National Perinatal Mortality Review Tool

PMRT
Supporting high quality local perinatal reviews

Learning from Standardised Reviews When Babies Die

National Perinatal Mortality Review Tool

Third Annual Report

Tables of Findings

October 2021

Royal College of Obstetricians & Gynaecologists
each baby COUNTS
University of BRISTOL
Royal College of Midwives
NHS Birmingham Women's and Children's NHS Foundation Trust
British Association of Perinatal Medicine
MANCHESTER 1824 The University of Manchester
PARENTS
NHS The Newcastle upon Tyne Hospitals NHS Foundation Trust
UNIVERSITY OF BIRMINGHAM
NHS Bradford Teaching Hospitals NHS Foundation Trust
Sands Stillbirth & neonatal death charity
HQIP Healthcare Quality Improvement Partnership
UNIVERSITY OF LEICESTER
TIMMS
UCL
NPEU
UNIVERSITY OF OXFORD

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October 2021

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HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing and National Voices. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales.

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1. Conducting Reviews

Table 1.1: Number of reviews and the percentage of deaths where a review has been carried out using the PMRT by year, England 2018 to 2021 (as at 3rd August 2021)

	Type of death		
	Stillbirths & late miscarriages n (%)	Neonatal deaths n (%)	Total n (%)
2018			
Review at least started	2,256 (85%)	1,094 (80%)	3,350 (83%)
Review published*	2,069 (78%)	889 (65%)	2,958 (74%)
2019			
Review at least started	2,458 (98%)	1,330 (99%)	788 (99%)
Review published*	2,293 (92%)	1,128 (90%)	3,421 (91%)
2020			
Review at least started	2,279 (91%)	1,260 (99%)	3,539 (94%)
Review published*	2,059 (82%)	966 (77%)	3,052 (80%)
2021			
Review at least started**	1,216 (97%)	709 (99%)	1,925 (99%)
Review published**	550 (48%)	215 (34%)	768 (41%)

*Published means that the review is complete, has been closed and the final report has been produced

**Percentages based on the notifications of eligible deaths to the MBRRACE-UK system as at 3rd August 2021; some deaths may not have been notified and some of these reviews will still be in progress at this stage

Table 1.2: Number of reviews and the percentage of deaths where a review has been carried out using the PMRT by year, Scotland 2018 to 2021 (as at 3rd August 2021)

	Type of death		
	Stillbirths & late miscarriages n (%)	Neonatal deaths n (%)	Total n (%)
2018			
Review at least started	93 (45%)	35 (38%)	128 (43%)
Review published*	59 (29%)	27 (29%)	861 (29%)
2019			
Review at least started	160 (82%)	65 (75%)	225 (80%)
Review published*	127 (65%)	53 (61%)	225 (80%)
2020			
Review at least started	157 (80%)	50 (57%)	207 (73%)
Review published*	139 (71%)	39 (45%)	178 (63%)
2021			
Review at least started**	65 (66%)	26 (60%)	91 (64%)
Review published**	36 (37%)	4 (9%)	40 (28%)

*Published means that the review is complete, has been closed and the final report has been produced

**Percentages based on the notifications of eligible deaths to the MBRRACE-UK system as at 3rd August 2021; some deaths may not have been notified and some of these reviews will still be in progress at this stage

Table 1.3: Number of reviews and the percentage of deaths where a review has been carried out using the PMRT by year, Wales 2018 to 2021 (as at 3rd August 2021)

	Type of death		
	Stillbirths & late miscarriages n (%)	Neonatal deaths n (%)	Total n (%)
2018			
Review at least started	92 (72%)	47 (78%)	139 (74%)
Review published*	75 (59%)	24 (40%)	99 (53%)
2019			
Review at least started	93 (73%)	73 (99%)	166 (82%)
Review published*	67 (52%)	43 (58%)	110 (54%)
2020			
Review at least started	87 (68%)	58 (78%)	145 (72%)
Review published*	70 (55%)	20 (27%)	90 (45%)
2021			
Review at least started**	34 (53%)	20 (54%)	54 (53%)
Review published**	15 (23%)	1 (3%)	16 (16%)

*Published means that the review is complete, has been closed and the final report has been produced

**Percentages based on the notifications of eligible deaths to the MBRRACE-UK system as at 3rd August 2021; some deaths may not have been notified and some of these reviews will still be in progress at this stage

Table 1.4: Number of reviews and the percentage of deaths where a review has been carried out using the PMRT by year, Northern Ireland 2020 to 2021 (as at 3rd August 2021)

	Type of death		
	Stillbirths & late miscarriages	Neonatal deaths	Total
2020¥			
Review at least started	68 (80%)	25 (34%)	93 (58%)
Review published*	30 (35%)	5 (7%)	35 (22%)
2021			
Review at least started	31 (73%)	7 (19%)	38 (48%)
Review published*	3 (7%)	0 (0%)	3 (4%)

¥ Trusts in Northern Ireland adopted the PMRT for the conduct of reviews during autumn 2019. As a consequence the reviews carried out in Northern Ireland in 2019 and 2020 were during the implementation phase of the use of the PMRT and few reviews were completed or published in 2019. This table therefore only includes information about reviews carried out from January 2020

*Published means that the review is complete, has been closed and the final report has been produced

