent quarter on right-hand side



The Pennine data is now presented as two separate sites: North Manchester and Oldham. Split data for previous quarters is not available.

Figure 4: 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.

Performance against the transport standard (figure 5) was good. Overall 98.1% samples were received within 3 working days. 10 Trusts met the standard, including 5 reaching the achievable threshold. Performance was very similar to the last quarter (98.2% samples received within 3 working days). One Trust continues to have poor performance against this standard (Southport and Ormskirk, 65.6%).

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 $\leq 1\%$

The avoidable repeat rate for quarter 2 was 2.9%. This is higher than quarter 1 (1.4%) but temporary COVID-19 acceptance criteria was in place for the majority of that quarter. The performance for each trust is displayed in figure 6. One Trust met the standard (Tameside). Figure 7 compares the avoidable repeat rate for samples collected from in-patients with samples collected from babies at home/ in the community. The rate was 2.4% for babies at home (1.2% in quarter 2) and 7.2% for samples collected from in-patients (3.1% in quarter 1).

Figure 5: 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

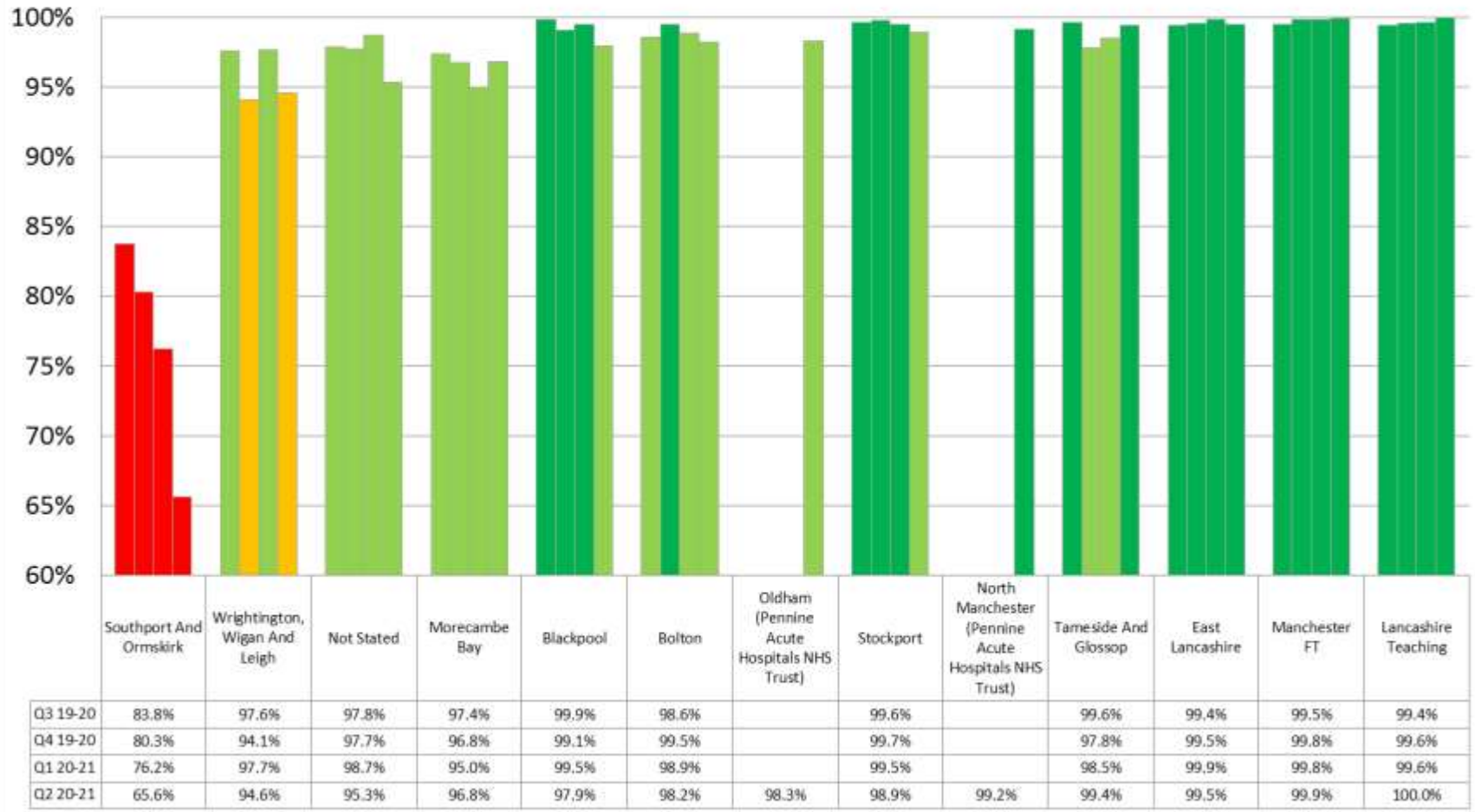


Figure 6: Standard 6 - The proportion of first blood spot samples that require repeating due to an avoidable failure in the sampling process

