NHS
Mid and South Essex
NHS Foundation Trust

H.M Area Coroner
Ms Sonia Hayes
SEAX House
Victoria Road South
Chelmsford
Essex
CM1 1QH

Our Ref: [redacted]

[redacted]

7 February 2025

Dear Ms Hayes

Regulation 28 Report to Prevent Future Deaths- Laura-Jane Seaman

I write further to your Regulation 28 Report to Prevent Future Deaths (PFDR) dated 13th December 2024, relating to the Inquest of Ms Laura-Jane Seaman

We have considered your concerns and set out our formal response to each matter using your numbering as follows.

Matters of Concern

(**1) The acute Trust 72-hour investigation did not identify:**

a. The absence of a contemporaneous Labour Ward medication chart for a patient that was administered medications on the ward.

All Mid and South Essex Hospital NHS Foundation Trust ('MSE') sites have now adopted an electronic prescribing and medication administration (EPMA) platform. EPMA facilitates team members across specialties to record accurately and contemporaneously in one place. The system allows all registered users to clearly see what other medications have been administered and by whom. Staff details are visible against the record so that each interaction is name and date stamped within the patient record. This aides staff communication as it is clear who has been involved in the prescription of medications, and any queries or escalations can be quickly actioned. A new 'e-chart' is automatically started when there is a new patient admission which limits the risk of drug errors and allows for re-evaluation of a patient's medication.

EPMA is used for the prescription of all medications with the exception of variable rate infusions. These remain on paper charts at this time as the platform does not support medicines such as Insulin, magnesium sulphate and oxytocin infusion for augmentation. These are managed under specific variable infusion regimes in response to the patient's clinical condition.

b. Significant omissions in the medical record-keeping and some medications administered were entered into a medication chart from a previous admission in November 2023

Our 72-hour report (Rapid Review) learning response was completed with Multidisciplinary (MDT) input in the immediate days following Laura-Jane's death. Within the scope of the Rapid Review and MDT, the aim was to identify the immediate urgent concerns and contributing factors that led to this tragic outcome. These actions were identified, agreed, and put in place to make immediate improvements and prevent reoccurrence.

The reviewing MDT panel agreed that a much more in-depth investigation was required to fully understand the situation and to draw out any additional concerns and learning. The case was referred to Healthcare Safety Investigation Branch (HSIB) as maternal death meets the criteria for a referral to them. HSIB accepted the referral and undertook the investigation. Terms of reference for this wider investigation are mutually agreed between HSIB and the Trust. (HSIB is now known as Maternity and Newborn Safety Investigations (MNSI).

The division acknowledges that the use of multiple medication charts was not included as a specific line of inquiry at the Rapid Review stage, and it should have been. We have reflected on the MDT meeting undertaken for Laura-Jane's incident and we have made improvements to our processes. We now ensure that patient notes are uploaded as a digital copy in readiness for all MDT meetings so that whether meetings take place in person, online or hybrid, all staff attending have access to review and scrutinise the patient's notes. Therefore, minimising the risk that important factors such as accuracy and quality record keeping are missed.

c. Vital signs for patients on the Labour ward being annotated on a piece of cardiotocograph paper and the absence of required MEWS charts.

Our Rapid Review identified this issue, and several immediate actions were taken including urgent training delivered to staff to increase awareness and improve knowledge of MEWS charts.

These actions included the immediate elimination of photocopied versions to ensure the coloured scoring was working as intended and prompting the expected trigger response in the escalation pathway.

Please see section (2) below for an expanded narrative on how we have improved our use of MEWS charts.

d. Communication issues with Trust staff and sharing of information.

The obstetric, midwifery and anaesthetic teams have yearly Practical Obstetric Multi Professional Training (PROMPT) training sessions as an MDT where they role play emergency scenarios. Since Laura-Jane's death, during PROMPT, the team are taught about the SBAR tool, (Situation, Background, Assessment, Recommendation). Escalation via the use of the SBAR tool is practiced teaching the quality and effectiveness of good communication. SBAR is an easy to remember mechanism to use to frame communications or conversations. It is a structured way of communicating information that requires a response from the receiver. As such, SBAR can be used very effectively to escalate a clinical problem that requires immediate attention, or to facilitate efficient handover of patients between clinicians or clinical teams.

