REGULATION 28: REPORT TO PREVENT FUTURE DEATHS (1)

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** [redacted] **Chair of the Association of Ambulance Chief Executives** **Waterfront Business Park,** **Waterfront Way** **Brierly Hill** **West Midlands** **DY5 1LX.** **Sir Andrew Dillon** **National Institute for Health Care Excellence** **1 City Tower** **Piccadilly Plaza** **Manchester** **M1 4BT.** **Dorothy Hosein** **Chief Executive, East of England Ambulance Service** **East of England Ambulance Headquarters** **Whiting Way** **Melbourn** **Royston** **SG8 6EN.**
1	**CORONER** I am Nigel Parsley, Senior Coroner, for the coroner area of Suffolk.
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 1st August 2016 I commenced an investigation into the death of Oliver Hall The investigation concluded at the end of the inquest on 7th June 2019. The conclusion of the inquest was that the death was the result of:- **Natural causes contributed to by neglect.** The medical cause of death was confirmed as: **1(a) Meningococcal septicaemia**
4	**CIRCUMSTANCES OF THE DEATH** Oliver Hall was a six-year old boy who died suddenly on the 24th Oct 2017 after becoming acutely unwell on the 23rd October 2017. At the time of his death Oliver had been admitted to the James Paget University Hospital, Gorleston, Norfolk, although he resided in Haverhill, Suffolk.

	Oliver became unwell on the morning of 23rd October 2017 when he became lethargic, photophobic, had a sore neck, a temperature which was resistant to Calpol and Calprofen and had developed a rash which his mother felt was non-blanching. [redacted] called her GP just before 10am and requested an appointment, emphasising that her child was unwell with a temperature which was not responding to medication. She was advised the earliest appointment was at 3.50pm that afternoon but she was to call back if there was any change in circumstances. Following a further call to the GP practice, [redacted] contacted the NHS 111 number who, on hearing of Oliver's symptoms, sent an ambulance. The NHS Pathway System recorded a disposition for the call relating to Oliver as 'emergency ambulance response for septicaemia' The ambulance crew arrived at around 1pm. [redacted] described her son's symptoms as outlined above. She told them she was concerned that her son had meningitis. The ambulance crew completed a full set of observations (excluding blood pressure). Upon arrival Oliver's pulse rate was 137 bpm and after approximately 15 minutes this settled to 120 bpm. The ambulance crew said that Oliver did not have meningitis because his rash disappeared under pressure. Oliver's mother said the edges of the rash blanched and they were in effect only partially blanching. Oliver also had one purple raised area on his arm that did not blanch which the crew thought may have been from the result of trauma. The ambulance crew said Oliver didn't need to go to hospital but agreed to take him to his GP such was [redacted] anxiety as to her son's condition. They arrived at the GP practice at around 2.30pm. Initially a trainee GP saw Oliver in the presence of his mother and both of the ambulance crew. Again, [redacted] mentioned her concerns regarding meningitis with the GP taking the history from the paramedics. The trainee GP took Oliver's temperature but did not record any of Oliver's other vital signs, accepting these were normal from the ambulance crew. Upon seeing the non-blanching purple mark on Oliver's forearm the trainee GP interrupted his examination to seek assistance from his training supervisor. Both doctors returned but a physical top to toe examination was not completed. The mark on Oliver's arm was assessed by the second GP, who also briefly looked at a maculopapular rash on his leg. A group decision by the four medical personnel present was made that Oliver was well enough to go home. Almost one hour had passed since Oliver's vital signs had been taken That evening, Oliver's spots were getting worse. [redacted] decided to take her son back to the GP who recognised a meningococcal non-blanching rash at 6.45pm. The GP immediately gave Oliver an injection of antibiotics and called 999 for an ambulance at 6.50pm. After a thirty minute wait the GP called 999 again and was told there was 'no resource available'. [redacted] decided not to wait and she and her husband drove Oliver straight to hospital, arriving at the James Paget University Hospital at around 8pm. Tragically, despite the best efforts of the medical staff at the hospital, Oliver passed away in the early hours of 24th October 2017.
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 could occur unless action is taken. In the circumstances it is my statutory duty to report to you;

the **MATTERS OF CONCERN** as follows. –

1. It is apparent that there is a failure in the process of the transfer information regarding a patient's original disposition by the NHS 111 Service to the ambulance service and the treating clinicians on the ground.