**Percentages based on the notifications of eligible deaths to the MBRRACE-UK system as at 3rd August 2021; some deaths may not have been notified and some of these reviews will still be in progress at this stage

Table 1.5: Number and percentage of staff recorded as present at the review session with the largest number of participants by type of death, comparing the three periods: Jan 2018 – Feb 2019, Mar 2019 – Feb 2020, and Mar 2020 – Feb 2021

Number of staff recorded as present	Reviews Jan 2018 to Feb 2019				Reviews Mar 2019 to Feb 2020				Reviews Mar 2020 to Feb 2021			
	Late mis-carriages (N = 143) n (%)	Stillbirths (N = 1,011) n (%)	Neonatal deaths (N = 346) n (%)	All deaths (N = 1,500) n (%)	Late mis-carriages (N = 449) n (%)	Stillbirths (N= 2,158) n (%)	Neonatal deaths (N = 1,086) n (%)	All deaths (N = 3,693) n (%)	Late mis-carriages (N = 385) n (%)	Stillbirths (N= 2,215) n (%)	Neonatal deaths (N = 1,381) n (%)	All deaths (N = 3,981) n (%)
1	11 (8%)	83 (8%)	23 (7%)	117 (8%)	49 (11%)	175 (8%)	89 (8%)	313 (8%)	30 (8%)	130 (6%)	110 (8%)	270 (7%)
2-3	54 (38%)	262 (26%)	87 (25%)	403 (27%)	110 (24%)	495 (23%)	188 (17%)	793 (21%)	76 (20%)	329 (15%)	161 (11%)	566 (14%)
4-7	57 (40%)	420 (42%)	129 (37%)	606 (40%)	167 (37%)	864 (40%)	434 (40%)	1,465 (40%)	157 (41%)	932 (42%)	448 (32%)	1,537 (39%)
8+	19 (13%)	246 (24%)	107 (31%)	372 (25%)	97 (22%)	504 (23%)	323 (30%)	924 (25%)	111 (29%)	763 (34%)	627 (45%)	1,501 (38%)
None recorded	2				26 (6%)	120 (6%)	52 (5%)	52 (5%)	11 (3%)	61 (3%)	35 (3%)	107 (3%)
Median	5	5	6	5	4	5	5	5	5	6	7	6
Minimum with correct roles*	21 (15%)	224 (22%)	1 (0%)	246 (16%)	96 (22%)	516 (24%)	3 (1%)	615 (17%)	157 (41%)	932 (42%)	448 (32%)	1,537 (39%)

* At least the minimum number of staff with the correct roles recorded as present for the largest review session

Table 1.6: Number and percentage of reviews involving each type of professional, comparing the three periods: Jan 2018 – Feb 2019, Mar 2019 – Feb 2020, and Mar 2020 – Feb 2021

Professional role	Number of reviews with a record of involving this type of professional in any review session (% of reviews) Reviews Jan 2018 to Feb 2019				Number of reviews with a record of involving this type of professional in any review session (% of reviews) Reviews Mar 2019 to Feb 2020				Number of reviews with a record of involving this type of professional in any review session (% of reviews) Reviews Mar 2020 to Feb 2021			
	Late mis-carriages (N = 143) n (%)	Stillbirths (N = 1,011) n (%)	Neonatal deaths (N = 346) n (%)	All deaths (N = 1,500) n (%)	Late mis-carriages (N = 449) n (%)	Stillbirths (N= 2,158) n (%)	Neonatal deaths (N = 1,086) n (%)	All deaths (N = 3,693) n (%)	Late mis-carriages (N = 385) n (%)	Stillbirths (N= 2,215) n (%)	Neonatal deaths (N = 1,381) n (%)	All deaths (N = 3,981) n (%)
External panel member	15 (10%)	90 (9%)	29 (8%)	134 (9%)	55 (12%)	441 (20%)	206 (19%)	702 (19%)	61 (16%)	478 (22%)	304 (22%)	843 (21%)
Midwife	124 (87%)	848 (84%)	267 (77%)	1,239 (83%)	354 (78%)	1,820 (85%)	826 (76%)	3,009 (81%)	334 (89%)	1,961 (89%)	1,128 (82%)	3,435 (86%)
Neonatologist/ paediatrician	13 (9%)	127 (13%)	204 (59%)	344 (23%)	87 (19%)	381 (18%)	766 (71%)	1,234 (33%)	82 (21%)	510 (23%)	1,112 (81%)	1,704 (43%)
Obstetrician	100 (70%)	793 (78%)	253 (73%)	1,146 (76%)	343 (76%)	1,707 (79%)	778 (72%)	2,833 (76%)	335 (87%)	1,934 (87%)	1,024 (74%)	3,292 (83%)
Bereavement team member	70 (49%)	425 (42%)	145 (42%)	640 (43%)	221 (49%)	1,223 (57%)	526 (48%)	1,977 (54%)	200 (52%)	1,153 (52%)	703 (51%)	2,056 (52%)
Risk manager/ governance team member	79 (55%)	670 (66%)	206 (60%)	955 (64%)	410 (91%)	2,042 (95%)	918 (85%)	3,381 (92%)	274 (71%)	1,615 (73%)	920 (67%)	2,089 (71%)
PMRT/maternity safety champion*	8 (6%)	117 (12%)	24 (7%)	149 (10%)	69 (16%)	385 (19%)	139 (14%)	593 (17%)	54 (15%)	356 (18%)	269 (21%)	670/3621 19%)
Neonatal nurse	5 (3%)	51 (5%)	83 (24%)	139 (9%)	36 (8%)	190 (8%)	779 (71%)	1,005 (27%)	23 (6%)	186 (8%)	632 (46%)	840 (21%)
Service manager/ member of management team	26 (18%)	262 (26%)	65 (19%)	353 (24%)	186 (41%)	944 (44%)	366 (34%)	1,499 (40%)	127 (33%)	840 (38%)	404 (29%)	1,371 (34%)
Administrative support staff	14 (10%)	108 (11%)	48 (14%)	170 (11%)	67 (15%)	381 (18%)	230 (21%)	680 (18%)	76 (20%)	469 (21%)	320 (23%)	865 (22%)
Pathologist	4 (3%)	22 (2%)	4 (1%)	30 (2%)	15 (3%)	105 (5%)	16 (1%)	136 (4%)	22 (6%)	130 (6%)	47 (3%)	199 (5%)
Anaesthetist	0 (0%)	39 (4%)	4 (1%)	43 (3%)	8 (2%)	44 (2%)	19 (2%)	71 (2%)	6 (2%)	43 (2%)	33 (3%)	84 (2%)
Other	22 (15%)	201 (20%)	67 (19%)	290 (19%)	127 (28%)	637 (30%)	558 (51%)	1,323 (36%)	84 (22%)	539 (24%)	466 (34%)	1,089 (27%)
Unknown (in addition to other)	107 (75%)	831 (82%)	297 (86%)	1,235 (82%)	70 (16%)	336 (16%)	252 (23%)	658 (18%)	34 (9%)	323 (15%)	305 (22%)	662 (17%)