In May 2023, the maternity education team facilitated an SBAR awareness week which focused on using the SBAR tool in a variety of scenarios to demonstrate effective communication. It is planned to revisit this topic as part of the 'awareness week' programme this year.

As part of the Each Baby Counts initiative, the maternity service is launching the Royal College of Obstetricians and Gynaecologists' (RCOG) 'Escalation Toolkit' in February 2025. This toolkit is designed to enhance escalation and improve patient safety and consists of three key components:

1. The AID (Advice Inform Do) mnemonic: A structured approach to frame escalation, followed by the use of SBAR.
2. The Teach or Treat Strategy: Encourages open discussions when there is a conflict in clinical opinion, ensuring a collaborative approach to decision-making.
3. Team of the Shift at handovers / huddle: Simplifies the escalation process and fosters a culture of psychological safety within the team.

The toolkit aims to help staff get the response they need by using safety-critical language to initiate and frame the conversation. This is followed by the usual SBAR process.

Effective clinical escalation is vital for patient safety, requiring clear and concise communication with the right person at the right time. The goal is to clearly signal that escalation is happening, prompt a timely response, assist senior staff with prioritisation, and empower junior staff in their decision-making.

When escalating, staff will be trained to use the safety-critical language from the RCOG framework. This language forms the AID tool and should headline SBAR communication.

- "I am asking for ADVICE."
- "I am INFORMING you."
- "I need you to (DO).

We will continue with this work and monitor compliance with the expected standards by audit.

e. Lack of compliance with national guidance and training

Trust guidelines are reviewed every three years and benchmarked against national guidance.

The maternity specific training programme is reviewed annually, and obstetric emergency training uses / follows the PROMPT Maternity Foundation resources. In addition, it uses local incidents for learning and follows the CCFV2 (Core Competency Framework version 2) as well as meeting the targets for SBLCB (Saving Babies Lives Care Bundle) and CNST action 8.

Training compliance 01/11/21 until 31/10/22 for obstetric emergencies was at 85% for Midwives. Since this incident, compliance with all mandatory training for Midwives has remained 90-95%.

f. Absence of contemporaneous blood testing results for Laura-Jane as a patient at high risk of post-partum haemorrhage in labour taken at:

i. 00:40 hours for cross matching, and
ii. urgent blood tests taken at approximately 04:45 for a deteriorating patient.

Our Rapid Review included the documentation and results that were available for Laura-Jane at the time. The team recognise that it was not identified at the time that some results were missing. As part of an initial review of an incident, all blood results are now considered as part of the MDT process.

Since August 2024, the maternity unit at Broomfield hospital has begun the implementation of a new obstetric bleeding strategy. The strategy works alongside current PROMPT recommendations of managing a postpartum haemorrhage already in place at the maternity unit.

The strategy is part of the Obstetric Bleeding Study UK (OBS UK) study and follows on from the Welsh study (OBS Cymru) where compliant hospitals have shown an increased compliance with the completion of bleeding risk assessments and quantitative blood loss measurements; a decrease in the need for red blood cell and fresh frozen plasma transfusions and decreased Major Obstetric Haemorrhages (MOH).

The strategy includes a four-part care bundle:

1. Risk assessing every birthing person's bleeding risk and continually reassessing throughout,
2. Real-time measurement of blood loss from the point of delivery,

3. Consistent approach to managing excess bleeding and involving more senior clinicians at specified timescales,
4. Bedside tests to rapidly identify and treat abnormal clotting.

Every patient is given an OBS UK proforma at the point of admission (induction, labour, elective caesarean) and a risk assessment is completed. If the patient was to sustain a postpartum haemorrhage the clinicians would progress through the stages of the proforma and follow the prompts.

At the point of 1litre blood loss with ongoing bleeding the patient will be offered a blood test for a venous blood gas, Thromboelastogram (TEG), FBC, G&S (if not already complete and in date) and coagulation sample +/- U&Es & LFTS depending on clinical situation. These samples can be repeated every 500mls after 1 litre to guide the clinicians as to what blood products are required.

The TEG and VBG are rapid tests which will have results available usually within 10 minutes with the laboratory sample used as confirmation due to not being as rapid. The result is discussed with the team and the algorithm followed to administer blood products if required.

An additional benefit to the study is the introduction of Fibrinogen concentrate to rapidly infuse a patient to clot the blood and reduce further loss. This is an alternative to cryoprecipitate which takes additional time to thaw and be transported to maternity from the laboratory but can also be used within the study if required. Once the patient is stable the Post Partum Haemorrhage (PPH) post event checklist is completed to provide a plan of care for the patient postnatally.