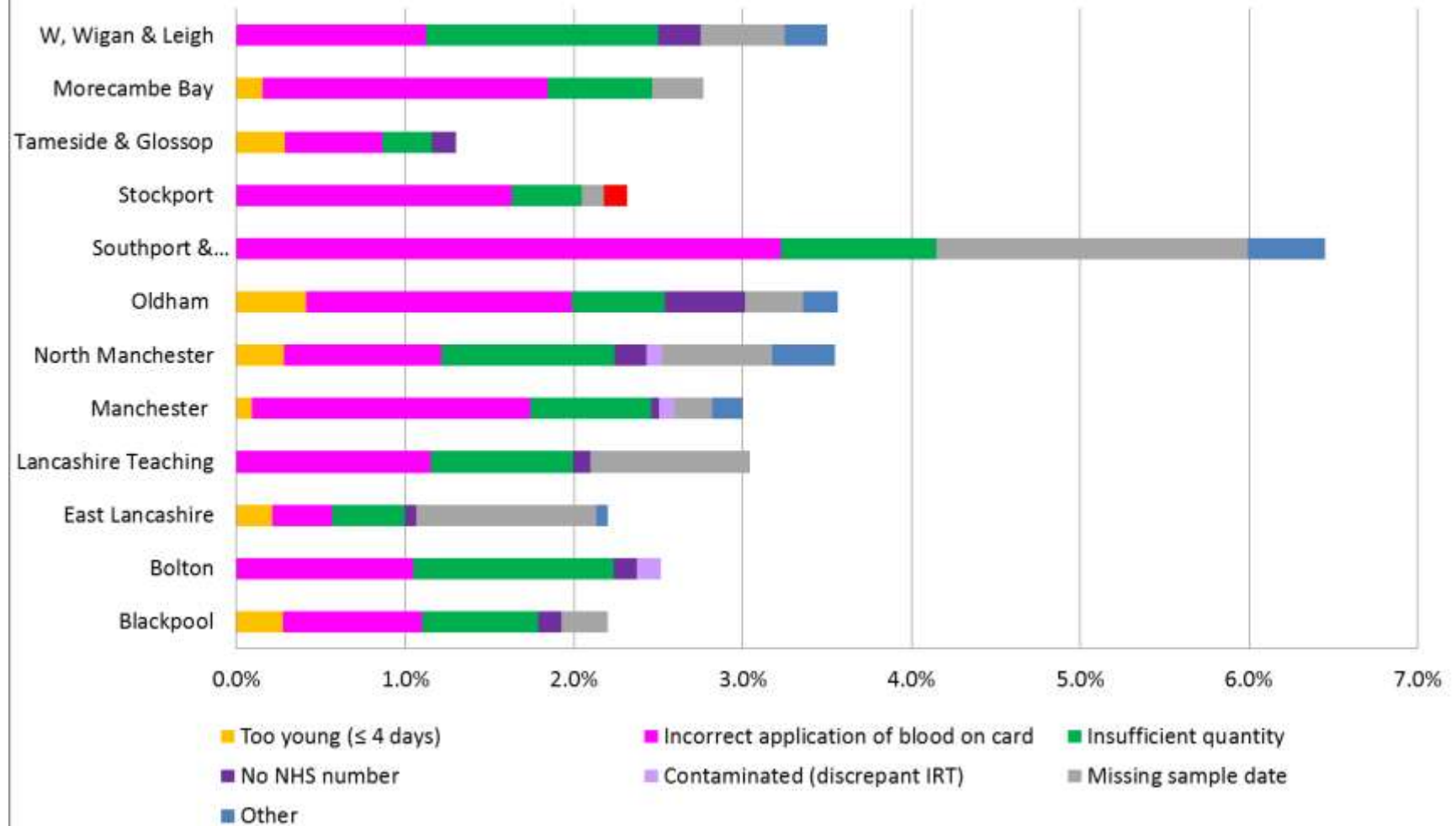
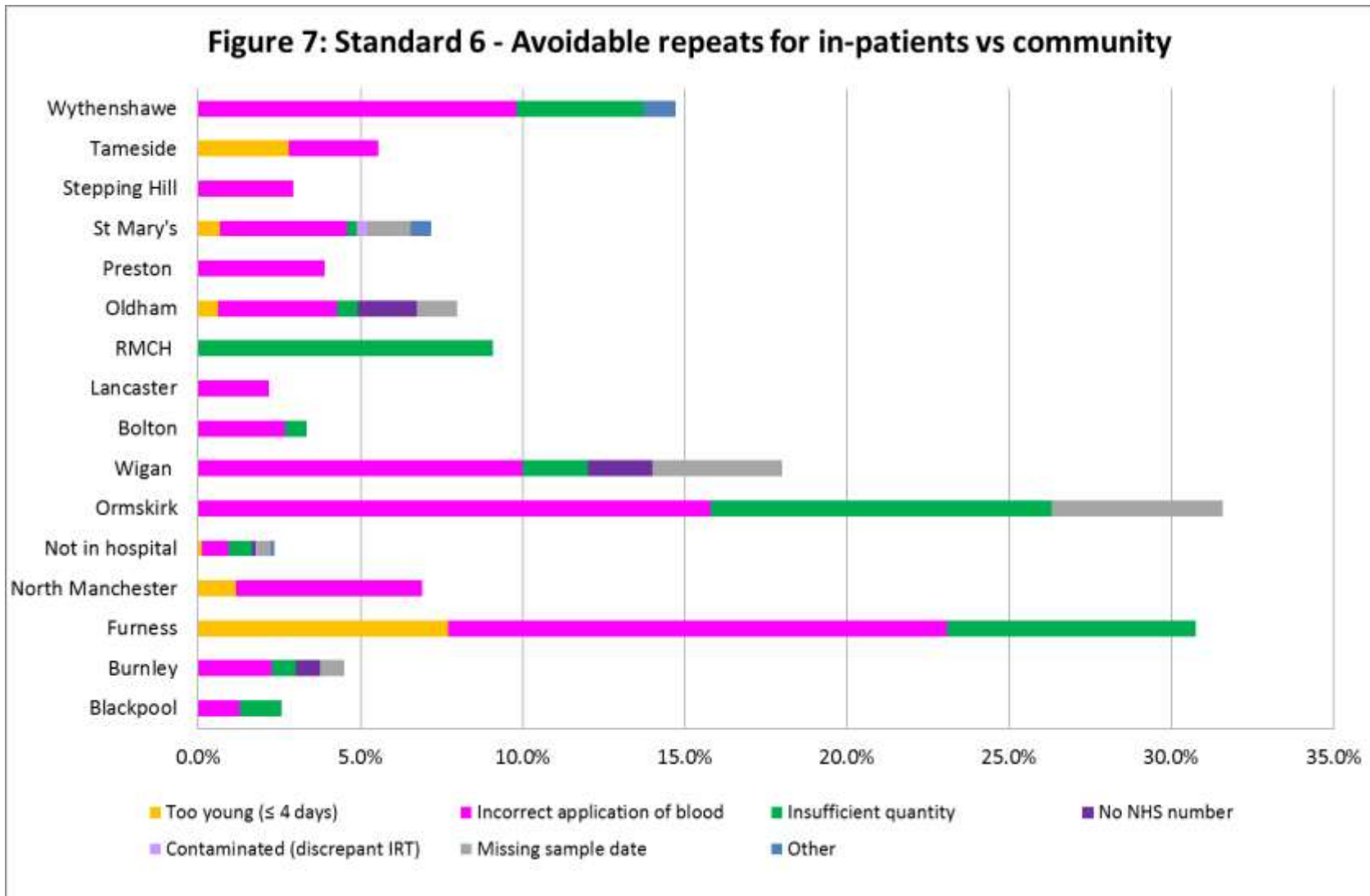