*Maternity safety champions only relevant in England and thus proportions are calculated using reviews in England as the denominator

Table 1.7: Time from the death to the review report generation and publication comparing the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

	Reviews Jan 2018 to Feb 2019				Reviews Mar 2019 to Feb 2020				Reviews Mar 2020 to Feb 2021			
	Time from death to draft report generation (weeks)		Time from death to report publication (weeks)		Time from death to draft report generation (weeks)		Time from death to report publication (weeks)		Time from death to draft report generation (weeks)		Time from death to report publication (weeks)	
	Median	Range	Median	Range	Median	Range	Median	Range	Median	Range	Median	Range
Country:												
England	16	0 to 80	17	0 to 80	17	0 to 111	20	1 to 111	17	0.5 - 164	21	1 to 164
Wales	15	1 to 31	16	1 to 41	31	3 to 98	36	3 to 97	44	2.5 - 142	21	3 to 155
Scotland	15	2 to 80	16	2 to 80	14	1 to 85	15	1 to 85	17	1.5 - 100	45	1 to 128
Overall	16	0 to 80	17	0 to 80	18	0 to 111	20	1 to 111	27	1.5 - 83	21	1 to 164
Type of death:												
Late miscarriages	16	0 to 47	16	0 to 47	17	2 to 104	19	3 to 104	17	0.5 - 145	18	1 - 145
Stillbirths	15	0 to 80	17	0 to 80	17	0 to 104	19	1 to 107	17	1 - 162	19	1.5 - 162
Neonatal deaths	17	0 to 55	18	0 to 55	19	1 to 111	21	1 to 110	21	1 - 164	27	2 - 164

Table 1.8: Number and percentage of reviews indicating parents' perspectives of care were sought and comments recorded comparing the three periods: Jan 2018 - Feb 2019, Mar 2019 – Feb 2020 and Mar 2020 - Feb 2021

	Reviews Jan 2018 to Feb 2019				Reviews Mar 2019 to Feb 2020				Reviews Mar 2020 to Feb 2021			
	Reviews where parents' perspectives were indicated as having been sought		Reviews with parents' comments recorded*		Reviews where parents' perspectives were indicated as having been sought		Reviews with parents' comments recorded*		Reviews where parents' perspectives were indicated as having been sought		Reviews with parents' comments recorded*	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Country:												
England	1,070	76%	1,037	73%	2,916	84%	2,899	84%	3,277	90%	3,244	90%
Wales	19	82%	18	78%	70	86%	70	86%	98	67%	98	67%
Scotland	35	57%	34	56%	130	87%	130	87%	160	91%	160	91%
Northern Ireland	--	--	--	--	--	--	--	--	34	89%	34	89%
Overall	1,124	75%	1,089	73%	3,116	84%	3,099	84%	3,569	90%	3,536	89%
Type of death:												
Late miscarriages	100	70%	98	69%	365	81%	365	81%	344	89%	344	89%
Stillbirths	781	77%	755	75%	1,879	87%	1,875	87%	2,041	92%	2,039	92%
Neonatal deaths	243	70%	236	68%	872	80%	859	79%	1,184	86%	1,153	83%

*A number of the comments were not actually parental comments

Table 1.9: Themes from those parents who had questions or expressed concerns about their care comparing the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