Due to the large scale of the strategy, the time taken to implement it has been inbuilt into the study and the first nine months from 1 August 2024 till 30 April 2025 is to be used as an implementation phase. This phase is provided to allow sites time to train and adopt the study without expecting 100% compliance straight away.

To date, we have 91% training compliance of our target group of clinicians which is being reassessed after a new rotation of staff to ensure we remain above 90%. To assess our compliance of the strategy audits (first 30 consecutive births) and case note reviews (first ten consecutive births with 1litre loss or more) are undertaken at month one, four, seven and ten after the start of the study. Due to training of staff and development of a standard operating procedure (attached) taking a number of months the strategy did not commence till 21st November 2024 with the last few months taken to drive the uptake of the bundle. To reflect this, the service undertook an additional audit in January which showed a 75% compliance across the board for risk assessments, measured blood loss and appropriate TEG testing. The service leads are continually reassessing with the local MDT and national teams for ways to improve the adoption of the strategy.

In addition to implementing and auditing the strategy compliance, the research team have been monitoring all postpartum haemorrhage cases for birthing people who lose over 1.5 litres and/or require a transfusion due to PPH since 1st February 2024. This includes, but is not limited to; blood results, length of hospital stays, maternal and neonatal death, blood products given, contributions to PPH and actions taken. This data is fed back to the national study team and discussed with the local risk governance team during our obstetric haemorrhage reviews to collaborate on learning we can disseminate to staff.

g. Lack of compliance with the triggering of the major haemorrhage protocol

Although this concern was not specifically drawn out in the initial Rapid Review, the HSIB report highlighted this as a safety action which has now been addressed through education, training, and the amendment of local guidance.

Following training and teaching there has been a significant increase in the utilisation of the MOH call. Latest figures (December 2024) demonstrated 83% compliance. This is monitored every month, and any issues addressed. The majority of MOHs occur in the theatre situation – namely during Caesarean Section. There is therefore anaesthetic and obstetric presence to manage the clinical situation, however acknowledgement has been given that putting out MOH calls to lab staff which means a timelier response can occur if blood products are required. In the majority of cases blood products are not required.

(2) Laura-Jane was not escalated for hours as a deteriorating patient in accordance with training and national guidance including PROMPT training, or the Royal College of Obstetricians and Gynaecologists Maternal Collapse in Pregnancy and Puerperium (RCOG)Green-top Guideline No.56. The maternal collapse was categorised as a "Faint" by Trust staff and Laura-Jane was treated for potential dehydration (with no apparent risk factors) and administered medication that had only a transient effect.

The service identified these issues in the initial review of the incident. Since Laura-Jane's death there has been an implementation of a new MEWS package with escalation policy. This includes the trigger response/medical emergency team once a score of 7 or above is reached.

MEWS is a documentation tool designed to allow early recognition of physical deterioration in childbearing women by monitoring their physiological observations and allow for escalation when concerns arise. Serious adverse events such as cardiac arrest are frequently preceded by changes in physiological parameters and recognising and escalating a deteriorating patient has been shown to have a positive impact on morbidity and mortality. The aim of implementing the MEWS package was to improve our documentation, management, and patient safety outcomes within our maternity services.

Maternity now has good compliance with plotting observations on a MEWS chart and escalating appropriately – this compliance is closely audited and monitored.

Our post-incident review actions are set out chronologically below.

1) In January 2023, the education team took bite size learning to the ward on MEWS, followed by posters, shared learning by emails, they additionally included MEWS and escalation in all PROMPT sessions monthly. PROMPT training is delivered in protected time outside of clinical duties. The bite size education was delivered Monday to Friday by the education team during ward rounds with cascade training delivered by the ward matrons and managers. Regular audits occurred and findings were shared, and actions taken where appropriate. There was increased availability of MEWS charts, verbal information, posters, and emails. The 2023 Maternity training programme additionally included escalation, SBAR and communication.

2) In March 2023, the service signed up to an East of England national pilot towards the implementation of the MEWS chart. The project received oversight and contribution from our Obstetrics Consultant Lead, Consultant Midwife, Inpatient Matron and Clinical Skills Facilitator.

