Case study

MEWS in Action



Health Innovation West of England

NHS

Introduction

This case study explores how the new national Maternity Early Warning Score (MEWS) chart supports the identification and escalation of deterioration in pregnant and recently pregnant women and birthing people, in comparison to previous charts.

Set in an Acute Maternity Service at Royal United Hospitals (RUH) Bath NHS Foundation Trust, this case study demonstrates how the new chart supports escalation even when clinical observations are within normal limits, and how this important change empowered staff to escalate earlier, leading to rapid medical intervention, preventing a potentially devastating outcome.



Maternity Early Warning Score (MEWS)

For a decade, UK Maternal Mortality Reports have raised concerns about maternal observations, highlighting incomplete recordings, inconsistent use of Early Warning Score systems and delays in escalation. Variation in scoring systems and escalation pathways across the UK contributed to inconsistent recognition and response to clinical deterioration, which all contributed to preventable morbidity and mortality.

To address this, NHS England have commissioned the national roll out of a standardised, evidence-based Maternity Early Warning Score (MEWS) chart, designed around the physiological changes of pregnancy and informed by robust UK population data.

Royal United Hospitals (RUH) Bath

Supporting around 4,500 births each year, the RUH was chosen as a ‘pathfinder site’ for implementation of the national chart on paper.

The RUH had previously used a local MEOWS system which, while well embedded, relied on red and amber indicators rather than a calculated score to trigger escalation. Audits revealed inconsistencies and potential delays in escalation, highlighting ambiguities within the pathway. Regional variation in thresholds and documentation further contributed to inconsistency in practice.



* The name has been changed to ensure anonymity

Sarah’s story*

Sarah, a 30-year-old mother of two, presented at the RUH’s Maternity triage department.

Sarah was 32 weeks pregnant and complaining of lower abdominal pain.

Routine admission tests highlighted a likely urinary tract infection (UTI) but with normal observations.

Oral analgesia was provided, which settled the pain.

Sarah was able to return home with oral antibiotics to treat a presumed UTI.



First observations

At 3pm the next day, Sarah presented at the triage department again as her pain had returned.

Her observations were taken and recorded on the new MEWS chart, scoring 1 but with additional concerns due to increasing pain.

On the previous chart, Sarah's observations would have triggered 2 amber indicators but would not have included specific concerns around pain and would not necessarily have been escalated at this point.

Maternity Early Warning Score (MEWS)

Hospital sticker with patient details

MEWS score: 0 | 1 | 2 — A score for each vital sign is required at each entry

Parameter	Range	DATE / TIME: 15:00	Score
Respirations (Breaths/min)	>=25		2
	22-24		1
	18-21	O	0
	13-17		0
	9-12		0
	7-8		1
	<=6		2
SpO_2 Oxygen saturation (%)	>=95	O	0
	93-94		1
	<=92		2
Temperature (°C)	>=37.5		2
	37.3-37.4		1
	36.8-37.2	O	0
	36.2-36.7		0
	35.7-36.1		1
	<=35.6		2
Pulse (Beats/min)	>=131		2
	122-130		2
	113-121	1	1
	99-112		0
	86-98		0
	71-85		0
	63-70		1
	<=62		2
Pulse - from 48 hours post birth ONLY (Beats/min) Date & time to commence monitoring:	>=108		2
	99-107		1
	85-98		0
	71-84		0
	58-70		0
	51-57		1
	<=50		2
Systolic blood pressure (mmHg)	>=175		2
	160-174		2
	145-159		2
	136-144		1
	121-135	O	0
	111-120		0
	101-110		0
	94-100		1
	77-93		2
	61-76		2
	<=60		2
Diastolic blood pressure (mmHg)	>=110		2
	97-109		2
	89-96		1
	80-88	O	0
	70-79		0
	62-69		0
	57-61		1
	<=56		2
MEWS TOTAL		1	

Additional concerns - Please see overleaf for additional concern table. If one or more additional concern is present, consider escalation and review.