In Oliver's case a non-clinician NHS Pathway Advisor using the NHS Pathway algorithms identified a 'severe illness and a rash suggestive of septicaemia' following a 5-minute phone call with his mother. As identified at inquest meningococcal septicaemia was Oliver's actual cause of death and the NHS 111 Service identified this as a possible risk at 13.00, some 5 hours 45 minutes before it was diagnosed by a medical clinician.

In response to their algorithms the NHS 111 Service implemented a disposition of an 'emergency ambulance response for septicaemia' and an automatic referral was made to the 999 service. This disposition and a 'severe illness and a rash suggestive of septicaemia' were included in the information transferred to the East of England Ambulance Service.

However, it was then identified that the current East of England Ambulance Service system does not provide the ambulance crew (and therefore in this case subsequently the GP's) with that information.

The message made available to the crew simply read 'headache/abdo-pain/fever- no access issues, patient not alone 38.8'.

Both the ambulance crew and GP's stated in their evidence that had they known the original disposition from the NHS 111 Service had been suggestive of septicaemia it would have informed their decision-making processes and may have changed their clinical management of Oliver.

2. It was heard in evidence that since this incident the East of England Ambulance Service have introduced a system whereby if a medical professional calls requesting an ambulance and one is not available (due to pressure on the service exceeding capacity) they will inform the medical professional if the anticipated response time is outside the key performance times for the category of call.

It was identified, that in a septicaemia case similar to Oliver's (or indeed any case where time is of the essence to transport a patient to hospital to commence life saving treatment) the correct category for the ambulance response would be Category 2.

As such, any medical professional who calls for an ambulance will only be told there will be a delay if it is anticipated that delay would be longer than 40 minutes (40 minutes being the Category 2 aimed response time in 9 out of 10 cases).

Therefore, under the current system, a medical professional requesting an ambulance will not be told if the delay is 39 minutes or less.

Evidence was heard, that in a patient with meningococcal septicaemia the bacterial loading in their system will have almost doubled in that 39 minute time period and the patient's condition would have rapidly deteriorated.

As such, under the current system of a medical professional being told of the delay if it is only 40 minutes or more (in a Category 2 case), that attending medical professional will be unable to make an informed judgement as to whether waiting for an ambulance or using another form of transport is the right course of action for the patient they are treating.

	3. It was apparent from the evidence given by both the ambulance crew and treating doctors that there was some lack of clarity over the current National Institute for Health Care Excellence guidance on the treatment of sepsis and the guidance provided by the Joint Royal Colleges Ambulance Liaison Committee. This lack of clarity centred around the heart rate which should trigger a medical treatment response in a sick six-year-old child. Evidence heard stated that a heart rate of 120 beats per minute was given in some guidance as being at the top end of the normal range for a six-year-old child. The health professionals involved in Oliver's case said they had relied on this guidance. However, in other guidance a heart rate of 120 beats per minute in a six-year-old child is considered to be a high-risk criteria in cases of suspected sepsis requiring an urgent response. The health professionals involved in Oliver's case said they were either unaware of this guidance, or they were aware of it but placed their reliance on the 'normal range' guidance above. Therefore, it is apparent that the significance of Oliver's heart rate of 120 beats per minute was not identified as being a symptom of his meningococcal septicaemia by the health professionals responsible for his treatment, likely to be due to the nature of the conflicting guidance as detailed above.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you 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 12th August 2019 I, the Senior Coroner, may extend the period if I consider it reasonable to do so. 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, [redacted] 111 Service, [redacted] I am under a duty to send the Chief Coroner a copy of your response. 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 Senior Coroner, at the time of your response, about the release or the publication of your response by the Chief Coroner.
9	**17th June 2019** **Nigel Parsley**