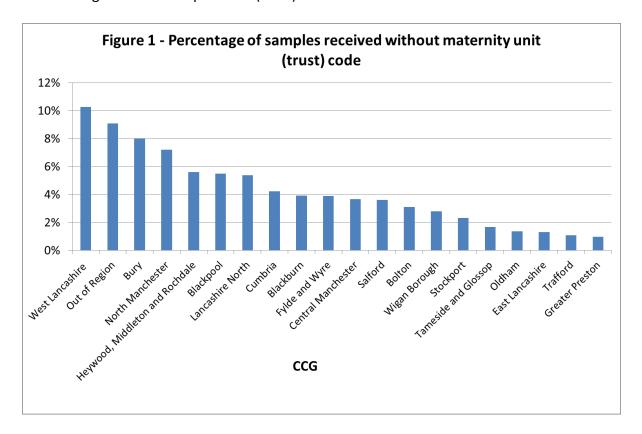
Manchester Newborn Screening Laboratory Quarterly Blood Spot Screening Report: Quarter 1 2019-20

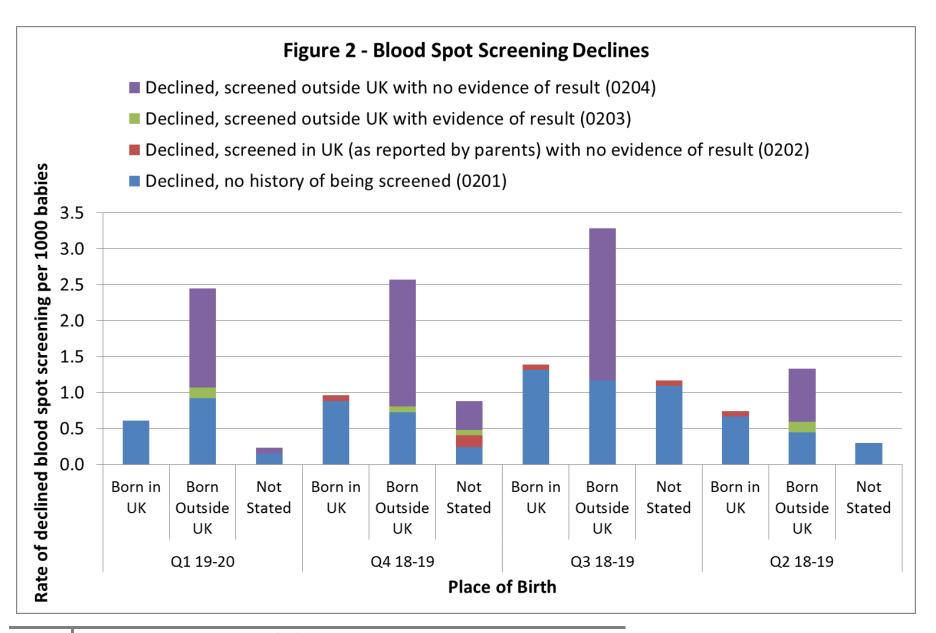
Manchester Newborn Screening Laboratory, which serves babies born in Greater Manchester, Lancashire and South Cumbria, received 13966 blood spot samples between 1st April and 30th June 2019. This report describes performance against the NHS Newborn Blood Spot Screening Programme Standards. Full details 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 (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 569 sample cards (4.1%).



Declines

In quarter 1 the laboratory received 43 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.



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.