Figure 7: Standard 6 - Avoidable repeats for in-patients vs community



Royal Blackburn Hospital not shown (avoidable repeat rate 0%).

Q2 20-21 Table 1 - Summary of performance				
Standard 3	Standard 3	Standard 4	Standard 5	Standard 6
Blackpool Teaching Hospitals NHS FT	95.2%	94.2%	97.9%	2.2%
Bolton NHS FT	80.4%	92.4%	98.2%	2.5%
East Lancashire Hospitals NHS Trust	96.6%	93.3%	99.5%	2.2%
Lancashire Teaching Hospitals NHS FT	96.0%	94.5%	100.0%	3.0%
Manchester University NHS FT	96.0%	96.4%	99.9%	3.0%
North Manchester (Pennine Acute Hospitals NHS Trust)	88.4%	91.6%	99.2%	3.5%
Not Stated	83.0%	93.1%	95.3%	3.6%
Oldham (Pennine Acute Hospitals NHS Trust)	72.2%	91.5%	98.3%	3.6%
Southport & Ormskirk Hospital NHS Trust	68.5%	94.8%	65.6%	6.5%
Stockport NHS FT	84.5%	93.5%	98.9%	2.3%
Tameside And Glossop Integrated Care NHS FT	92.0%	93.6%	99.4%	1.3%
University Hospitals of Morecambe Bay NHS FT	92.9%	95.4%	96.8%	2.8%
Wrightington, Wigan and Leigh NHS FT	25.0%	93.8%	94.6%	3.5%