3) By June 2023, the education team completed further face to face bite size teaching following audit of the MEWS charts and additionally shared this learning by email. Teaching took place on escalation pathways, completion of observation charts and scoring during PROMPT sessions with ward support.

4) In August 2023, the pathways for escalation were clarified and the team shared learning and commenced formal referral to the 'Trigger response team' with a MEWS score of 7, with consideration of Trigger response if a MEWS score reached 5. In addition, all documentation for inpatients was changed to reflect the same.

5) By October 2023, the service was planning to change to National MEWS and training commenced in January 2024. National MEWS went live on wards on 18th March 2024. All forms and documents were adapted with the new escalation pathway, and further ward support was provided.

6) National MEWS have a standardised escalation policy to follow, this includes involvement locally of the trigger response team as well as clear actions to take based on the MEWS score. This is audited as part of the MEWS audit, and we are demonstrating good compliance. Escalation is taught in mandatory training and several verbal and written memos have been distributed to staff. This audit remains ongoing and is being closely monitored within the service by the Head of Midwifery, audit team, Quality Improvement Manager, and Inpatient Matron.

7) An ‘unwell woman’ simulation based on antepartum and postpartum haemorrhage including uterine rupture, abruption, and Vasa Previa, as well as a separate simulation on an anaphylaxis scenario was included in the 2023 PROMPT maternity training for all staff in addition to Human factors training, teamwork, situational awareness, and escalation.

8) Maternal collapse was taught to all staff in the annual PROMPT training of 2024 as deteriorating patient with a focus on recognising signs of an unwell patient, considering differential diagnoses and escalating appropriately. Obstetric and midwifery staff attend protected mandatory PROMPT training yearly.

9) Focus on PPH management was taught in PROMPT throughout 2024. The Trust uses the standard guides produced by PROMPT which cover signs of hypovolemia but do not directly address covert bleeding. Amendments were made to this programme at Broomfield and all MSE sites following Laura-Jane’s death. This now includes signs of covert bleeding, initiating the 2222 MOH call, escalation and recognising deterioration including the signs and treatment of hypovolemia.

10) In 2023 and 2024, live drills were conducted on the wards regularly and feedback and learning were shared with all staff following. Live drills are scenario based simulated skills sessions that take place in clinical areas. Staff are not made aware in advance that they are attending a simulated drill to gain the reaction and action required in dealing with obstetric emergencies. In August 2024, the service delivered a deterioration awareness week where different themes were shared, and learning distributed to all staff.

Planned training for PROMPT 2025 includes a deteriorating patient with differential diagnoses and escalation as a simulated drill and additionally teaching sessions on the RCOG escalation tool kit and live ward drills are also planned. The RCOG escalation toolkit will go live on 24th February 2025.

Since January 2023, six midwives have attended the Anglia Ruskin University ‘Care of the Critically Unwell Woman’ workshop. Three midwives attended the Maternity HDU course at Kings College London in May 2024.

Each year midwives will be given the opportunity to apply for places on these courses to build the number of staff with this specialist skill.

(3) The administration of Metaraminol on the Labour Ward is rare for a mother who had an uneventful delivery and did not prompt a critical care review with a background of deranged vital signs

As explained in point (2) above, we have now implemented the MEWS package with escalation policy which includes a trigger response/medical emergency team once a

score of 7 or above is reached. This change has allowed for rapid critical care involvement in cases where it has been needed and improved the working relationship and communication between critical care and maternity services, with shared language and clearly defined expectations prescribed within the tool.

The administration of Metaraminol is an appropriate treatment given to someone who is hypotensive. It is not necessarily a marker of how unwell a patient is - a patient may transiently become hypotensive for example following a regional anaesthetic technique (epidural for example) or rapid infusion of IV paracetamol. Its repeated use (because of transient response to the medication) would indicate a problem that needs further investigation and definitive treatment. Therefore, Metaraminol's repeated use should trigger a review by a senior anaesthetic and/or intensive care doctor.

Consequently, where Metaraminol is administered and there is only a transient response, further clinical assessment must be undertaken by an appropriately trained anaesthetic and/or intensive care doctor. In this case the medical team agree that a review by critical care should have taken place

With regard to assessment by a suitably trained doctor, this is found in the GPAS (Guidelines for the provision of anaesthetic services) document from the Royal College of Anaesthetists (RCoA) and the Curriculum for CCT in anaesthetics from the RCoA.