	Frequency of responses Jan 2018 to Feb 2019 N = 468 n (%)	Frequency of responses Mar 2019 to Feb 2020 N=225 n (%)	Frequency of responses* Mar 2020 to Feb 2021 N= 200** n (%)
Questions and/ or concerns about management plans and the care received	208 (44%)	120 (53%)	108 (54%)
Poor communication	25 (5%)	21 (9%)	32 (16%)
Concerns about technical aspects of care e.g. scans quality and reporting	22 (5%)	9 (4%)	32 (16%)
Did not feel listened to	21 (4%)	14 (6%)	18 (9%)
Felt unsupported	8 (2%)	8 (4%)	8 (4%)
Left alone in labour	4 (1%)	5 (2%)	4 (2%)

*For 499 (13%) of reviews the question about parental questions and concerns was left blank; for 1556 (40%) of reviews it was reported there were no concerns or questions raised by the parents or that no questions or concerns had been received from the parents at the time of the review; and for 80 (2%) of reviews the parents were reported as being happy with all aspects of their care (some were happy with some but not all aspects of their care and are not included in the 80).

** A total of 1,846 (46%) reviews had at least one question or concern identified; a sample of 200 reviews were read and categorised into one of the six main themes identified in the two previous reports.

2. Findings from Reviews

Table 2.1: Characteristics of the reviews by country, size of unit, and type of death by gestational age for the three periods: Jan 2018 - Feb 2019, Mar 2019 - Feb 2020 and Mar 2020 - Feb 2021

	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021	
	Number of reviews N = 1,500	Percentage of reviews	Number of reviews N = 3,693	Percentage of reviews	Number of reviews N = 3,981	Percentage of reviews
Country:						
England	1,416	94%	3,642	94%	3,621	91%
Wales	23	2%	81	2%	146	4%
Scotland	61	4%	150	4%	176	4%
Northern Ireland¥	--	--	--	--	38	1%
Service provision:						
Level 3 neonatal unit & neonatal surgery	468	31%	1,231	33%	1,241	31%
Level 3 neonatal unit	321	21%	861	23%	1,065	27%
4,000+ births per annum*	517	35%	1,037	28%	1,090	27%
<4,000 births per annum*	194	13%	564	15%	585	15%
Type of death by gestational age at birth:						
Late miscarriages	143	10%	449	12%	385	10%
Stillbirths						
24 - <28 weeks	284	19%	551	15%	518	13%
28 - <32 weeks	186	12%	366	10%	370	9%
32 - <37 weeks	246	16%	577	16%	601	15%
37+ weeks	292	20%	652	18%	697	18%
Missing gestation	3**	--	12**	--	29	<1%
All stillbirths	1,011	67%	2,158	58%	2,215	56%
Neonatal deaths:						
<24 weeks	96	6%	297	8%	314	8%
24 - <28 weeks	89	6%	271	7%	343	9%
28 - <32 weeks	37	3%	125	3%	176	4%
32 - <37 weeks	49	3%	167	5%	201	5%
37+ weeks	75	5%	224	6%	339	9%
Missing gestation	--	--	2	--	8	--
All neonatal deaths	346	23%	1,086	29%	1,381	35%

¥ Northern Ireland adopted the tool in autumn 2019

* Units without level 3 neonatal service provision or neonatal surgery

Table 2.2: Number and percentage of staff recorded as present at the review session with the largest number of participants by type of death, comparing the three periods: Jan 2018 – Feb 2019, Mar 2019 – Feb 2020, and Mar 2020 – Feb 2021

	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021	
	Number of reviews with at least one issue generated	Percentage of all reviews with at least one issue generated	Number of reviews with at least one issue generated	Percentage of all reviews with at least one issue generated	Number of reviews with at least one issue generated	Percentage of all reviews with at least one issue generated
England	1,334	94%	3,238	89%	3,456	95%
Wales	23	100%	68	84%	144	99%
Scotland	59	97%	131	87%	160	91%
Overall	1,416	94%	3,437	93%	37	97%
Level 3 neonatal unit & neonatal surgery	436	93%	1,130	92%	1,159	93%
Level 3 neonatal unit	311	97%	810	94%	1,013	95%
4,000+ births per annum*	488	94%	982	95%	1,062	97%
<4,000 births per annum*	181	93%	515	91%	563	86%
Late miscarriages	127	89%	399	88%	360	94%
Stillbirths						
<37 weeks	664	93%	1,355	91%	1,409	95%
37+ weeks	281	96%	613	94%	696	100%
All stillbirths	940	93%	1,980	92%	2,465	96%
Neonatal deaths						
<37 weeks	266	98%	841	98%	1,001	97%
37+ weeks	75	100%	215	96%	331	98%
All neonatal deaths	341	99%	1,058	97%	1,332	97%

* Units without level 3 neonatal service provision or neonatal surgery

Table 2.3: The most common issues with care presented in related categories identified during the review of pre-conception and antenatal care, for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

