



Record of Inquest

Following an Investigation commenced on the **11 October 2023**;

And an Inquest opened on the **09 December 2024**;

And an Inquest hearing at **Liverpool & Wirral Coroner's Court - Court 1, Gerard Majella Courthouse, Boundary Street, Liverpool, Merseyside** on the **18 December 2024**, heard before **Helen RIMMER**, in the said coroner's area.

The following is the record of the inquest (including the statutory determination and, where required findings) –

1. Name of the deceased (if known)
Eleanor Hazel ALDRED-OWEN

2. Medical cause of death:

I(a) **Severe Hypoxic-Ischaemic Encephalopathy (with coning)**

(b) **Cardio-respiratory arrest**

(c) **Right-tension Pneumothorax**

(d)

II

3. How, when and where, and for investigations where section 5(2) of the Coroners and Justice Act 2009 applies, in what circumstances, the deceased came by his or her death:
Eleanor Hazel Aldred-Owen was a 1 year old girl with a medical history of bicoronal synostosis. Eleanor was admitted to Alder Hey Children's Hospital for elective craniofacial surgery. Eleanor had no associated medical problems or genetic abnormalities and was otherwise well. Eleanor went to theatre on 29th September 2023 under the care of the craniofacial team. The procedure (fronto-occipital advancement and remodelling) was uneventful except that Eleanor's tracheal tube dislodged toward the end of the procedure but she was re-intubated uneventfully. Tube dislodgement is a known, albeit rare, complication of surgery, but more common in surgeries such as the one performed on Eleanor. Eleanor spent time in recovery when it was noted that she was tachycardic. Whilst this was expected following surgery, her persistent tachycardia was higher than acceptable and she appeared pale. Blood gases were taken to assess Eleanor's haemoglobin levels, which were not concerning, but other abnormalities in the test results were not reviewed. Eleanor was returned to the ward at around 18:26 hours, despite the discharge from recovery criteria not having been met in that Eleanor's observations were not in line with the normal or expected parameters for Eleanor, the cause of the persistent tachycardia had not been identified. Further investigations and clinical examination were not undertaken prior to Eleanor returning to the ward, this being a basic part of the medical attention and treatment Eleanor required at that time. On admission to the ward Eleanor's Paediatric Early Warning Score did not include a score for parental concern regarding Eleanor's breathing and colour, as a result an appropriate and timely clinical review and assessment of Eleanor was not triggered. At 18:50 hours a review was undertaken of Eleanor, it was advised that AIRVO oxygenation be provided to Eleanor if required, there was no record of this review. Eleanor was heard grunting at 19:15 hours and AIRVO was requested. No prescription for AIRVO was in place in accordance with the hospital policy. A full medical review was not completed and a documented treatment plan was not implemented before commencing AIRVO. It is unlikely that AIRVO caused the pneumothorax but it is more likely than not that it contributed toward the progression of the pneumothorax to a tension pneumothorax. Over a period of several hours Eleanor deteriorated with increased work of breathing and respiratory distress. No basic observations or a Paediatric Early Warning Score were recorded at 20:00 hours in accordance with the hospital's policy, this is fundamental basic care and information, which more likely than not would have led to a clinical escalation and review of Eleanor's condition at that time. At 21:00 hours the response team attended to look at the AIRVO machine as it was alarming, this was rectified but it was noticed that Eleanor was increasingly unwell. A full clinical assessment was requested, the first since Eleanor had returned from theatre. Observations recorded at 21:07 hours did not reflect Eleanor's increase effort in breathing or parental and nurse concern in relation to Eleanor's heart rate. Ward staff were advised to contact the surgeons for a review, a plan was agreed for an