Additional concern	15:00
Healthcare professional concerned	
Woman/family concerned	
Significant additional therapies (e.g. Oxygen)	
Increased pain (analgesic requirement)	1
Significant vaginal bleeding	
Reduced urine output	
Altered level of consciousness/responsiveness	
Monitoring frequency	
Escalation of care YES/NO	Y
Initials	

Refer to back page for thresholds and triggers

PLAN:

- Action low-medium escalation pathway for review within 30 minutes
- Transfer to labour ward for close monitoring and further investigations.

30 minutes later, a Registrar reviewed Sarah and requested hourly observations.

Blood results were reviewed as soon as available and showed a white cell count of 13.5 with a normal lactate.

Oral analgesia (Oramorph) was provided.

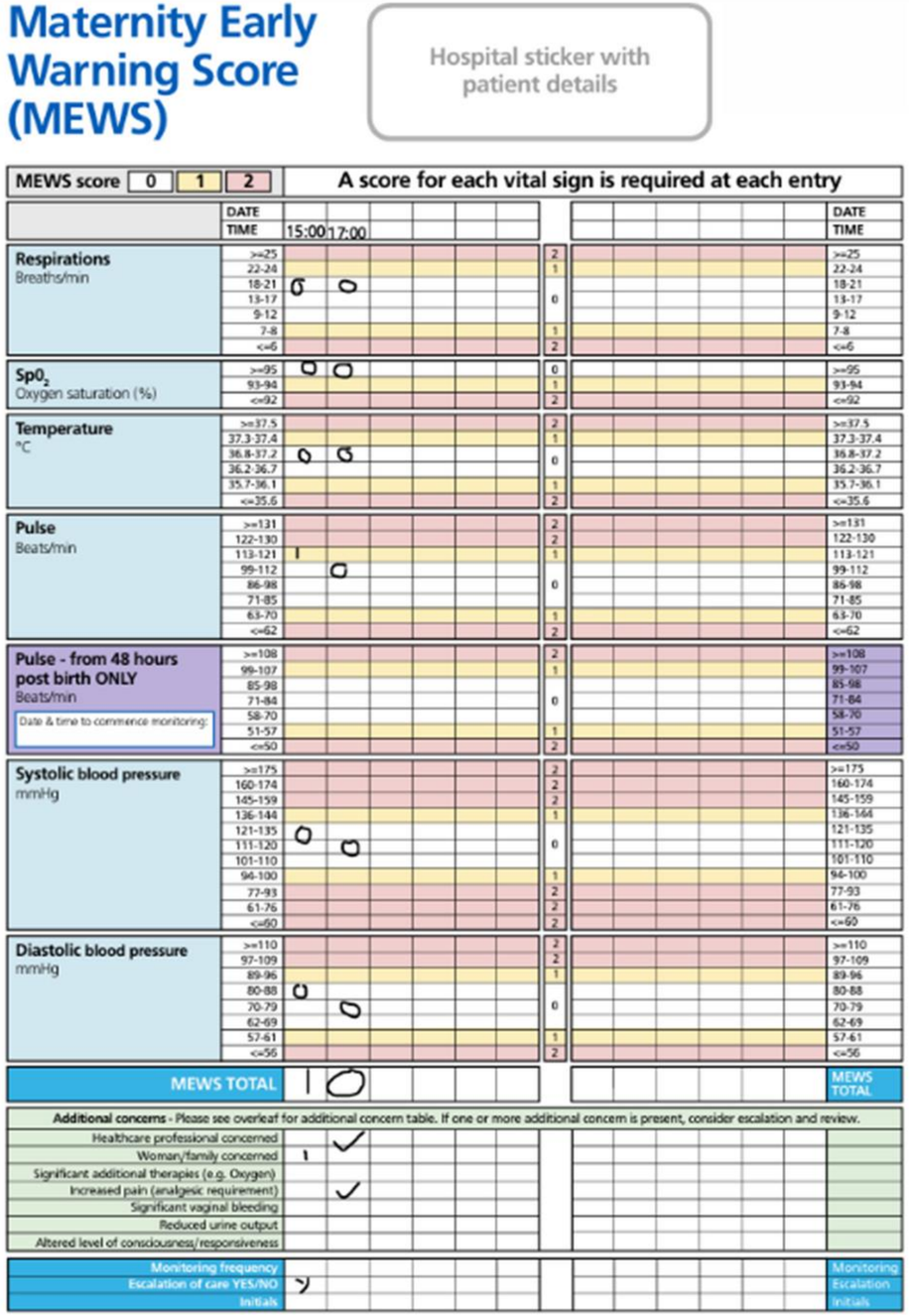
Second observations

At 5pm, the pain had settled, and observations were normal, so a plan was made to transfer Sarah to the antenatal inpatient ward for continued observations. However, the abdominal pain suddenly returned.