Issue categories	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021	
	Number and percentage of reviews with each issue N=1,500 n (%)	Percentage of all reviews with at least one issue generated N=883 n (%)	Number and percentage of reviews with each issue N=3,693 n (%)	Percentage of all reviews with at least one issue generated N=1,871 n (%)	Number and percentage of reviews with each issue N=3,981 n (%)	Percentage of all reviews with at least one issue generated N=1,650 n (%)
Smoking assessment and management of exposure to tobacco smoke	604 (40%)	113 (13%)	1,226 (33%)	196 (11%)	973 (24%)	129 (8%)
Inadequate growth surveillance	384 (26%)	269 (30%)	712 (19%)	448 (24%)	748 (19%)	371 (23%)
Lack of appropriate referral for social issues[1] or screening for domestic abuse at booking	196 (13%)	11 (1%)	808 (22%)	51 (3%)	636 (16%)	39 (2%)
Late booking/unbooked pregnancy	220 (15%)	65 (7%)	568 (15%)	201 (11%)	588 (15%)	139 (8%)
Assessment and management of aspirin requirement	339 (23%)	66 (7%)	628 (17%)	128 (7%)	467 (12%)	101 (6%)
Inadequate investigation or management of reduced fetal movements[2]	230 (15%)	142 (16%)	456 (12%)	273 (15%)	462 (12%)	314 (19%)
Delay in diagnosis or inappropriate management of significant medical/surgical/social problems during pregnancy[3]	155 (10%)	106 (12%)	363 (10%)	343 (18%)	408 (10%)	334 (20%)
Not offered routine MSU at booking	222 (15%)	<10	282 (8%)	11 (1%)	348 (9%)	13 (1%)
Screening for or management of gestational diabetes mellitus (GDM)	164 (11%)	17 (2%)	246 (7%)	38 (2%)	235 (6%)	30 (2%)
Communication with mothers with learning difficulties, hearing problems or poor/no English	62 (4%)	10 (1%)	197 (5%)	41 (2%)	213 (5%)	32 (2%)

Lack of appropriate pre-conception counselling/ management of medical and past obstetric complications[4]	77 (5%)	16 (2%)	210 (6%)	30 (4%)	173 (4%)	27 (2%)
Issues with anomaly screening or management of anomalies[5]	50 (3%)	21 (2%)	149 (4%)	39 (2%)	141 (4%)	41 (3%)
Incorrect risk assessment or type of care at booking	37 (3%)	28 (3%)	60 (2%)	35 (2%)	83 (2%)	43 (3%)
No local DNA policy, or policy not instituted following DNA for antenatal appointments	31 (2%)	12 (1%)	69 (2%)	39 (2%)	79 (2%)	36 (2%)
Inappropriate management given obstetric and/or family history	22 (1%)	<10	67 (2%)	15 (1%)	60 (2%)	12 (1%)
No antenatal discussion of birth options after previous caesarean section	31 (2%)	<10	72 (2%)	6 (<1%)	56 (1%)	<10

1.Includes: housing, benefits, social support, teenager, other vulnerabilities

2.Includes: no risk assessment; investigations indicated not carried out; poor quality, or incorrectly interpreted CTGs; lack of appropriate written information for mother

3.Includes: appropriate management according to local guidelines, but not national guidelines

4.Includes: for anti-convulsants, warfarin, SSRIs, psychoactive drugs or history of pre-eclampsia/HELLP syndrome/eclampsia

5.Includes: anomaly scan late or not offered despite booking early enough; further trisomy testing indicated but not offered or results missing; condition amenable to prenatal diagnosis/ultra-sound detection but not detected prenatally

Table 2.4: The most common issues with care presented in related categories identified during the review of pre-conception and antenatal care, for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

Issue group	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021	
	Number and percentage of reviews with each issue N=1,500 n (%)	Number of issues relevant to outcome N=346 n (%)	Number and percentage of reviews with each issue N=3,693 n (%)	Number of issues relevant to outcome N=869 n (%)	Number and percentage of reviews with each issue N=3,981 n (%)	Number of issues relevant to outcome N=1,037 n (%)
Issues with monitoring of the mother[1]	507 (34%)	52 (15%)	944 (26%)	114 (13%)	904 (23%)	115 (11%)
No assessment of mother's risk status or inadequate management at the start of her care in labour or during the course of her labour	118 (8%)	41 (12%)	198 (5%)	83 (10%)	221 (6%)	122 (12%)
Issues with communication with mothers with poor/no English	77 (5%)	13 (4%)	244 (7%)	45 (5%)	193 (5%)	22 (2%)
Inappropriate setting/location of birth	53 (4%)	24 (7%)	138 (4%)	50 (6%)	178 (5%)	84 (8%)
Staffing issues[2]	82 (5%)	40 (12%)	289 (5%)	132 (15%)	169 (4%)	136 (13%)
Fetal monitoring issues[3]	53 (4%)	67 (19%)	162 (4%)	180 (21%)	162 (4%)	177 (17%)
Issues with birth mode(s)[4]	42 (3%)	19 (5%)	101 (3%)	68 (8%)	108 (3%)	81 (8%)
Issues in management of intra and post-partum complications	37 (2%)	24 (7%)	89 (2%)	55 (6%)	83 (2%)	75 (7%)
Issues in management of (threatened) preterm labour	27 (2%)	22 (6%)	73 (2%)	28 (3%)	93 (2%)	50 (5%)
Inappropriate duration of labour or management of delay in labour	23 (2%)	<10	56 (2%)	27 (3%)	67 (2%)	41 (4%)
Maternal transfer issues	19 (1%)	12 (3%)	43 (1%)	24 (3%)	68 (2%)	54 (5%)
Pain management issues	19 (1%)	<10	43 (1%)	4 (1%)	65 (2%)	18 (2%)
Inadequate documentation	20 (1%)	10 (3%)	74 (2%)	28 (3%)	57 (1%)	20 (2%)
Specific birth planning advice indicated for pregnancy complications but not given	19 (1%)	<10	33 (1%)	12 (1%)	28 (1%)	17 (2%)
Medication issues[5]	12 (1%)	<10	31 (1%)	5 (1%)	27 (1%)	8 (1%)