urgent portable chest x-ray, blood transfusion and continuous observation monitoring. The chest x-ray was ordered at 22:03 hours and was performed at 22:18 hours. The chest x-ray was grossly abnormal but this was not raised or concerns escalated with any of the medical or nursing staff on the ward. The x-ray was not reviewed until 22:40 hours. This is basic, critical care and treatment that should have been undertaken. It is more likely than not that had the abnormal chest x-ray been escalated earlier, the right tension pneumothorax would have been identified and treated and Eleanor would have had a greater chance of survival. Not to have provided this basic care is a gross failure which has, more likely than not, hastened Eleanor's death. At 22:25 hours Eleanor's Paediatric Early Warning Score had increased to 8, as Eleanor had recently been reviewed and a plan agreed and implemented, she was not reviewed at this time. The deterioration in Eleanor's condition was not escalated in accordance with the hospital's policy and it was not recognised that Eleanor was now in peri-arrest and required an immediate clinical review. This is basic, critical care and treatment that should have been undertaken, not to have provided this basic care is a gross failure which has more likely than not hastened Eleanor's death. Sadly, at 22:35 hours Eleanor collapsed and suffered a cardiac arrest. At 22:36 hours a cardiac arrest call was put out for Eleanor and she required full resuscitation over the course of a 20-minute period. The cardiac arrest response team were initially unaware of the grossly abnormal chest x-ray and the presence of a right tension pneumothorax. The requester of the x-ray was bleeped to urgently review the x-ray at 22:40 hours. The requester of the x-ray received a bleep to attend a major haemorrhage on Eleanor's ward, they had not received the cardiac arrest call. There was a period of approximately 30 minutes between the x-ray being taken at 22:18 hours and bilateral needle decompression being performed at 22:48 hours, effective resuscitation was unlikely to have occurred until the bilateral needle decompression was performed on Eleanor, this delay in the decompression being performed more likely than not contributed to the subsequent ischaemia suffered by Eleanor. There was a return of spontaneous circulation at 22:56 hours. Eleanor was then transferred to the Paediatric Intensive Care Unit at 23:35 hours for ongoing management and neuroprotective measures. An MRI scan was performed on 30th September 2023, which demonstrated some changes including in the basal ganglia, caudate nuclei and thalami. Over the course of 1st October 2023, Eleanor became progressively less stable having had an episode of supraventricular tachycardia and then became hypertensive, tachycardic with abnormal pupillary reaction. An urgent CT head scan was obtained which sadly showed catastrophic hypoxic-ischaemic change with evidence of coning. Eleanor passed away peacefully in the arms of her parents on 2nd October 2023 at 20:25 hours. It is more likely than not that Eleanor developed a pneumothorax as a result of the surgery performed. This pneumothorax was not promptly recognised, and therefore not promptly treated. There were a number of missed opportunities for the hospital to have identified, escalated and treated the pneumothorax. The appropriate treatment for Eleanor's pneumothorax was to insert a chest drain but because the pneumothorax was not recognised, this treatment was not provided. The failure to insert a chest drain prior to Eleanor's cardiac arrest represented a failure to render care that would more likely than not have prevented her death. Having identified specific gross failures which clearly amount to neglect, it is also found that the accumulation of the catalogue of missed opportunities throughout the care and treatment of Eleanor by those involved in her care, namely the acts and omissions mentioned above, have as a whole also amounted to neglect.

4. Conclusions of the coroner/jury as to the death:
Misadventure contributed to by neglect
5. Further particulars required by the Births and Deaths registration Act 1953 to be registered concerning the death:

1. Date and place of birth: 28 December 2021 Wrexham	
2. Name and Surname of deceased: Eleanor Hazel ALDRED-OWEN	
3. Sex: Female	4. Maiden surname of woman who has married:
5. Date and place of death: 02 October 2023 Alder Hey Childrens NHS Foundation Trust, East Prescott Road, Liverpool, Merseyside	

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| 6. Occupation and usual address:
Daughter of Charles Richard ALDRED-OWEN, Senior customer consultant and Rachel Anne ALDRED-OWEN, Civil Servant |
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Signature of coroner (and jurors):

A handwritten signature in black ink, appearing to read 'H Rimmer', written over a horizontal line.

Signature of **Helen RIMMER, Assistant Coroner**