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

Acceptable: ≥ 95% of second blood spot samples taken on day 21 to day 24

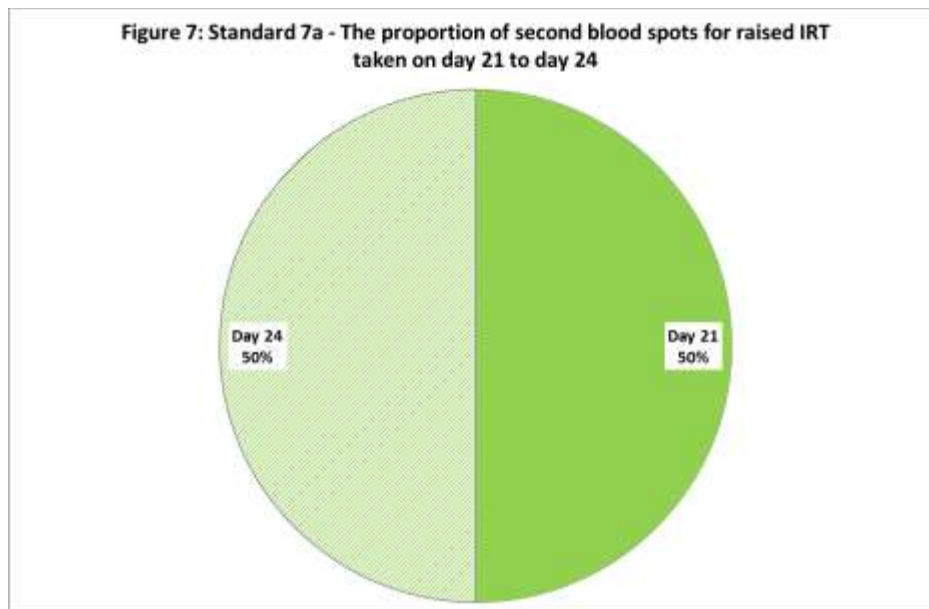
Achievable: ≥ 70% of second blood spot samples taken on day 21

From April 2021:

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

Standard 7a was met. During quarter 2 there were only 2 repeats for raised IRT (CF inconclusive). One collected on day 21 and one on day 24. CF inconclusive repeats are performed by Screening Link Health Visitors. The data is presented in figure 7 and by local Child Health Records Department, in table 2.



Q2 Table 2 - Standard 7a					
Child Health Department	Age at Collection of CF		Grand Total	% collected day 21	% collected day 21-24
	21	24			
Manchester	1		1	100%	100%
Trafford		1	1	0%	100%
Grand Total	1	1	2	50%	100%

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: ≥ 95.0% of second blood spot samples taken as defined