1. Includes: infrequent observations and lack of partogram
2. Includes: insufficiently senior staff involved in care and lack of one-to-one care in established labour
3. Includes: incorrect method of fetal monitoring, interpretation or management, from prior to established labour to the latent phase of labour
4. Includes: inappropriate choice, timing and management
5. Includes: oxytocin and medication for pre-existing conditions

Table 2.5: The most common issues with care identified during neonatal care (excluding end of life care), for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

Issue group	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021	
	Number and percentage of reviews with each issue N=346 n (%)	Number of issues relevant to outcome N=81 n (%)	Number and percentage of reviews with each issue N=1,086 n (%)	Number of issues relevant to outcome N=440 n (%)	Number and percentage of reviews with each issue N=1,381 n (%)	Number of issues relevant to outcome N=440 n (%)
Inadequate documentation overall	185 (53%)	32 (40%)	791 (73%)	125 (28%)	721 (52%)	154 (35%)
Resuscitation		172 (50%)		525 (48%)		441 (32%)
Transfer to neonatal unit		25 (7%)		107 (10%)		92 (7%)
Neonatal care		35 (10%)		134 (12%)		162 (12%)
Transfer to an external neonatal unit		14 (4%)		25 (2%)		26 (2%)
Thermal management issues overall	61 (18%)	14 (17%)	272 (25%)	88 (20%)	345 (25%)	138 (31%)
Resuscitation		18 (5%)		24 (3%)		51 (4%)
Neonatal care		14 (4%)		64 (5%)		64 (5%)
Transfer to neonatal unit/other location		50 (15%)		174 (16%)		230 (17%)
Issues with respiratory management during resuscitation[1]	56 (16%)	<10	183 (17%)	55 (13%)	218 (16%)	71 (16%)
Issues with cardiovascular management on neonatal unit[2]	21 (6%)	<10	45 (4%)	43 (10%)	60 (4%)	10 (2%)
Issues with communication with parents[3]	13 (4%)	<10	43 (4%)	56 (3%)	52 (4%)	11 (3%)

1. Includes: issues around establishing ventilation, intubation, positive pressure respiratory support, oxygen saturation monitoring and administration of surfactant
2. Includes: line placement and radiological confirmation of line position
3. Includes: mothers with poor/no English

Table 2.6: The most common issues with care identified during end of life care, for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

Issue group	Reviews Jan 2018 to Feb 2019 Number and percentage of reviews N=346 n (%)	Reviews Mar 2019 to Feb 2020 Number and percentage of reviews N=1,086 n (%)	Reviews Mar 2020 to Feb 2021 Number and percentage of reviews N=1,381 n (%)
Organ donation not discussed with parents despite no specific contraindications	82 (24%)	209 (19%)	225 (16%)
Post-mortem not discussed with parents prior to the baby's death	52 (15%)	151 (14%)	217 (16%)
Inadequate documentation	57 (16%)	180 (17%)	114 (8%)

Table 2.7: The most common issues with care identified after the baby had died, for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

Issue group	Reviews Jan 2018 to Feb 2019 Number and percentage of reviews (N=1,500) n (%)	Reviews Mar 2019 to Feb 2020 Number and percentage of reviews N=3,693 n (%)	Reviews Mar 2020 to Feb 2021 Number and percentage of reviews N=3,981 n (%)
Placental histology was performed but not by a perinatal/paediatric pathologist	177 (12%)	351 (10%)	287 (7%)
The placenta was not sent for histological examination	38 (3%)	136 (4%)	132 (3%)
The parents were not offered a hospital post-mortem	16 (1%)	63 (2%)	77 (2%)
The placenta was sent for histological examination but there is no result in the notes	27 (2%)	52 (1%)	40 (1%)
It is not possible to assess from the notes whether the parents were offered a hospital post-mortem	19 (1%)	39 (1%)	30 (1%)
The parents consented to a full or limited post-mortem examination but this was not carried out	17 (1%)	7 (<1%)	4 (<1%)

Table 2.8: The most common issues identified with bereavement care Jul 2020 – Feb 2021

Issue group	Reviews Jan 2018 to Feb 2019 Number and percentage of reviews N=2,322* n (%)
Policy, support and practical help to take their baby home was not available	542 (24%)
Inadequate documentation regarding taking the baby home	413 (18%)
Inadequate documentation regarding access to a cold cot	237 (10%)
Location and quality of the bereavement suite inadequate	207 (9%)
Inadequate documentation regarding transfer to mortuary care	187 (8%)
Inadequate documentation to tell if bereavement care respected cultural, religious and spiritual wishes of the parents	134 (6%)
Inadequate documentation to tell if bereavement care provided included practical help and/or emotional support	95 (4%)
Inadequate documentation to tell if a named contact for questions after bereavement was not identified	69 (3%)
Poor quality of the bereavement care offered	64 (3%)
Bereavement checklist was not included in the notes	51 (3%)