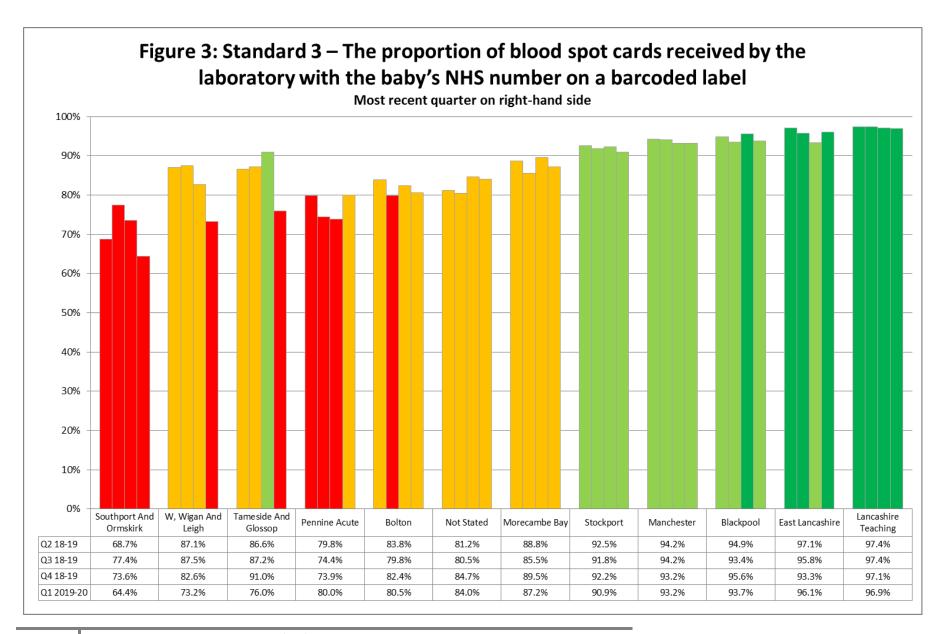
Figure 3 displays performance against standard 3.

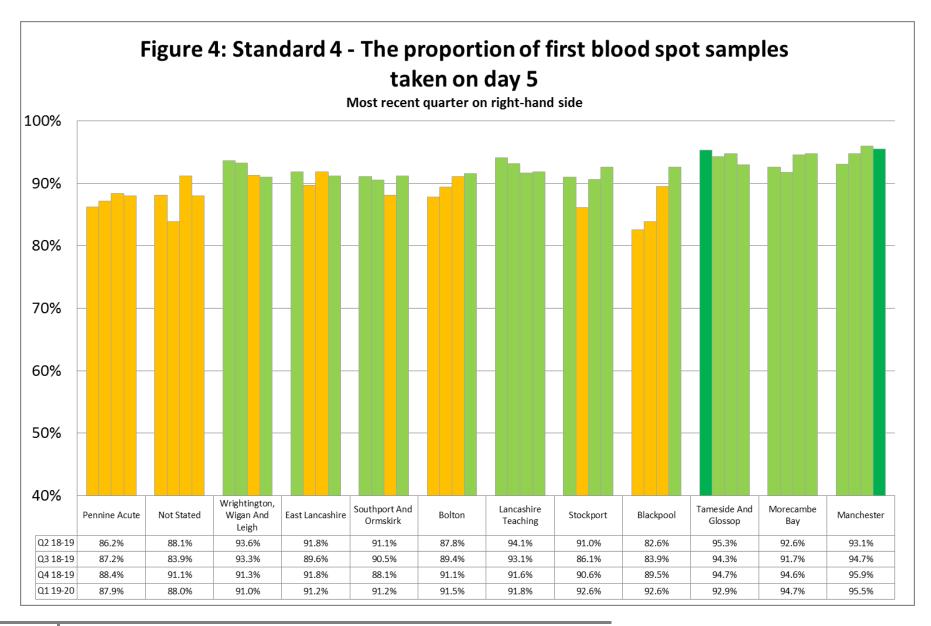
Overall, 85.9% of samples received April to June 2019 had a barcoded NHS number label, which is slightly less than quarter 4 (86.4%). Of 11 maternity units, 5 met the standard, including two reaching the achievable threshold (East Lancashire and Lancashire Teaching).

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

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

Figure 4 displays performance against standard 4. Overall, 91.1% of samples received April to June 2019 were collected on day 5. Of 11 maternity units, 10 met standard 4, which is similar to quarter 4 (91%; 9 units met the standard). Manchester FT 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.