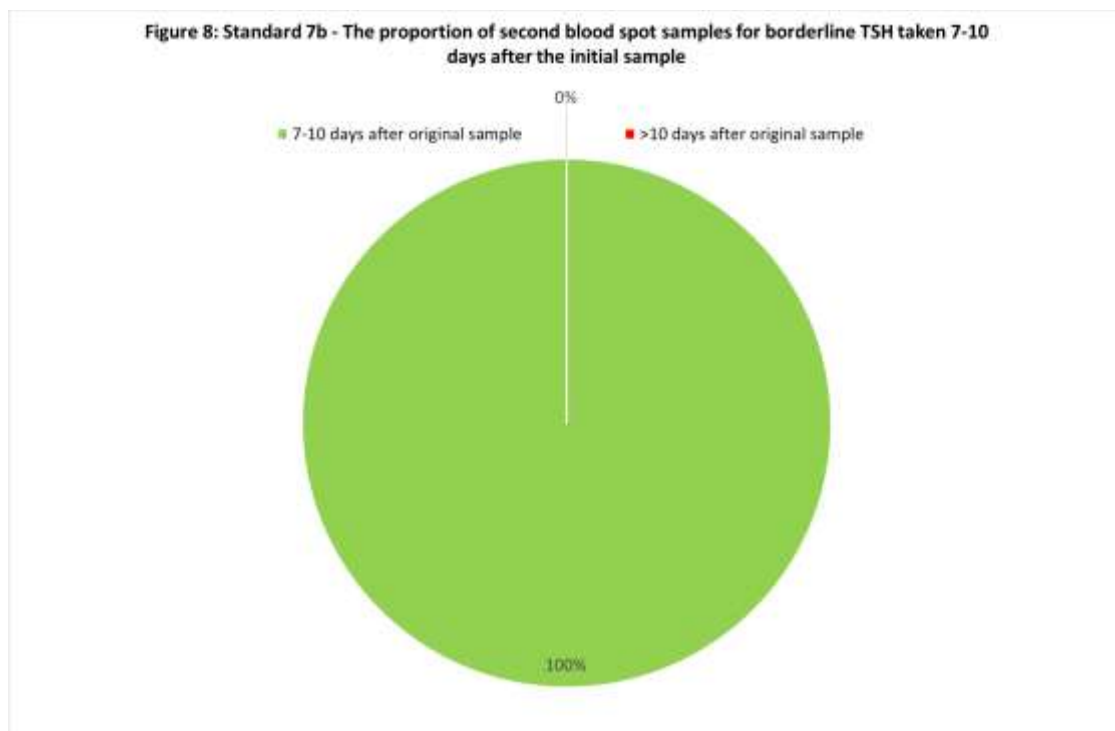
Achievable: ≥ 99.0% of second blood spot samples taken as defined

From April 2021:

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

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

Standard 7b was met (100%). Figure 8 displays the proportion collected 7-10 days after the initial sample and table 3 displays the information by Trust.



Q2 Table 3: Standard 7b

Trust	Number of days between original sample and collection of repeat sample				Grand Total	% collected 7-10 days after original sample
	7	8	9	10		
Blackpool Teaching Hospitals NHS FT			2		2	100%
Bolton NHS FT			2		2	100%
East Lancashire Hospitals NHS Trust			1		1	100%
Lancashire Teaching Hospitals NHS FT	1				1	100%
Manchester University NHS FT	1	2	2		5	100%
North Manchester (Pennine Acute Hospitals NHS Trust)		2			2	100%
Oldham (Pennine Acute Hospitals NHS Trust)			1	1	2	100%
Southport & Ormskirk Hospital NHS Trust			1		1	100%
Tameside And Glossop Integrated Care NHS FT				1	1	100%
Grand Total	2	4	9	2	17	100%

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

Acceptable: $\geq 95.0\%$ of second blood spot samples taken as defined

Achievable: $\geq 99.0\%$ of second blood spot samples taken as defined

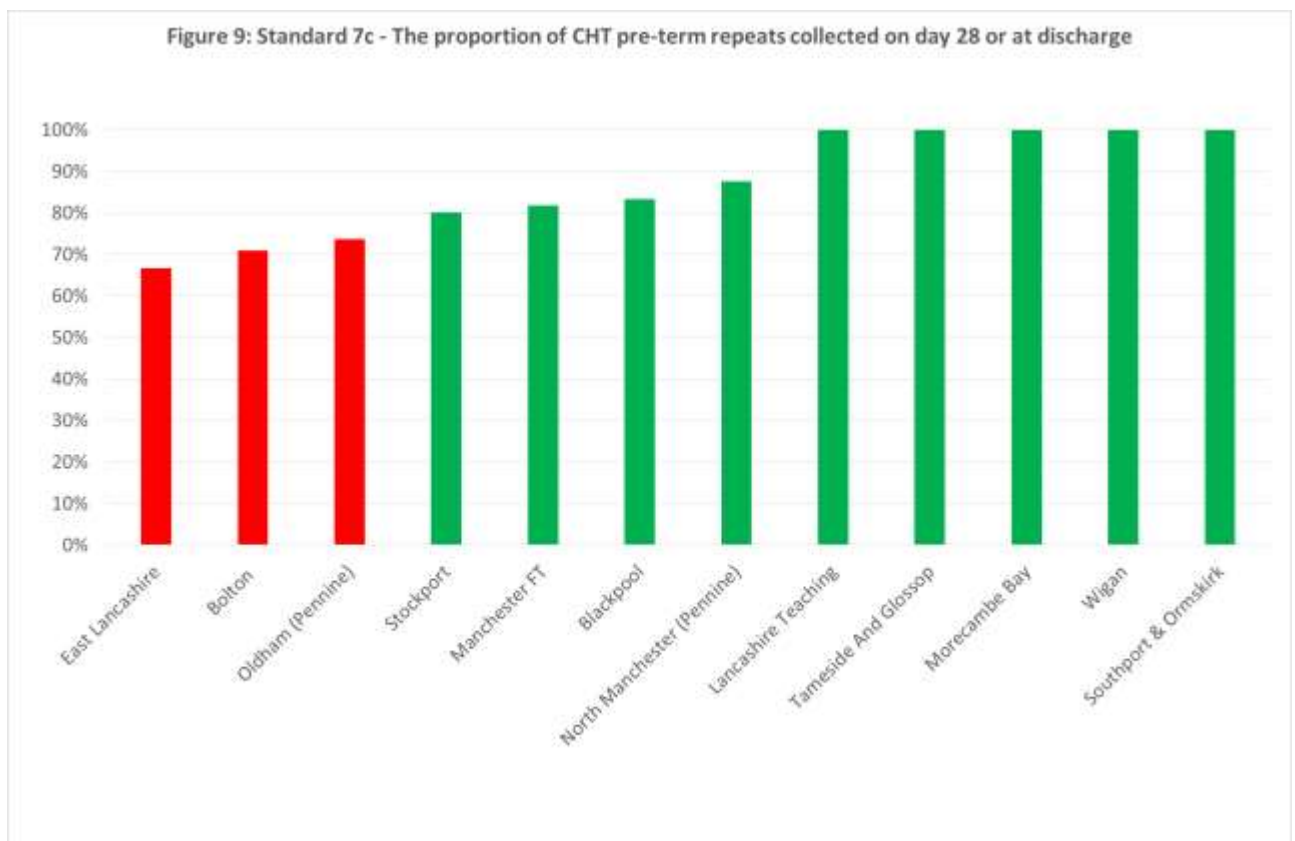
From April 2021:

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 2, 121 CHT pre-term repeats were received (avoidable repeats and duplicates excluded) Performance by trust is displayed in figure 9. 80% were collected on day 28 or at discharge, 3% were collected too early (and required a further repeat) and 17% were collected after day 28.

Of note, 6 out of 20 babies with samples collected after day 28 had transfusions on days 25-28, which would account for the delayed sampling.



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 8 screen positive samples for CHT during quarter 2. All were referred within 3 working days.

There were 2 IMD screen positive samples and both were referred within 3 working days.

Standard 11 - Timely entry into clinical care

Data for standard 11 is displayed in table 4.

Table 4: 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%	
CHT (suspected on first sample)	Attend first clinical appointment by 14 days of age	Acceptable: 100%	6	6	100%	
CHT (suspected on repeat following borderline TSH)	Attend first clinical appointment by 21 days of age	Acceptable: 100%	2	2	100%	
CF (2 CFTR mutations detected)	Attend first clinical appointment by 28 days of age	Acceptable: $\geq 95.0\%$ Achievable: 100%	2	2	100%	
HCU	Attend first clinical appointment by 28 days of age	Acceptable: $\geq 95.0\%$ Achievable: 100%	0	0	N/A	
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	3	3	100%	

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
2140000	27/07/20	3 - moderate	2 - slight	Blood spot labelling error: another baby's bar-coded demographic sticker and reported against wrong baby.	Older sibling's sticker	External	Pennine Community Midwives
2147220	08/09/20	3 - moderate	2 - slight	Blood spot labelling error: handwritten NHS number belonging to another baby (other demographic details correct)	Same dates of birth but different names. Other baby resident in different part of the country. Born at Bolton.	External	Pennine Community Midwives
2147620	12/09/20	3 - moderate	2 - slight	Blood spot labelling error: handwritten NHS number belonging to another baby (other demographic details correct)	Same surname and date of birth. Other baby resident in different part of the country.	External	Bolton Community Midwives
2147621	12/09/20	3 - moderate	2 - slight	Blood spot labelling error: handwritten NHS number belonging to another baby (other demographic details correct)	Same date of birth but different surname. Other baby resident in different part of the country.	External	Bolton Community Midwives