(4) There was a focus by midwifery staff on per vaginal bleeding and the hypovolemia was not recognised. The PROMPT training guidance contains illustrations by way of photographs to assist with the assessment of blood loss that focuses on per vaginal bleeding. Covert bleeding is referred to in the context of hypovolemia in a separate place on one line. Covert bleeding is not referred to in the Trust Drills & Skills Booklet.

PROMPT stopped producing books for candidates and the last edition was printed in 2019. The booklet provided to staff was a summary of the current algorithms that are provided in the 2021 and 2022 online PROMPT packages.

The Trust used the standard guidance produced by PROMPT which cover signs of hypovolemia but do not directly address covert bleeding. We recognise that bleeding may be covert, and we have adapted the mandatory training and skills and drills sessions to reflect this as explained above. Training has focused on recognising signs of concealed bleeding and what action to take if these symptoms are present.

Training has been delivered in multiple ways on this topic including yearly mandatory sessions, verbal teaching, live drills on the ward, dissemination of written information and in sharing learning from incidents.

(5) Laura-Jane informed clinical professionals she thought she was haemorrhaging and that she was going to die in a background picture of maternal collapse and prolonged deranged vital signs. This did not trigger Consultant obstetric review, 2222 alert or referral to the critical care outreach team.

The service recognises the failure to recognise how seriously unwell Laura-Jane was and the delay in calling for immediate help. Training has now been embedded to aid this recognition as described in the narrative response above for points two and four. Staff have now been extensively trained on when to escalate and who to contact and this information is now readily available and easy to access.

In Laura-Jane's case, although MEWS charts were available for use, it was found that not all staff used these consistently or correctly to record maternal observations. This led to significant delays in Laura-Jane receiving the care she required. Broomfield maternity have now adopted a new maternal observation chart known as the national MEWS. This chart is now mandatory for use for all maternity inpatients. The national MEWS escalation policy also includes referral to the trigger response (critical care) team. The new MEWS charts also include an additional trigger if the patient has concerns, which increases the score and level of review or escalation required.

In the event of a similar deterioration and concealed bleed in the future the Consultant under this guidance, and with the above actions in place, would be alerted for a much earlier attendance.

(6) The Trust Executive Review Group ("ERG") Report was not shared with the Trust Director of Midwifery or the Head of Midwifery at Broomfield Hospital who did not agree with the ERG conclusions that:

'The absence of escalation to an obstetric consultant was discussed and noted that the team escalated to an anaesthetist, which is usual practice in an obstetric emergency (putting out a call to the medical emergency team would not be common practice).'

'The possible reasons why the bleeding was not identified were discussed and it was noted that in maternity cases the absence of vaginal bleeding and with no signs of uterine rupture it would be unlikely that the team would have considered bleeding as a cause of deterioration.' and gave evidence that this is not in accordance with good clinical practice or national guidelines and training.

Following the conclusion of the Inquest, a reflective learning exercise was completed by senior colleagues in the service to understand the extent to which the incident investigation was shared within the team. We identified that there were opportunities to improve how complex cases such as this one are shared with colleagues as versions are edited and finalised.

We have a new leadership model, and the Director of Midwifery now attends all MDT meetings to ensure senior oversight for all cases. We are confident that all cases have senior oversight from start to finish, and all final versions are being shared appropriately.

Following the Inquest, we have adapted our process for incidents presented at Patient Safety Incident Review Group (PSIRG). We now have a failsafe to share the post meeting

version of the document, including the decision sheet to the Senior Leadership Team and Governance Lead for the Site or Service presenting, this is in addition to the document being available within the Datix Risk Management System. Therefore, the possibility that an incident report is not shared with the appropriate staff is remote.

Significant improvements and training have taken place as described in sections 3,4 and 5 above to make sure that staff are competent to recognise when escalation is required, and clarity about to whom they should escalate.

[7 & 8 were not included in the PFDR, and the Coroner's officer has confirmed this was a numbering error]

(9) Staff skill mix for doctors on the Labour Ward for the night of 20/21 December was staffed with a junior obstetric registrar with a newly qualified colleague in his first week and a junior anaesthetist, all with limited experience of working on the Labour Ward.

The RCOG considers documentary evidence of signed-off competency as a senior registrar. This is in relation to specific cases described in RCOG documents of 'Roles and responsibilities of the consultant providing acute care in obstetrics and gynaecology.'