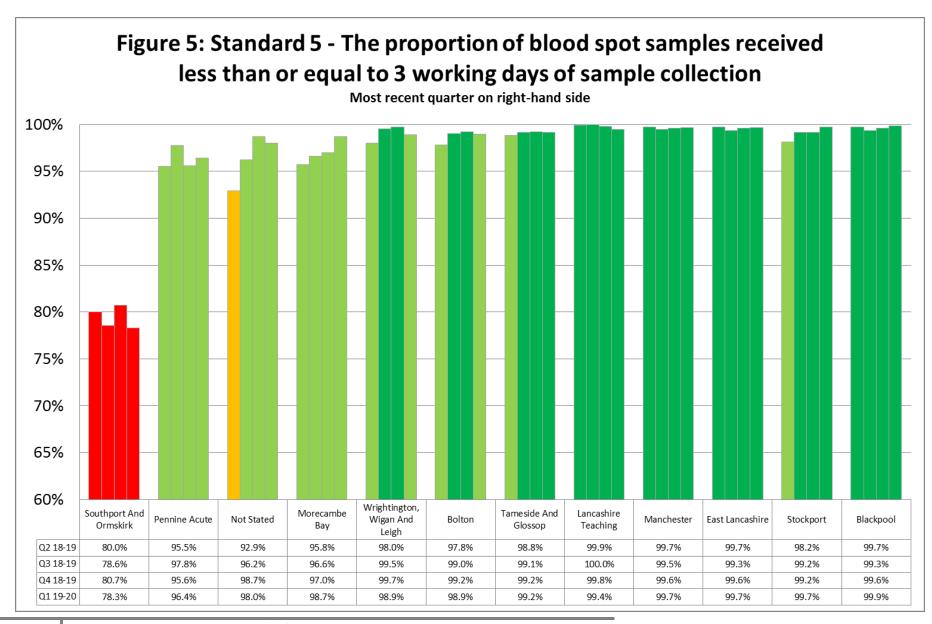
Performance against the transport standard (figure 5) was good. Overall 98.3% samples were received within 3 working days. 10 Trusts met the standard, including 6 reaching the achievable threshold. Performance was very similar to the last quarter (98.2% samples were received within 3 working days).

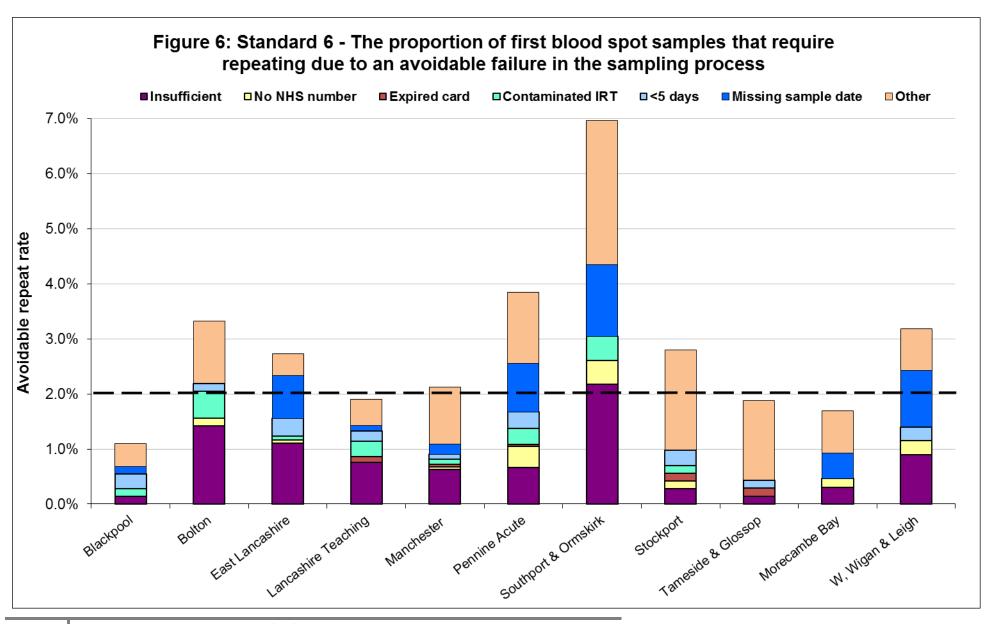
Standard 6 - The proportion of first blood spot samples that require repeating due to an avoidable failure in the sampling process