Appendix

Quarter 2 2020-21: 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	Percentage of all blood spot cards including babies' NHS number	Percentage of all blood spot cards including ISB bar-coded babies' NHS number
Blackpool Teaching Hospitals NHS FT	747	746	711	99.87%	95.18%
Bolton NHS FT	1576	1573	1267	99.81%	80.39%
East Lancashire Hospitals NHS Trust	1515	1512	1464	99.80%	96.63%
Health Visitor	60	59	11	98.33%	18.33%
Lancashire Teaching Hospitals NHS FT	1002	1001	962	99.90%	96.01%
Manchester University NHS FT	2494	2494	2395	100.00%	96.03%
North Manchester (Pennine Acute Hospitals NHS Trust)	1127	1125	996	99.82%	88.38%
Not Stated	141	140	117	99.29%	82.98%
Oldham (Pennine Acute Hospitals NHS Trust)	1563	1555	1129	99.49%	72.23%
Southport & Ormskirk Hospital NHS Trust	235	235	161	100.00%	68.51%
Stockport NHS FT	755	755	638	100.00%	84.50%
Tameside And Glossop Integrated Care NHS FT	709	709	652	100.00%	91.96%
University Hospitals of Morecambe Bay NHS FT	676	676	628	100.00%	92.90%
Wrightington, Wigan and Leigh NHS FT	829	826	207	99.64%	24.97%
Grand Total	13429	13406	11338	99.83%	84.43%

Quarter 2 2020-21: 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	682	32	5	0	4	0.14%	94.20%	4.42%	0.69%	0.00%	0.55%
Bolton NHS FT	2	1321	77	12	5	13	0.14%	92.38%	5.38%	0.84%	0.35%	0.91%
East Lancashire Hospitals NHS Trust	7	1297	60	11	7	8	0.50%	93.31%	4.32%	0.79%	0.50%	0.58%
Health Visitor	0	5	2	0	0	32	0.00%	12.82%	5.13%	0.00%	0.00%	82.05%
Lancashire Teaching Hospitals NHS FT	0	893	43	4	0	5	0.00%	94.50%	4.55%	0.42%	0.00%	0.53%
Manchester University NHS FT - SMH & RMCH	2	2149	50	8	13	8	0.09%	96.37%	2.24%	0.36%	0.58%	0.36%
North Manchester (Pennine Acute Hospitals NHS Trust)	3	975	64	8	2	12	0.28%	91.64%	6.02%	0.75%	0.19%	1.13%
Not Stated	1	122	8	0	0	0	0.76%	93.13%	6.11%	0.00%	0.00%	0.00%
Oldham (Pennine Acute Hospitals NHS Trust)	7	1330	92	12	5	8	0.48%	91.47%	6.33%	0.83%	0.34%	0.55%
Southport & Ormskirk Hospital NHS Trust	0	201	6	2	0	3	0.00%	94.81%	2.83%	0.94%	0.00%	1.42%
Stockport NHS FT	0	686	44	1	1	2	0.00%	93.46%	5.99%	0.14%	0.14%	0.27%
Tameside And Glossop Integrated Care NHS FT	2	647	29	7	1	5	0.29%	93.63%	4.20%	1.01%	0.14%	0.72%
University Hospitals of Morecambe Bay NHS FT	1	617	26	1	0	2	0.15%	95.36%	4.02%	0.15%	0.00%	0.31%
Wrightington, Wigan and Leigh NHS FT	0	744	36	7	0	6	0.00%	93.82%	4.54%	0.88%	0.00%	0.76%
Grand Total	26	11669	569	78	34	108	0.21%	93.47%	4.56%	0.62%	0.27%	0.87%

Excludes samples with missing dates

Quarter 2 2020-21: Standard 5			
Maternity Unit	Number of samples received in 3 or fewer 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
Blackpool Teaching Hospitals NHS FT	716	731	97.9%
Bolton NHS FT	1368	1393	98.2%
East Lancashire Hospitals NHS Trust	1428	1435	99.5%
Health Visitor	32	34	94.1%
Lancashire Teaching Hospitals NHS FT	981	981	100.0%
Manchester University NHS FT - SMH & RMCH	2325	2327	99.9%
North Manchester (Pennine Acute Hospitals NHS Trust)	1067	1076	99.2%
Not Stated	123	129	95.3%
Oldham (Pennine Acute Hospitals NHS Trust)	1391	1415	98.3%
Southport & Ormskirk Hospital NHS Trust	147	224	65.6%
Stockport NHS FT	715	723	98.9%
Tameside And Glossop Integrated Care NHS FT	690	694	99.4%
University Hospitals of Morecambe Bay NHS FT	634	655	96.8%
Wrightington, Wigan and Leigh NHS FT	613	648	94.6%
Grand Total	12230	12465	98.1%