Observations were checked and remained normal but **now included two additional concerns** - increased pain and healthcare professional concern.

PLAN:

- Remain on labour ward.
- Repeat observations every 15 minutes
- Action medium escalation pathway for registrar to review within 15 minutes



Maternity Early Warning Score (MEWS)

Hospital sticker with patient details

MEWS score	0	1	2	A score for each vital sign is required at each entry

		DATE / TIME	15:00	17:00		DATE / TIME
Respirations Breaths/min	>=25				2	>=25
	22-24				1	22-24
	18-21		0	0		18-21
	13-17				0	13-17
	9-12					9-12
	7-8				1	7-8
	<=6				2	<=6
SpO_2 Oxygen saturation (%)	>=95		0	0	0	>=95
	93-94				1	93-94
	<=92				2	<=92
Temperature °C	>=37.5				2	>=37.5
	37.3-37.4				1	37.3-37.4
	36.8-37.2		0	0	0	36.8-37.2
	36.2-36.7					36.2-36.7
	35.7-36.1				1	35.7-36.1
	<=35.6				2	<=35.6
Pulse Beats/min	>=131				2	>=131
	122-130				2	122-130
	113-121		1		1	113-121
	99-112			0		99-112
	86-98				0	86-98
	71-85					71-85
	63-70				1	63-70
	<=62				2	<=62
Pulse - from 48 hours post birth ONLY Beats/min Date & time to commence monitoring:	>=108				2	>=108
	99-107				1	99-107
	85-98					85-98
	71-84				0	71-84
	58-70					58-70
	51-57				1	51-57
	<=50				2	<=50
Systolic blood pressure mmHg	>=175				2	>=175
	160-174				2	160-174
	145-159				2	145-159
	136-144				1	136-144
	121-135		0			121-135
	111-120			0	0	111-120
	101-110					101-110
	94-100				1	94-100
	77-93				2	77-93
	61-76				2	61-76
	<=60				2	<=60
Diastolic blood pressure mmHg	>=110				2	>=110
	97-109				2	97-109
	89-96				1	89-96
	80-88		0			80-88
	70-79			0	0	70-79
	62-69					62-69
	57-61				1	57-61
	<=56				2	<=56
MEWS TOTAL			1	0		MEWS TOTAL

Additional concerns - Please see overleaf for additional concern table. If one or more additional concern is present, consider escalation and review.

Healthcare professional concerned		✓	
Woman/family concerned	1		
Significant additional therapies (e.g. Oxygen)			
Increased pain (analgesic requirement)		✓	
Significant vaginal bleeding			
Reduced urine output			
Altered level of consciousness/responsiveness			