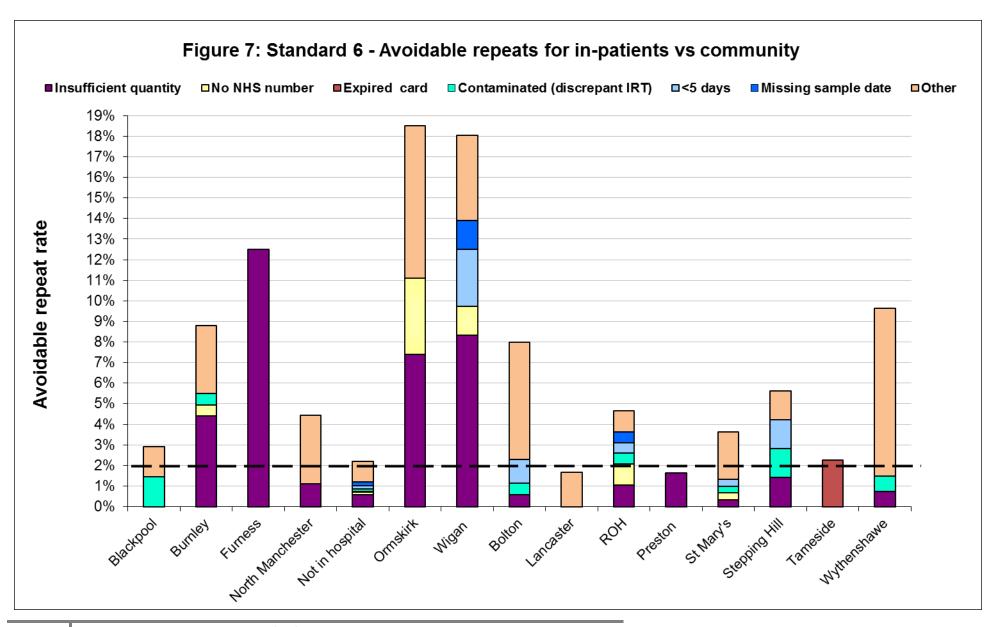
Acceptable: Avoidable repeat rate is $\leq 2.0\%$

Achievable: Avoidable repeat rate is ≤ 1%

The avoidable repeat rate for quarter 1 was 2.7%, which is higher than last quarter (2.0%). The performance for each trust is displayed in figure 6. Four Trusts met the standard. Figure 7 compares the avoidable repeat rate for samples collected from in-patients with sample collected from babies at home/ in the community. The rate was 2.2% for babies in the community (higher then Quarter 4 - 1.6%) and 6.3% for samples collected from in-patients (4.9% in quarter 4).







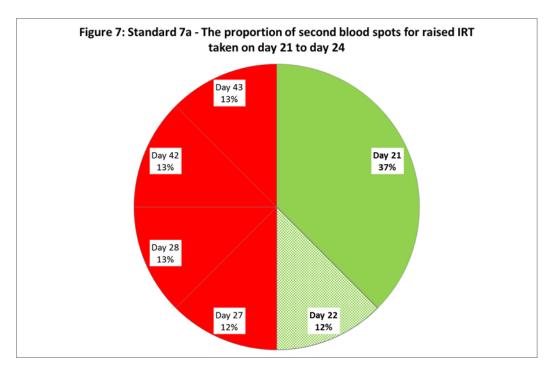
Q1 19-20 Ta	able 1 - Summa	ry of performa	nce	
Trust	STD 3	STD 4	STD 5	STD 6
Blackpool Teaching Hospitals NHS FT	93.7%	92.6%	99.9%	1.1%
Bolton NHS FT	80.5%	91.5%	98.9%	3.3%
East Lancashire Hospitals NHS Trust	96.1%	91.2%	99.7%	2.7%
Lancashire Teaching Hospitals NHS FT	96.9%	91.8%	99.4%	1.9%
Manchester University NHS FT	93.2%	95.5%	99.7%	2.1%
Pennine Acute Hospitals NHS Trust	80.0%	87.9%	96.4%	3.8%
Southport & Ormskirk Hospital NHS Trust	64.4%	91.2%	78.3%	7.0%
Stockport NHS FT	90.9%	92.6%	99.7%	2.8%
Tameside And Glossop Integrated Care NHS FT	76.0%	92.9%	99.2%	1.9%
University Hospitals of Morecambe Bay NHS FT	87.2%	94.7%	98.7%	1.7%
Wrightington, Wigan and Leigh NHS FT	73.2%	91.0%	98.9%	3.2%

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

The acceptable threshold was met for Standard 7a. During quarter 1 there were 8 repeats for raised IRT (CF inconclusive). Of these, 38% (3) were collected on day 21 and 50% (4) on day 21-24. 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.