Quarter 2 2020-21: 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	North Manchester (Pennine Acute Hospitals NHS Trust)	Not Stated	Oldham (Pennine Acute Hospitals NHS Trust)	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)	2	0	3	0	0	2	3	0	6	0	0	2	1	0	19
0302: too soon after transfusion (<72 hours)	0	3	3	0	0	10	1	0	1	0	0	0	0	1	19
0303: insufficient sample	5	17	6	0	8	16	11	1	8	2	3	2	4	11	94
0304: unsuitable sample (blood quality): incorrect blood application	6	15	5	1	11	37	10	0	23	7	12	4	11	9	151
0305: unsuitable sample (blood quality): compressed/damaged	0	0	1	0	0	4	4	1	3	1	0	0	0	2	16
0306: Unsuitable sample: day 0 and day 5 on same card															
0307: unsuitable sample for CF: possible faecal contamination	0	2	0	1	0	2	1	0	0	0	0	0	0	0	6
0308: unsuitable sample: NHS number missing/not accurately recorded	1	2	1	0	1	1	2	0	7	0	0	1	0	2	18
0309: unsuitable sample: date of sample missing/not accurately recorded	2	0	15	0	9	5	7	3	5	4	1	0	2	4	57
0310: unsuitable sample: date of birth not accurately matched	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	1	0	0	0	1
0312: unsuitable sample: >14 days in transit, too old for analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0313: unsuitable sample: damaged in transit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Avoidable Repeat Requests	16	36	31	2	29	67	38	5	52	14	17	9	18	28	362
Number of first samples received/	727	1432	1407	53	954	2236	1071	138	1459	217	734	691	650	800	12569
Avoidable Repeat Requests Rate	2.2%	2.5%	2.2%	3.8%	3.0%	3.0%	3.5%	3.6%	3.6%	6.5%	2.3%	1.3%	2.8%	3.5%	2.9%
<i>Transfusion Repeats are not included in the Avoidable Repeat calculation</i>															

Quarter 2 2020-21: 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, Manchester	Stepping Hill Hospital	Tameside General Hospital	Wythenshawe Hospital	Grand Total
0301: too young for reliable screening (≤ 4 days)	0	0	1	1	13	0	0	0	0	0	0	1	0	2	0	1	0	19
0302: too soon after transfusion (<72 hours)	0	3	0	0	1	0	1	0	3	0	0	1	0	10	0	0	0	19
0303: insufficient sample	1	1	1	0	80	2	1	0	1	0	1	1	0	1	0	0	4	94
0304: unsuitable sample (blood quality): incorrect blood application	1	3	2	5	92	3	5	0	4	1	0	6	4	12	2	1	10	151
0305: unsuitable sample (blood quality): compressed/damaged	0	0	0	0	13	0	0	0	0	0	0	0	0	2	0	0	1	16
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	0	0	0	0	0	1	0	0	0	6
0308: unsuitable sample: NHS number missing/not accurately recorded	0	1	0	0	13	0	1	0	0	0	0	3	0	0	0	0	0	18
0309: unsuitable sample: date of sample missing/not accurately recorded	0	1	0	0	47	1	2	0	0	0	0	2	0	4	0	0	0	57
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	1	0	0	0	0	0	0	0	0	0	0	0	0	1
0312: unsuitable sample: >14 days in transit, too old for analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	2	6	4	6	264	6	9	0	5	1	1	13	4	22	2	2	15	362
Number of first samples received/ babies tested	78	133	13	87	11201	19	50	3	150	46	11	163	103	306	68	36	102	12569
Avoidable Repeat Requests Rate	2.6%	4.5%	30.8%	6.9%	2.4%	31.6%	18.0%	0.0%	3.3%	2.2%	9.1%	8.0%	3.9%	7.2%	2.9%	5.6%	14.7%	2.9%
<i>Transfusion Repeats are not included in the Avoidable Repeat calculation</i>																		

Quarter 2 2020-21: Standard 7c

Trust	Number of Pre-term CHT second samples collected:				% Prem repeats collected on day 28 or at discharge
	Early	On time	Late	Total	
Blackpool Teaching Hospitals NHS FT		5	1	6	83%
Bolton NHS FT	1	17	6	24	71%
East Lancashire Hospitals NHS Trust		10	5	15	67%
Lancashire Teaching Hospitals NHS FT		12		12	100%
Manchester University NHS FT	1	18	3	22	82%
North Manchester (Pennine Acute Hospitals NHS Trust)		7	1	8	88%
Oldham (Pennine Acute Hospitals NHS Trust)	2	14	3	19	74%
Southport & Ormskirk Hospital NHS Trust		1		1	100%
Stockport NHS FT		4	1	5	80%
Tameside And Glossop Integrated Care NHS FT		3		3	100%
University Hospitals of Morecambe Bay NHS FT		4		4	100%
Wrightington, Wigan and Leigh NHS FT		2		2	100%
Grand Total	4	97	20	121	80%