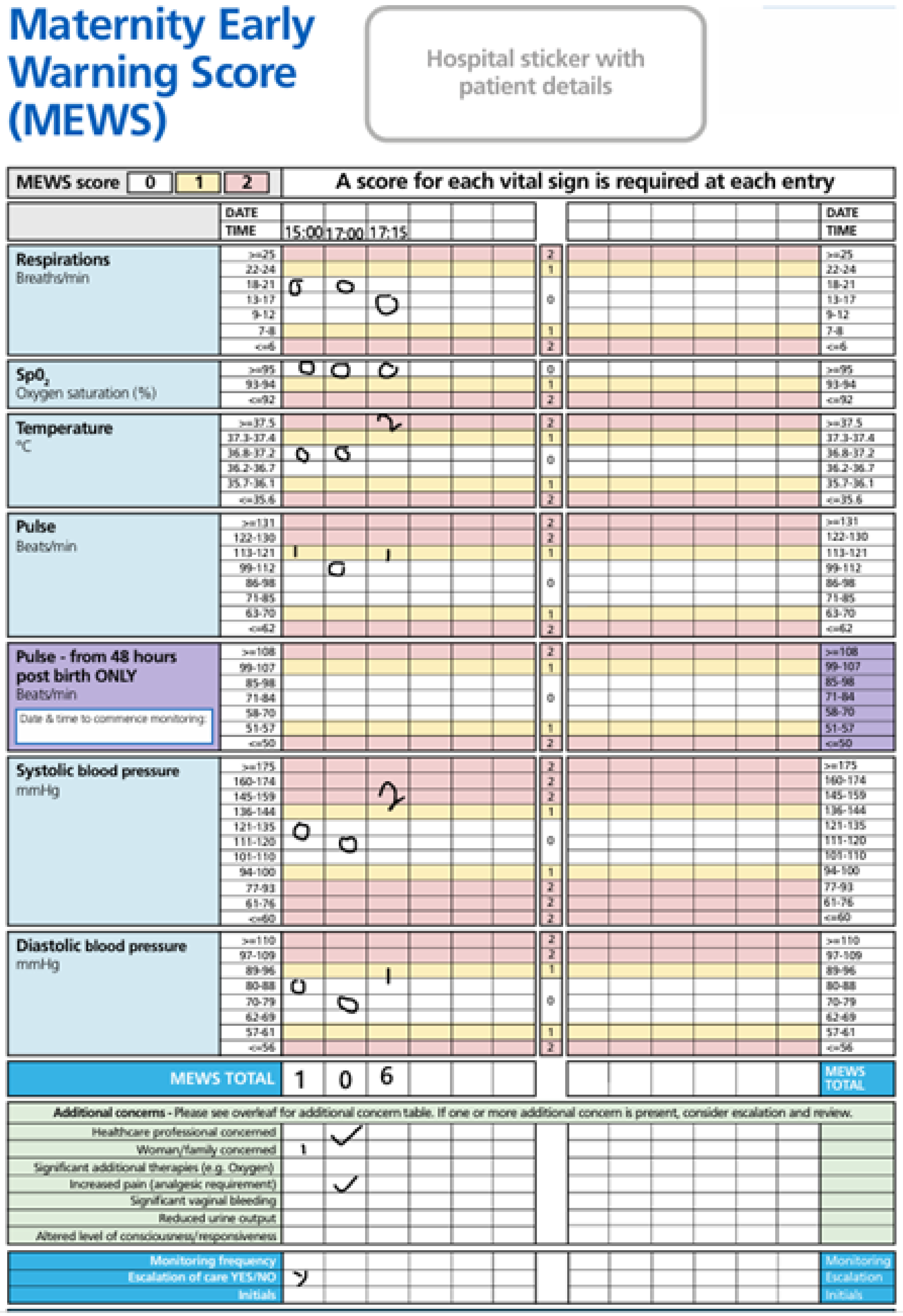
Monitoring frequency			Monitoring
Escalation of care YES/NO	Y		Escalation
Initials			Initials

Third observations

At 5:15pm, observations are repeated and are now scoring 6.

Initial thoughts suggest raised blood pressure due to pain, so further analgesia is administered.

However, the MEWS is 6 with additional concerns of increased pain and healthcare professional concern. Registrar review led to consideration of possible placental abruption and Sarah is escalated for a Consultant review.