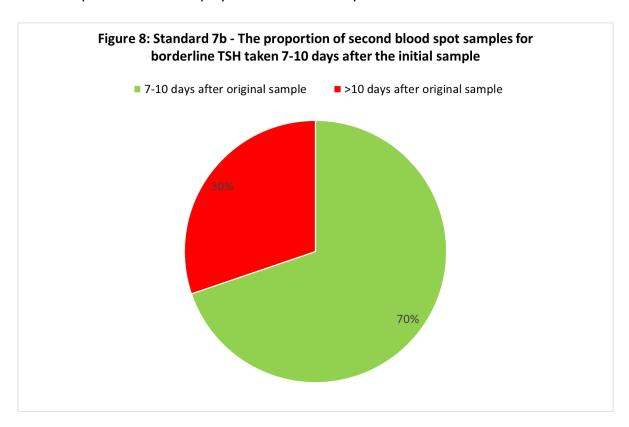


	Q1 Table 2 - Standard 7a												
Child Health Records Department	Ag	e at Collect	ion of CF In	ys)	Grand Total	% collected	% collected						
Department	21	22	27	28	42	43		day 21	day 21-24				
Ashton, Wigan & Leigh		1					1	0%	100%				
Blackpool	1						1	100%	100%				
Bolton	1			1			2	50%	50%				
Burnley						1	1	0%	0%				
Bury			1				1	0%	0%				
Central Lancashire/Chorley					1		1	0%	0%				
Rochdale	1						1	100%	100%				
Grand Total	3	1	1	1	1	1	8	38%	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: ≥ 95.0% of second blood spot samples taken as defined **Achievable:** ≥ 99.0% of second blood spot samples taken as defined

Standard 7b was not met. Figure 8 displays the proportion collected 7-10 days after the initial sample and table 3 displays the information by Trust.



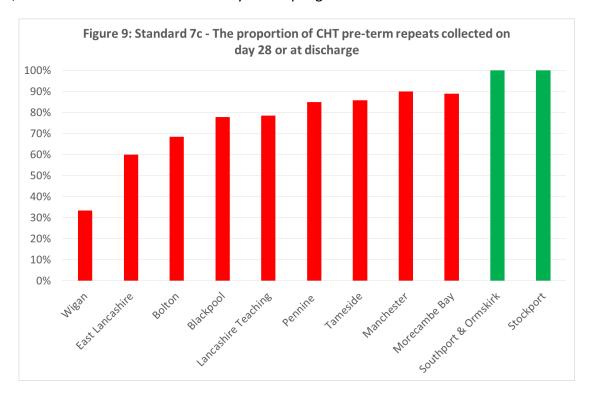
	Q1 Table 3: Standard 7b												
Trust	Numi	ber of c	lays be	Grand Total	% collected 7-10 days after								
	5	7	8	9	10	11	12	13	17	22		original sample	
Blackpool Teaching Hospitals NHS FT						1					1	0%	
Bolton NHS FT				1				1			2	50%	
East Lancashire Hospitals NHS Trust	1	1	1			1					4	50%	
Lancashire Teaching Hospitals NHS FT					1						1	100%	
Manchester University NHS FT		1	4	3							8	100%	
Not Stated					1						1	100%	
Pennine Acute Hospitals NHS Trust		2	1	2		2			1	1	9	56%	
Stockport NHS FT				1			1				2	50%	
Tameside And Glossop Integrated Care NHS FT			1		2	1					4	75%	
University Hospitals of Morecambe Bay NHS FT	1		1	1					_		3	67%	
Wrightington, Wigan and Leigh NHS FT		1 3 1 1 1 1						8	75%				
Grand Total	2	5	11	9	5	6	2	1	1	1	43	70%	

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

Acceptable: ≥ 95.0% of second blood spot samples taken as defined **Achievable:** ≥ 99.0% of second blood spot samples taken as defined

Standard 7c was not met. During quarter 1, 132 CHT pre-term repeats (second samples only, avoidable repeats excluded) were received. 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. 17% were collected after day 28.

Of note, 7 out of 23 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

14 samples screened positive for CHT during quarter 1. 100% of babies were referred within 3 working days.

There were 5 IMD positives (excluding HCU) and all were referred within 3 working days.

