Regulation 28: REPORT TO PREVENT FUTURE DEATHS

NOTE: This form is to be used **after** an inquest.

	REGULATION 28 REPORT TO PREVENT DEATHS **THIS REPORT IS BEING SENT TO:** **National Institute for Health and Care Excellence (NICE)** **British Society for Haematology (BSH)** **NHS England**
1	**CORONER** I am Elizabeth GRAY, Area Coroner for the coroner area of Cambridgeshire and Peterborough
2	**CORONER'S LEGAL POWERS** I make this report under paragraph 7, Schedule 5, of the Coroners and Justice Act 2009 and regulations 28 and 29 of the Coroners (Investigations) Regulations 2013.
3	**INVESTIGATION and INQUEST** On 27 June 2022 I commenced an investigation into the death of Amelia Alexandra Anuszka RIDOUT aged 6. The investigation concluded at the end of the inquest on 21 March 2024. The conclusion of the inquest was that: Amelia Ridout underwent a bilateral bone marrow aspirate and trephine procedure at Addenbrookes Hospital on 16th June 2022 following a diagnosis of pancytopenia. A bilateral bone marrow aspirate and trephine procedure was carried out by a Paediatric Oncology Specialist Doctor whose understanding at the time was that Amelia Ridout's differential diagnosis still included the possibility of a solid cancer which would require a bilateral bone marrow aspirate and trephine procedure to ensure accurate diagnosis. The Senior Clinical Fellow in Paediatric Haematology who had asked for the bone marrow aspirate and trephine procedure to proceed had not specified whether the bone marrow aspirate and trephine procedure was to be a unilateral or bilateral procedure. The bone marrow aspirate and trephine procedure was carried out under general anaesthetic with a Consultant Anaesthetist in attendance. Amelia Ridout was positioned on her left side for the bone marrow aspirate and trephine procedure. The right sided bone marrow aspirate and trephine procedure was completed. Following the completion of the left sided bone marrow aspirate and trephine procedure the Paediatric Oncology Speciality Doctor carrying out the bone marrow aspirate and trephine procedure noted a spurt of blood on removal of the trephine needle and queried the sample extracted. The supervising Consultant Haematologist was called in to review and confirmed that there was no signs to raise concern and that the bone marrow aspirate and trephine procedure should be concluded. Amelia Ridout remained positioned on her left side for the bone marrow aspirate and trephine procedure in line with the training and practise adopted by the Paediatric Oncology Specialist Doctor. Shortly after the conclusion of the left sided bone marrow aspirate and trephine procedure at 11.32am, Amelia Ridout started to decompensate and rapidly went into Pulseless Electrical Activity arrest (PEA arrest). Full Advanced Paediatric Life Saving procedures were commenced. The paediatric resuscitation team attended promptly, the on call Paediatric Surgeon was alerted and it was rapidly established and agreed based on Amelia Ridout's differential diagnosis that Amelia Ridout was suffering an internal bleed as a result of the bone marrow aspirate and trephine procedure which needed to be dealt with through surgical intervention as a priority. The clinical team arranged for an operating theatre to be made available as a matter of

	emergency, a vascular surgeon was requested to attend and interventional radiological solutions were explored and excluded. AR's resuscitation and stabilisation, continued and she was transferred to an operating theatre at 13.05. Amelia Ridout was prepared for an emergency laparotomy by the Anaesthetic team. Central Venous lines and arterial access were sited by the Anaesthetic team,to allow them the ability to provide life saving resuscitation to Amelia Ridout inter-operatively. On arrival at the Operating Theatre, Amelia Ridout was relatively stable as a result of the continued resuscitation efforts. The clinical team managing the emergency laparotomy anticipated that invasive surgery could lead to a rapid destabilisation in Amelia Ridout's condition. Shortly after the start of Amelia Ridout's surgery, Amelia Ridout went into PEA arrest and needed chest compressions. The surgical team continued to treat Amelia Ridout's internal injury and identified a defect in the anterior arterial wall of the external iliac artery, the appearances of which were consistent with the anticipated needle injury caused by the bone marrow aspirate and trephine procedure. Amelia Ridout's condition continued to deteriorate despite continued resuscitation efforts. The clinical team took the decision that continued efforts would be futile and Amelia Ridout was declared deceased.
4	**CIRCUMSTANCES OF THE DEATH** 6-year-old girl with suspected aplastic anaemia attended the paediatric day unit on 16th June for a minor surgical procedure under general anaesthetic (a bone marrow aspirate and trephine). During the procedure, the trephine needle accidentally penetrated through the pelvic bone and pierced the iliac vessels causing massive, catastrophic bleeding internally. Following prolonged resuscitation, she was transferred to theatre under paediatric and vascular surgical teams, but the bleeding could not be stopped, and after further prolonged resuscitation attempts, she died in theatre.
5	**CORONER'S CONCERNS** During the course of the investigation my inquiries revealed matters giving rise to concern. In my opinion there is a risk that future deaths could occur unless action is taken. In the circumstances it is my statutory duty to report to you. The **MATTERS OF CONCERN** are as follows: (brief summary of matters of concern) To consider the development and publication of a national guidelines and standard operating procedure for the carrying out of Bone Marrow Aspirate (BMA) and trephine biopsy to include recommended methodology. To consider the development of a data base to record these procedures and their outcomes.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you (and/or your organisation) have the power to take such action.
7	**YOUR RESPONSE** You are under a duty to respond to this report within 56 days of the date of this report, namely by April 08, 2025. I, the coroner, may extend the period. Your response must contain details of action taken or proposed to be taken, setting out the timetable for action. Otherwise, you must explain why no action is proposed.
8	**COPIES and PUBLICATION** I have sent a copy of my report to the Chief Coroner and to the following Interested Persons;

	1. [redacted] (Father) 2. [redacted] (Mother) c/o [redacted], Solicitor from Legal Solutions Partnership 3. Addenbrookes Hospital I am also under a duty to send a copy of your response to the Chief Coroner and all interested persons who in my opinion should receive it. I may also send a copy of your response to any person who I believe may find it useful or of interest. The Chief Coroner may publish either or both in a complete or redacted or summary form. He may send a copy of this report to any person who he believes may find it useful or of interest. You may make representations to me, the coroner, at the time of your response about the release or the publication of your response by the Chief Coroner.
9	**Dated: 11/02/2025** Elizabeth A. C Gray **Elizabeth GRAY** **Area Coroner for** **Cambridgeshire and Peterborough**