*These questions were incorporated into the PMRT in July 2020

Table 2.9: The most common issues identified as due to the impact of the SARs-CoV-2 pandemic*, Jul 2020 – Feb 2021

Issue group	Reviews Jan 2018 to Feb 2019 Number and percentage of reviews N=2,322* n (%)
The pandemic affected how women accessed maternity care	114 (5%)
Bereavement care adversely affected by service modifications due to the pandemic	90 (4%)
Questions about domestic abuse not asked due to remote delivery of booking care	63 (3%)
The opportunity to take their baby home after death was not available	44 (2%)
Location and quality of the bereavement care adversely affected by the pandemic	34 (2%)
Serial scans for high risk of fetal growth restriction not available due to changes to service provision	17 (1%)
Standard and further postnatal investigations were indicated but not offered	15 (1%)

*These questions were incorporated into the PMRT in July 2020

Table 2.10: Grading of care during pregnancy care, labour and birth for late miscarriages & stillbirths, for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021		Reviews Mar 2020 to Feb 2021 with external**	
	Number of reviews N = 1,154	Percentage of reviews*	Number of reviews N = 2,607	Percentage of reviews*	Number of reviews N = 2,600	Percentage of reviews*	Number of reviews N = 539	Percentage of reviews*
A – No issues with care identified	710	62%	1,496	57%	1,434	55%	253	47%
B - Care issues that would have made no difference to the outcome	291	25%	705	27%	721	28%	165	31%
C - Care issues which may have made a difference to the outcome	114	10%	329	13%	357	14%	96	18%
D - Care issues which were likely to have made a difference to the outcome	30	3%	72	3%	83	3%	25	5%
Unrecorded	9	1%	5	<1%	5	<1%	--	--

*Rounding errors may result in percentages totalling 99% or 101%

** These are reviews where an external member is present as part of the review team

Table 2.11: Grading of care during pregnancy, labour and birth for neonatal deaths, for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021		Reviews Mar 2020 to Feb 2021 with external**	
	Number of reviews N = 346	Percentage of reviews*	Number of reviews N = 1,086	Percentage of reviews*	Number of reviews N = 1,381	Percentage of reviews*	Number of reviews N = 304	Percentage of reviews*
A – No issues with care identified	214	62%	678	62%	751	54%	163	54%
B - Care issues that would have made no difference to the outcome	102	29%	278	26%	406	29%	87	29%
C - Care issues which may have made a difference to the outcome	20	6%	84	8%	111	8%	36	12%
D - Care issues which were likely to have made a difference to the outcome	7	1%	18	2%	41	3%	15	5%
Unrecorded	3	1%	28	3%	72	5%	3	1%

*Rounding errors may result in percentages totalling 99% or 101%

** These are reviews where an external member is present as part of the review team

Table 2.12: Grading of care from birth to the death of the baby for neonatal deaths, for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021

	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021		Reviews Mar 2020 to Feb 2021 with external**	
	Number of reviews N = 346	Percentage of reviews*	Number of reviews N = 1,086	Percentage of reviews*	Number of reviews N = 1,381	Percentage of reviews*	Number of reviews N = 304	Percentage of reviews*
A – No issues with care identified	237	68%	679	63%	852	62%	173	57%
B - Care issues that would have made no difference to the outcome	92	27%	342	32%	446	32%	108	36%
C - Care issues which may have made a difference to the outcome	11	3%	46	4%	68	5%	18	6%
D - Care issues which were likely to have made a difference to the outcome	1	0%	8	1%	10	1%	4	1%
Unrecorded	5	1%	11	1%	5	<1%	1	<1%

*Rounding errors may result in percentages totalling 99% or 101%

** These are reviews where an external member is present as part of the review team

Table 2.13: Most serious level of grading of care during pregnancy, labour, birth and during the neonatal period for neonatal deaths, for the three periods: Jan 2018 – Feb 2019, Mar 2019 – Feb 2020 and Mar 2020 – Feb 2021

	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021		Reviews Mar 2020 to Feb 2021 with external**	
	Number of reviews N = 346	Percentage of reviews*	Number of reviews N = 1,086	Percentage of reviews*	Number of reviews N = 1,381	Percentage of reviews*	Number of reviews N = 304	Percentage of reviews*
A – No issues with care identified	159	46%	507	47%	582	42%	108	36%
B - Care issues that would have made no difference to the outcome	147	42%	439	40%	586	42%	130	43%
C - Care issues which may have made a difference to the outcome	26	7%	111	10%	161	12%	47	15%
D - Care issues which were likely to have made a difference to the outcome	8	2%	24	2%	50	4%	19	6%
Unrecorded	6	2%	5	<1%	2	<1%	--	--

*Rounding errors may result in percentages totalling 99% or 101%

** These are reviews where an external member is present as part of the review team

Table 2.14: Grading of bereavement care following late miscarriage and stillbirth, for the three periods: Jan 2018 - Feb 2019, Mar 2019 - Feb 2020 and Mar 2020 - Feb 2021