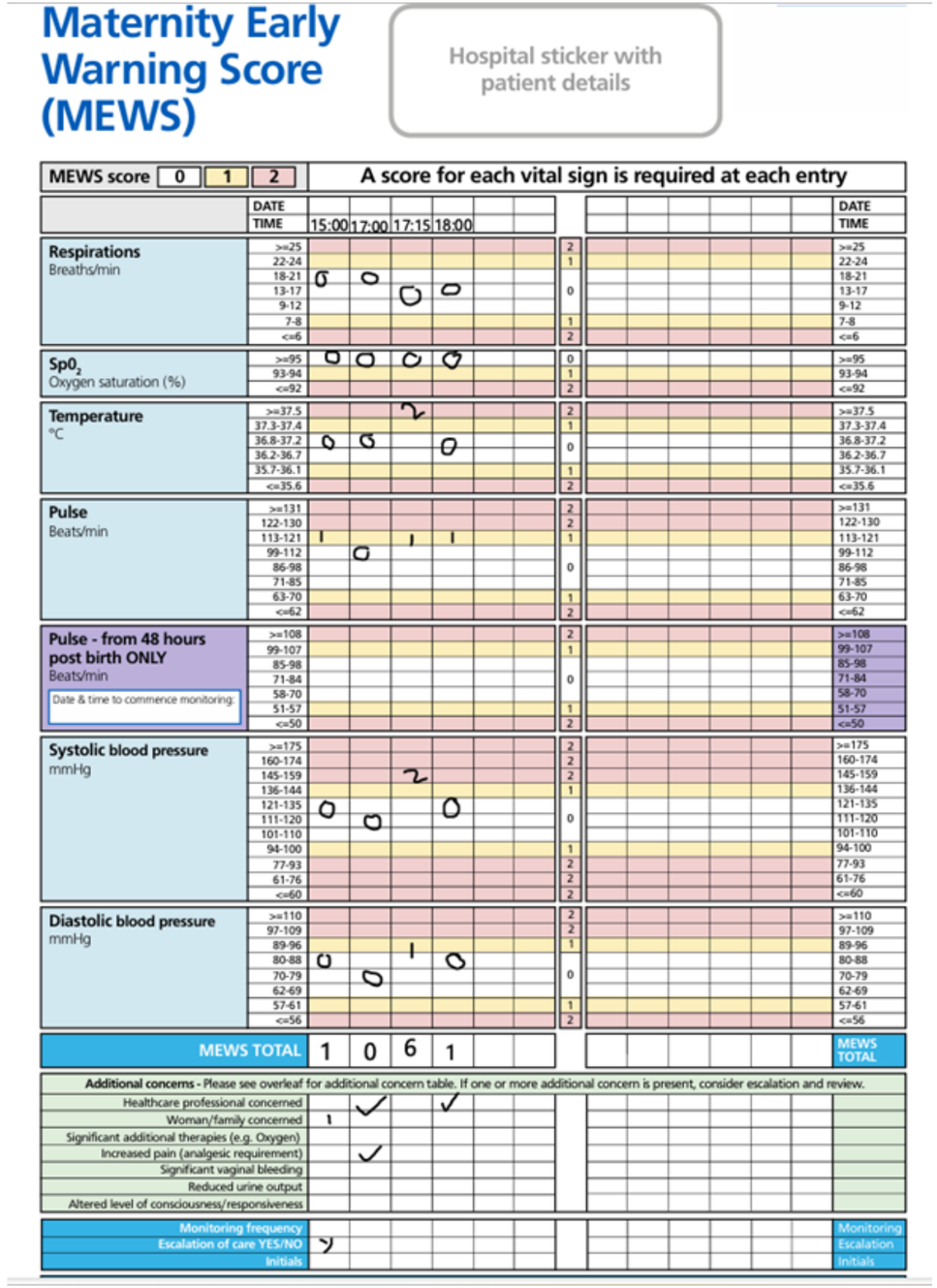
Fourth observations

At 6pm, observations have stabilised and MEWS decreases to 1 but still with **ongoing concern** from the Midwife and Registrar. Consultant review was still requested.

The consultant reviews 15 minutes later which coincides with an antepartum haemorrhage and precipitous delivery of the baby. A partial placental abruption is diagnosed. Sarah continues to bleed after the birth of the baby.

PLAN:

- Prompt fluid resuscitation
- Anaesthetic involvement
- Management of past partum haemorrhage



Maternity Early Warning Score (MEWS)