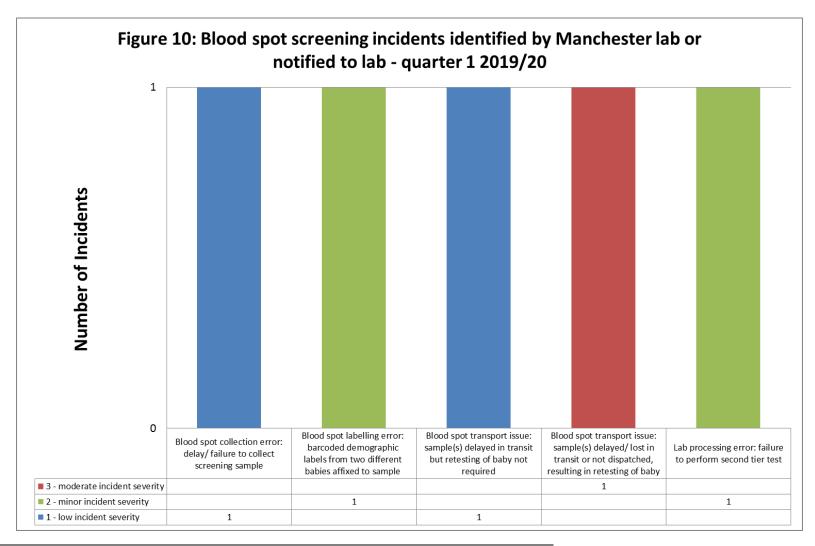
Standard 11 - Timely entry into clinical care

The 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%	5	5	100%									
CHT (suspected on first sample)	Attend first clinical appointment by 14 days of age	Acceptable: 100%	5	6	83%	One baby's sample was received within 3 working days of collection but 5 calendar days (due to Easter). Baby was 16 days old at first clinic appointment.								
CHT (suspected on repeat following borderline TSH)	Attend first clinical appointment by 21 days of age	Acceptable: 100%	5	6	83%	In one case the repeat sample was requested on day 11 but not collected until day 16. Two preterm babies were CHT suspected on repeat sampling (excluded from standard).								
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%	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	To follow	2	To follow	Excluding one baby previously reported as CF not suspected (day 43 repeat sample CF suspected).								
SCD	Attend first clinical appointment by 90 days of age	Attend first clinical appointment by 90 days of age	4	4	100%									

Incidents

Figure 10 displays blood spot screening incidents identified by the lab or notified to the lab. A summary table of incidents is included in the appendix. There has been a reduction in the number and the severity of incidents.



Appendix

	Quarter 1 2019-20: 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	749	749	702	100.00%	93.72%							
Bolton NHS FT	1582	1580	1274	99.87%	80.53%							
East Lancashire Hospitals NHS Trust	1692	1687	1626	99.70%	96.10%							
Health Visitor	115	114	2	99.13%	1.74%							
Lancashire Teaching Hospitals NHS FT	1080	1080	1047	100.00%	96.94%							
Manchester University NHS FT	2426	2425	2262	99.96%	93.24%							
Not Stated	569	568	478	99.82%	84.01%							
Pennine Acute Hospitals NHS Trust	2537	2527	2029	99.61%	79.98%							
Southport & Ormskirk Hospital NHS Trust	247	246	159	99.60%	64.37%							
Stockport NHS FT	739	738	672	99.86%	90.93%							
Tameside And Glossop Integrated Care NHS FT	725	725	551	100.00%	76.00%							
University Hospitals of Morecambe Bay NHS FT	679	678	592	99.85%	87.19%							
Wrightington, Wigan and Leigh NHS FT	826	825	605	99.88%	73.24%							
Grand Total	13966	13942	11999	99.83%	85.92%							

Quarter 1 2018-19: Standard 4												
		Number	of first sar	nples taker	n on day:			Percentag	e of first s	amples tak	en on day:	
Trust	4 or earlier	5	6	7	8	9 or later	4 or earlier	5	6	7	8	9 or later
Blackpool Teaching Hospitals NHS FT	3	676	41	3	1	6	0.41%	92.60%	5.62%	0.41%	0.14%	0.82%
Bolton NHS FT	2	1294	84	13	7	14	0.14%	91.51%	5.94%	0.92%	0.50%	0.99%
East Lancashire Hospitals NHS Trust	8	1393	98	17	0	12	0.52%	91.16%	6.41%	1.11%	0.00%	0.79%
Health Visitor	0	1	0	0	0	99	0.00%	1.00%	0.00%	0.00%	0.00%	99.00%
Lancashire Teaching Hospitals NHS FT	2	965	65	7	3	9	0.19%	91.82%	6.18%	0.67%	0.29%	0.86%
Manchester University NHS FT	2	2115	71	10	10	6	0.09%	95.53%	3.21%	0.45%	0.45%	0.27%
Not Stated	0	454	47	7	1	7	0.00%	87.98%	9.11%	1.36%	0.19%	1.36%
Pennine Acute Hospitals NHS Trust	8	2087	201	43	15	19	0.34%	87.95%	8.47%	1.81%	0.63%	0.80%
Southport & Ormskirk Hospital NHS Trust	0	207	16	2	1	1	0.00%	91.19%	7.05%	0.88%	0.44%	0.44%
Stockport NHS FT	2	661	43	4	1	3	0.28%	92.58%	6.02%	0.56%	0.14%	0.42%
Tameside And Glossop Integrated Care NHS FT	1	645	26	6	5	11	0.14%	92.94%	3.75%	0.86%	0.72%	1.59%
University Hospitals of Morecambe Bay NHS FT	0	612	24	4	0	6	0.00%	94.74%	3.72%	0.62%	0.00%	0.93%
Wrightington, Wigan and Leigh NHS FT	2	707	58	7	0	3	0.26%	90.99%	7.46%	0.90%	0.00%	0.39%
Grand Total	30	11817	774	123	44	196	0.23%	91.01%	5.96%	0.95%	0.34%	1.51%
Excludes samples with missing dates	•			•	•	•						•

