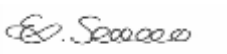
	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** **1. [redacted] - Chief Executive** **NHS England** **PO Box 16738** **Redditch** **B97 9PT**
1	**CORONER** I am Emma Serrano Area Coroner for **Stoke-on-Trent & North Staffordshire Coroner's Court**
2	**CORONER'S LEGAL POWERS** 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. http://www.legislation.gov.uk/ukpga/2009/25/schedule/5/paragraph/7 http://www.legislation.gov.uk/uksi/2013/1629/part/7/made
3	**INVESTIGATION and INQUEST** On 17/07/2017 I commenced an investigation into the death of Jamie Lee Poole, aged 27. The investigation concluded at the end of the inquest on 9th March 2021. The conclusion of the inquest was a narrative conclusion of: 'A recognised complication of immunosuppressant treatment for a lifesaving kidney transplant'. The cause of death recorded at inquest was:- 1a) Cerebral oedema. 1b) Electrolyte disarray with calcium and magnesium deficiencies. II) Renal failure due to Henoch-Schoenlein purpura.
4	**CIRCUMSTANCES OF THE DEATH** Jamie Lee Poole was diagnosed with IgA nephropathy, which causes kidney failure, which required the lifesaving surgery of a kidney transplant in 2011. After the transplant she was placed on a dose of immunosuppressant (tacrolimus) to prevent rejection of the transplanted kidney. One of the known side effects of the use of the medication is that it can cause low levels of magnesium within the body. Her kidney function again started to deteriorate in October 2016. She was managed for this within the community. Omeprazole was introduced in Jamie Lee Pools prescription medication, as part of the management of the reoccurrence of her kidney failure. A known side effect of this medication is that it can cause low levels of magnesium within the body. She was admitted to the Royal Stoke University Hospital on 27 June 2017 with low levels of magnesium and low calcium and was treated for correction of electrolyte disturbance. On the 28 June 2017 between 6:20 and 6:30 in the morning she was found on the floor having collapsed. It was discovered that she had significant swelling on her brain. This was caused by a lack of oxygen to the brain, which was either caused by a heart problem or a seizure, which on balance would have been caused by the low levels of magnesium. She was transferred to the intensive care unit at the Royal Stoke University, Stoke-on-Trent where she passed away on the 2 July 2017. She passed away due to acute cerebral oedema and acidosis. This was caused by low levels of magnesium and calcium.
5	**CORONER'S CONCERNS** During the course of the inquest the evidence revealed matters giving rise to concern. In my opinion

	there is a risk that future deaths will occur unless action is taken. In the circumstances it is my statutory duty to report to you. The **MATTERS OF CONCERN** are as follows. – (1) Transplant patients are put on strong immunosuppressive medication to prevent rejection of the transplanted organ. The medication, tacrolimus in Jamie Lee Pools case, has a common known side effect of reducing magnesium levels within the body. This can be life threatening. Despite this, it is not standard practice to regularly test transplant patients magnesium levels. I heard evidence at inquest that, whilst the Trust providing care for Jamie Lee Poole, has now remedied this, and routinely test post-transplant patients' for magnesium levels, this is not the case in other areas. The evidence that I heard that was that, whether these levels were tested routinely and regularly, was very much dependant on trust area. In one area, patients may be tested routinely for this in others they would not.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you NHS England 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 11 May 2021. 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], parents of the deceased. 2. Royal Stoke University Hospital, Stoke-on-Trent I am also under a duty to send the Chief Coroner a copy of your response and all interested persons who in my opinion should receive it. I may also send a copy of your response to any other 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.
9	15/03/2021 Signature:  Emma Serrano Area Coroner **Stoke-on-Trent & North Staffordshire Coroner's Court**