Hospital sticker with patient details

MEWS score 0 1 2	A score for each vital sign is required at each entry													
	DATE / TIME	15:00	17:00	17:15	18:00									DATE / TIME
Respirations Breaths/min	>=25							2						>=25
	22-24							1						22-24
	18-21	0	0											18-21
	13-17			0	0			0						13-17
	9-12													9-12
	7-8							1						7-8
	<=6							2						<=6
$Sp0_2$ Oxygen saturation (%)	>=95	0	0	0	0			0						>=95
	93-94							1						93-94
	<=92							2						<=92
Temperature °C	>=37.5			2				2						>=37.5
	37.3-37.4							1						37.3-37.4
	36.8-37.2	0	0		0			0						36.8-37.2
	36.2-36.7													36.2-36.7
	35.7-36.1							1						35.7-36.1
	<=35.6							2						<=35.6
Pulse Beats/min	>=131							2						>=131
	122-130							2						122-130
	113-121	1		1	1			1						113-121
	99-112		0											99-112
	86-98							0						86-98
	71-85													71-85
	63-70							1						63-70
	<=62							2						<=62
Pulse - from 48 hours post birth ONLY Beats/min Date & time to commence monitoring:	>=108							2						>=108
	99-107							1						99-107
	85-98													85-98
	71-84							0						71-84
	58-70													58-70
	51-57							1						51-57
	<=50							2						<=50
Systolic blood pressure mmHg	>=175							2						>=175
	160-174							2						160-174
	145-159			2				2						145-159
	136-144							1						136-144
	121-135	0			0									121-135
	111-120		0					0						111-120
	101-110													101-110
	94-100							1						94-100
	77-93							2						77-93
	61-76							2						61-76
	<=60							2						<=60
Diastolic blood pressure mmHg	>=110							2						>=110
	97-109							2						97-109
	89-96							1						89-96
	80-88	0		1	0									80-88
	70-79		0					0						70-79
	62-69													62-69
	57-61							1						57-61
	<=56							2						<=56
MEWS TOTAL		1	0	6	1									MEWS TOTAL
Additional concerns - Please see overleaf for additional concern table. If one or more additional concern is present, consider escalation and review.														
Healthcare professional concerned			✓		✓									
Woman/family concerned		1												
Significant additional therapies (e.g. Oxygen)														
Increased pain (analgesic requirement)			✓											
Significant vaginal bleeding														
Reduced urine output														
Altered level of consciousness/responsiveness														
Monitoring frequency														Monitoring
Escalation of care YES/NO		Y												Escalation
Initials														Initials

Outcome

Senior obstetric staff were already present at the time of the post-partum haemorrhage, enabling early treatment and involvement of the anaesthetic and theatre teams.

Sarah and her baby both made a full recovery.



Conclusion

The new MEWS chart enabled early recognition of deterioration, even when initial scores appeared low or normal.

By prompting escalation through “additional concerns” and encouraging more frequent monitoring, Sarah was in the right place with senior clinicians already at her side when her condition rapidly deteriorated.

Crucially, the previous MEOWS would not have triggered escalation so early, and Sarah might have been discharged or transferred to a ward, delaying recognition of a placental abruption with potentially devastating consequences.



Staff feedback

“I like that it is colour coded with clear information on when to escalate and who to.”

“Limited room for human error, removes guesswork. Gives confidence to escalate especially when senior staff/doctors question why you are concerned.”

“The MEWs chart has been really useful in aiding escalation. It gives a numerical value to clinical signs of concerns and having family and woman's concern is a really important part of this. I have found this, particularly useful in a case when dealing with sepsis. The patient’s family were concerned about the way she was acting and pairing that with clinical signs aided in swift escalation and appropriate review.”

MEWS implementation checklist

Build organisational readiness

- Appoint a clinical lead to drive implementation.
- Establish a multidisciplinary Task and Finish group (obstetric, anaesthetic, midwifery, training leads, critical care).
- Review existing audits and gather staff feedback to identify gaps and readiness for change.

Prepare and plan

- Order new charts and remove old versions (only required if implementing on paper).
- Decide how the chart will integrate with existing documentation (e.g. HDU chart, partogram).
- Agree the scope of your initial rollout (maternity first, expansion later).
- Use multiple communication channels: WhatsApp, newsletters, briefings, trust-wide updates.

MEWS implementation checklist

Train and support staff

- Set a clear training target (e.g. 80% before go-live).
- Deliver blended training: national e-learning + ‘Tea Trolley Training' for on-the-spot support.
- Identify and train ‘champions’ to cascade learning and provide peer support.
- Emphasise clinical judgement and embed a culture of curiosity:

“Not normal until you prove it is normal.”

Monitor and refine

- Begin with weekly audits, moving to monthly once embedded.
- Consider establishing a ‘Deteriorating Mother Group’ to track compliance, accuracy and escalation against the pathway, drive compliance and embed a culture of ‘Curiosity’.
- Share key learning through communication channels and adapt training as needed.
- Report progress through governance structures.
- Capture staff feedback and case stories to support continuous improvement.