We now have a new rota system in place where the required staffing establishment must include a junior registrar paired with a senior registrar. The junior then has a point of escalation to ensure that any MEWS score of four or above is escalated to the senior registrar and onto the Consultant.

The SHO role is subject to a supervision period to ensure that they are competent to manage the busy environment and understand their routes of escalation and support. If the junior/senior mix is not achievable due to staffing issues the rota coordinator will provide the detail to the Consultant on call to assess the risk and make appropriate plans at handover.

If the skill mix is not possible to achieve due to a longer-term issue for example due to sickness, the rota coordinator will provide the detail of the skill mix of the staff available to the clinical lead who will make the decisions on how to safely staff the rota and what mitigations will be in place.

(10) Quality of communication and handovers between Trust staff key information was omitted in handovers between staff at all levels including when Laura-Jane was taken to theatre as a medical emergency.

We have taken action to improve communication across our teams, we have included this within our response to point 1(d) above.

(11) Therapeutic anticoagulation was administered without consultant obstetric input, further medical review, or imaging where there had been hours of deranged vital signs that were inconsistent potential complications for pulmonary embolism.

Staff focused on the signs and symptoms of hypovolemia (both overt and covert) and how to manage and treat. The new MEWS score has an escalation policy which requires the involvement of an obstetric consultant when the score reaches 5 and above. This can be escalated prior to this point if a response has not been achieved within an acceptable time for lower scoring trigger.

In Laura-Jane's case the MEWS score was not completed, and so no formal escalation policy was followed. Staff have since had extensive training on completing MEWS charts and following the MEWS escalation and this is audited demonstrating good compliance. The investigation found that Laura-Jane was given the wrong diagnosis, and this was in part due to failure to recognise signs of concealed bleeding.

As set out above, there has been further training and education in identifying the deteriorating patient/woman and is now embedded within PROMPT, induction of new staff and local training sessions. The MEWS scores are discussed, and concerns raised at the daily huddles and handovers.

(12) No accounts were taken from Haematology, or the blood lab team involved with this massive haemorrhage by the Trust or the HSIB (who investigated this case) where massive amounts of blood products were prepared, dispensed, and then administered where the timings and sharing of information were important to understand.

The service acknowledges that Haematology was not involved in the initial Rapid Review, and they should have been.

The service now has an improved working relationship with haematology, critical care, and anaesthetics with regular attendance from these specialties where indicated. The Risk and Governance team now have a dedicated ITU consultant involved in reviewing any complex maternal care.

The haematology service was disappointed not to be involved in the HSIB investigation. The draft HSIB report was not shared widely enough to capture a response from the haematology staff involved in the event with the assumption that the haematology staff were actively involved in HSIB investigation and aware of the draft report. The Trust is unable to comment why HSIB did not involve Haematology in their investigation.

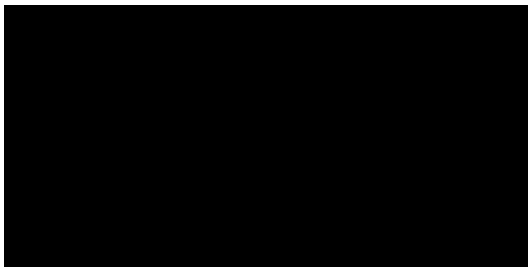
We have now renewed and improved our processes regarding MNSI investigations. The revised processes ensures that all staff involved in the incident are shared the draft report to facilitate the opportunity to comment for factual accuracy and for these comments to be shared with MNSI.

During the period of factual accuracy checking, a meeting is arranged by the Maternity Governance Team, where the Corporate Patient Safety team are invited to attend. This meeting facilitates an MDT review of the draft report for factual accuracy, builds a mechanism to ensure all staff groups have been shared the report and to collate comments for onward sharing to MNSI. It is recognised that if the process now in place was instigated when the draft HSIB report for Laura-Jane was shared with the Trust, there would have been an opportunity to have detected the concerns from haematology.

Our teams have reflected deeply on Laura-Jane's experience as evidenced by the extensive changes and improvements set out above. We hope that these actions will assure the Court we have made significant changes to our practice, and we are committed to ongoing learning from this very tragic case.

If I can assist further with these matters, please do not hesitate to contact me.

Yours sincerely



Chief Executive
Mid and South Essex NHS Foundation Trust