	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021		Reviews Mar 2020 to Feb 2021 with external**	
	Number of reviews N = 1,154	Percentage of reviews*	Number of reviews N = 2,607	Percentage of reviews*	Number of reviews N = 2,600	Percentage of reviews*	Number of reviews N = 539	Percentage of reviews*
A – No issues with care identified	955	83%	2,175	83%	2,072	80%	411	77%
B - Care issues that would have made no difference to the outcome	141	12%	336	13%	427	16%	99	18%
C - Care issues which may have made a difference to the outcome	23	2%	70	3%	65	3%	17	3%
D - Care issues which were likely to have made a difference to the outcome	8	1%	22	1%	34	1%	12	2%
Unrecorded	27	2%	4	<1%	2	<1%	--	--

*Rounding errors may result in percentages totalling 99% or 101%

** These are reviews where an external member is present as part of the review team

Table 2.15: Grading of bereavement care following neonatal death, for the three periods: Jan 2018 - Feb 2019, Mar 2019 - Feb 2020 and Mar 2020 – Feb 2021

	Reviews Jan 2018 to Feb 2019		Reviews Mar 2019 to Feb 2020		Reviews Mar 2020 to Feb 2021		Reviews Mar 2020 to Feb 2021 with external**	
	Number of reviews N = 346	Percentage of reviews*	Number of reviews N = 1,086	Percentage of reviews*	Number of reviews N = 1,381	Percentage of reviews*	Number of reviews N = 304	Percentage of reviews*
A – No issues with care identified	312	90%	933	86%	1,147	83%	250	82%
B - Care issues that would have made no difference to the outcome	22	6%	94	9%	131	9%	38	13%
C - Care issues which may have made a difference to the outcome	5	1%	28	3%	30	2%	11	4%
D - Care issues which were likely to have made a difference to the outcome	0	1%	21	2%	59	4%	4	1%
Unrecorded	7	2%	10	1%	14	1%	--	--

*Rounding errors may result in percentages totalling 99% or 101%

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Table 2.16: Frequency of level 1 National Patient Safety Agency contributory factors, reviews Mar 2020 – Feb 2021

Contributory factors	Reviews Mar 2020 to Feb 2021 Number and percentage of contributory factors* N=19,771 n (%)
Task factors	5,746 (29%)
Patient factors	4,340 (22%)
Communication	3,659 (19%)
Organisational	3,103 (16%)
Education and training	960 (5%)
Staff factors	879 (4%)
Work environment	687 (4%)
Equipment	346 (2%)
Team factors	51 (<1%)

*Rounding errors may result in percentages totalling 99% or 101%

Table 2.17: Number and proportion of contributory factors by impact on outcome and the need for remedial action, for the three periods: Jan 2018 - Feb 2019, Mar 2019-Feb 2020 and Mar 2020 – Feb 2021 (row percentages)

	Reviews Jan 2018 to Feb 2019				Reviews Mar 2019 to Feb 2020			
		Number of contributory factors with:				Number of contributory factors with:		
	No outcome contribution (% factors)	No impact/ possible impact on outcome and no action needed (% factors)	No impact on outcome but action needed (% factors)	Possible impact on outcome and action needed (% factors)	No outcome contribution (% factors)	No impact/ possible impact on outcome and no action needed (% factors)	No impact on outcome but action needed (% factors)	Possible impact on outcome and action needed (% factors)
England	263 (3%)	4,512 (60%)	1,860 (25%)	949 (13%)	380 (2%)	9,809 (55%)	5,328 (30%)	2,358 (13%)
Wales	0 (0%)	60 (48%)	32 (26%)	31 (25%)	0 (0%)	256 (62%)	78 (19%)	77 (19%)
Scotland	6 (2%)	142 (29%)	78 (27%)	60 (21%)	0 (0%)	329 (52%)	205 (32%)	100 (16%)
Overall	269 (3%)	4,714 (59%)	1,970 (25%)	1,040 (13%)	380 (<1%)	510,394 (58%)	5,611 (30%)	2,535 (13%)
Late miscarriages	18 (3%)	339 (65%)	127 (24%)	40 (8%)	1 (<1%)	970 (61%)	534 (33%)	96 (6%)
Stillbirths								
<37 weeks	84 (3%)	1,838 (58%)	819 (26%)	429 (14%)	59 (1%)	3,031 (51%)	1,964 (33%)	910 (15%)
37+ weeks	38 (3%)	651 (47%)	6361 (26%)	339 (24%)	23 (1%)	1,342 (44%)	939 (31%)	716 (24%)
All stillbirths	122 (3%)	2,489 (55%)	1,180 (26%)	768 (17%)	82 (1%)	4,373 (49%)	2,903 (32%)	1,626 (18%)
Neonatal deaths								
<37 weeks	104 (5%)	1449 (66%)	517 (23%)	132 (6%)	249 (3%)	3,926 (62%)	1,665 (26%)	534 (8%)
37+ weeks	25 (4%)	445 (63%)	146 (21%)	91 (13%)	48 (3%)	1,013 (55%)	491 (27%)	274 (15%)
All neonatal deaths	129 (4%)	1,894 (65%)	663 (23%)	223 (28%)	297 (4%)	4,939 (60%)	2,156 (26%)	808 (10%)

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