Quarter 1 2019-20: 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 in 3 or fewer working days of sample being taken								
Blackpool Teaching Hospitals NHS FT	746	747	99.9%								
Bolton NHS FT	1484	1500	98.9%								
East Lancashire Hospitals NHS Trust	1588	1593	99.7%								
Health Visitor	101	106	95.3%								
Lancashire Teaching Hospitals NHS FT	1070	1076	99.4%								
Manchester University NHS FT	2292	2300	99.7%								
Not Stated	545	556	98.0%								
Pennine Acute Hospitals NHS Trust	2417	2507	96.4%								
Southport & Ormskirk Hospital NHS Trust	191	244	78.3%								
Stockport NHS FT	736	738	99.7%								
Tameside And Glossop Integrated Care NHS FT	713	719	99.2%								
University Hospitals of Morecambe Bay NHS FT	311	315	98.7%								
Wrightington, Wigan and Leigh NHS FT	88	89	98.9%								
Grand Total	12282	12490	98.3%								

				Quarter	1 2019-20: 9	Standar	d 6 by T	rust						
Status code and description of avoidable repeat	Blackpool Teaching Hospitals NHS FT	Bolton NHS FT	East Lancashire Hospitals NHS Trust	Lancashire Teaching Hospitals NHS FT	Manchester University NHS FT	Not Stated	Health Visitor	Pennine Acute Hospitals NHS Trust	Southport & Ormskirk Hospital NHS Trust	Stockport NHS FT	Tameside And Glossop Integrated Care NHS FT	Morecambe	Wrightington, Wigan and Leigh NHS FT	Grand Total
0301: too young for reliable screening (≤ 4 days)	2	2	5	2	2	0	0	7	0	2	1	0	2	25
0302: too soon after transfusion (<72 hours)	0	5	4	0	6	0	0	4	0	0	0	0	0	19
0303: insufficent sample	1	20	17	8	14	0	1	16	5	2	1	2	7	94
0304: unsuitable sample (blood quality): incorrect blood application	2	14	5	4	23	0	3	10	4	11	0	1	6	83
0305: unsuitable sample (blood quality): compressed/damaged	1	2	1	1	0	0	0	21	2	2	10	1	0	41
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	1	7	1	3	2	1	0	7	1	1	0	0	0	24
0308: unsuitable sample: NHS number missing/not accurately recorded	0	2	1	0	1	0	1	9	1	1	0	1	2	19
0309: unsuitable sample: date of sample missing/not accurately recorded	1	0	12	1	4	0	1	21	3	0	0	3	8	54
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	1	1	0	0	1	0	1	1	0	0	5
0312: unsuitable sample: >14 days in transit, too old for analysis	0	0	0	0	0	0	1	0	0	0	0	3	0	4
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	8	47	42	20	47	1	7	92	16	20	13	11	25	349
Number of first samples received/ babies tested	731	1415	1540	1052	2218	523	107	2394	230	714	694	649	785	13052
Avoidable Repeat Requests Rate	1.1%	3.3%	2.7%	1.9%	2.1%	0.2%	6.5%	3.8%	7.0%	2.8%	1.9%	1.7%	3.2%	2.7%
Transfusion Reapeats are not included in the	Avoidable Rep	peat calcul	ation											

Quarter 1 2019-20: 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	Hill	Tameside General Hospital	Wythenshawe Hospital	Grand Total
0301: too young for reliable screening (≤ 4 days)	0	0	0	0	18	0	2	0	2	0	0	1	0	1	1	0	0	25
0302: too soon after transfusion (<72 hours)	0	4	0	0	0	0	0	0	5	0	0	4	0	6	0	0	0	19
0303: insufficent sample	0	8	2	1	66	2	6	0	1	0	1	2	2	1	1	0	1	94
0304: unsuitable sample (blood quality): incorrect blood application	1	4	0	1	42	1	3	0	10	1	0	2	0	6	1	0	11	83
0305: unsuitable sample (blood quality): compressed/damaged	0	0	0	1	39	1	0	0	0	0	0	0	0	0	0	0	0	41
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	1	1	0	0	17	0	0	0	1	0	0	1	0	1	1	0	1	24
0308: unsuitable sample: NHS number missing/not accurately recorded	0	1	0	0	13	1	1	0	0	0	0	2	0	1	0	0	0	19
0309: unsuitable sample: date of sample missing/not accurately recorded	0	2	0	1	48	0	1	0	0	0	0	1	0	1	0	0	0	54
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	4	0	0	0	0	0	0	0	0	0	0	1	0	5
0312: unsuitable sample: >14 days in transit, too old for analysis	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
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	16	2	4	251	5	13	0	14	1	1	9	2	11	4	1	13	349
Number of first samples received/ babies tested	69	182	16	90	11486	27	72	1	175	60	4	193	123	304	71	44	135	13052
Avoidable Repeat Requests Rate	2.9%	8.8%	12.5%	4.4%	2.2%	18.5%	18.1%	0.0%	8.0%	1.7%	25.0%	4.7%	1.6%	3.6%	5.6%	2.3%	9.6%	2.7%
Transfusion Reapeats are not included in the Av	oidable Repe	at calculatio	n															

Quarter 1 2019-20: Standard 7c											
	Numbe	r of Pre-term CHT	second samples co	llected:	% Prem repeats	% Prem repeats					
Trust	Early On time Late Total		collected on day 28 or at discharge	collected on day 28 or earlier							
Blackpool Teaching Hospitals NHS FT	1	7	1	9	78%	89%					
Bolton NHS FT	2	13	4	19	68%	79%					
East Lancashire Hospitals NHS Trust		9	6	15	60%	60%					
Lancashire Teaching Hospitals NHS FT		11	3	14	79%	79%					
Manchester University NHS FT		28	3	31	90%	90%					
Pennine Acute Hospitals NHS Trust		17	3	20	85%	85%					
Southport & Ormskirk Hospital NHS Trust		2		2	100%	100%					
Stockport NHS FT		3		3	100%	100%					
Tameside And Glossop Integrated Care NHS FT		6	1	7	86%	86%					
University Hospitals of Morecambe Bay NHS FT	1	8		9	89%	100%					
Wrightington, Wigan and Leigh NHS FT		1	2	3	33%	33%					
Grand Total	4	105	23	132	80%	83%					

			Summa	ary of Newborn Blood Spot Incidents Q1 2	019-20	
Incident Number	Incident Date	Incident Severity	Incident Harm	Summary of incident	Further details	Lab/ Ward/ Maternity Unit
2060837	24/03/19	2 - minor	1 - no harm	Blood spot labelling error: barcoded demographic labels from two different babies affixed to sample	Sticker from Baby A on white copy and Baby B on pink and yellow copy.	Ward 68, SMH (NICU)
2062176	11/02/19	3 - moderate	2 - slight	Blood spot transport issue: sample(s) delayed/lost in transit or not dispatched, resulting in retesting of baby	Arrived in a pre-printed envelope. Held by Royal Mail for postage unpaid	Salford Health Visitors
2062531	04/03/19	2 - minor	1 - no harm	Lab processing error: failure to perform second tier test	Sample not sent for IEF. Flagged up on NBSFS as Screening Incomplete.	NBS Lab
2073357	18/06/19	1 - low	1 - no harm	Blood spot collection error: delay/ failure to collect screening sample	Collected day 17	SMH Community Midwives
2077157	29/06/19	1 - low	1 - no harm	Blood spot transport issue: sample(s) delayed in transit but retesting of baby not required	Day 5 reported (6 days in transit). Day 15 collected but not required.	Ward F8 (Starlight) Wythenshawe