REGULATION 28: REPORT TO PREVENT FUTURE DEATHS (1)

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

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** **1. Chief Executive Officer Mid & South Essex NHS Foundation Trust** **2. [redacted] Chief Executive Association of Ambulance Chief Executives** **3. [redacted] Chief Executive East of England Ambulance Service NHS Trust** **4. Victoria Atkins Secretary of State for Health** **5. [redacted] Chief Executive Officer Essex Partnership University NHS Foundation Trust**
1	**CORONER** I am Sonia Hayes, Area Coroner, for the coroner area of Essex
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 9 June 2021 an investigation was commenced into the death of WILLIAM BRIAN KIN GRAY age 10. The investigation concluded at the end of the inquest on 22 November 2023. The conclusion of the inquest was 1a Cardiac Arrest Secondary to Respiratory Arrest 1b Acute Asthma Secondary to Chronically Very Under controlled Asthma. William Gray died as a consequence of failures by healthcare professionals to recognise the severity and frequency of his asthma symptomatology and the consequential risk to his life that was obvious. William's death was contributed to by neglect. William's death was avoidable. There were multiple failures to escalate and treat William's very poorly controlled asthma by healthcare professionals that would and should have saved William's life.
4	**CIRCUMSTANCES OF THE DEATH** William had a seven-year history of asthma and met the criteria for specialist referral. William's care and treatment was sub-optimal; his asthma was poorly controlled in the absence of appropriate assessment and reviews. William required chest compressions and intramuscular adrenalin in accordance with the Joint Royal Colleges Ambulances

	Liaison Committee (JRCALC) Guidelines with oxygen for a life-threatening asthma attack on 27 October 2020 that saved his life. William was conveyed to Southend Hospital where he was discharged home four hours later with no assessment of his recent symptomatology and no change to his medications. Family contacted the GP service for advice and chased a referral to the asthma and allergy services. No changes were made to William's medication until 4 November 2020 when he was prescribed a steroid preventer inhaler at the request of the asthma nurse and follow-up with Southend Hospital. William was lost to follow-up at Southend Hospital following a consultant appointment on 14 November 2020. The Asthma and Allergy Service comprised of telephone calls of no more than five minutes with no contact after 1 February 2021 until 21 May. The GP prescribed four short doses of oral steroids for exacerbations of his asthma in December 2020, February, April and 19 May 2021 that were insufficient to effectively manage obviously poorly controlled asthma in a picture of vastly excessive reliever inhaler prescriptions and the absence ongoing of preventer medication. On 21 May 2021 the asthma nurse did not review or escalate the increased salbutamol inhaler use information shared. The advanced GP nurse practitioner reviewed William's condition on 25 May 2021 at the request of the GP following the final prescription of steroids and confirmed that William's asthma remained very poorly controlled but failed to escalate concerns. As a consequence of multiple failures, William suffered an inevitable life-threatening asthma attack on the night of 29 May 2021 and crew arrived at approximately 00:18. Ambulance Crew could not secure William's airway when he went into respiratory arrest with a missed opportunity by ambulance crew to administer intramuscular adrenalin in the presence of a strong pulse that probably would have delayed the cardiac arrest and possibly saved his life. William went into cardiac arrest at approximately 00:35 with further crew on scene and chest compressions commenced. Intravenous adrenalin was administered at approximately 00:45 when William was in the ambulance and resuscitation continued until HEMS met the ambulance en-route to hospital. The HEMS doctor inserted an endotracheal tube and administered medications and William was conveyed to hospital. William had sustained a brain injury not compatible with life.
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. – **Mid & South Essex NHS Foundation Trust** (1) Experienced hospital paediatric doctors all gave evidence that they were unaware that administration of intramuscular adrenaline by paramedics is part of the Joint Royal Colleges Ambulances Liaison Committee JRCALC protocol for life-threatening asthma. The beneficial effects of the administration adrenalin was not considered, William's presentation on arrival at hospital was falsely reassuring. **Association of Ambulance Chief Executives** (2) Life threatening childhood asthma is a rare occurrence for ambulance paramedics and the Joint Royal Colleges Ambulances Liaison Committee (JRCALC) Guidelines sets out treatment for it, however as paramedics rarely attend: a. Clarity is required on what should be catagorised as a life-threatening asthma. With guidance to enter the algorithm immediately to administer intramuscular adrenalin the purpose being to avoid cardiac arrest. Paramedics are more familiar with administration of intravenous adrenalin during resuscitation once cardiac arrest has

occurred

b. does not contain clear guidance or advice on what to do when crew cannot ventilate, cannot oxygenate, or

c. when to abort repeated unsuccessful attempts to secure an airway and progress to hospital

d. inflation pressure being a potential cause of failure to secure a paediatric airway adjunct in life threatening asthma the consequence of this being increased ventilations pressure would be required

East Of England NHS Ambulance Trust

(3) Learning and sharing lessons learned is a function of investigation. The Trust investigation report did not:

(a) scrutinise the ambulance attendance to William on 27 October 2020 in comparison to the attendance on 29 May 2021 and missed an opportunity to understand:

i. the importance of the administration of adrenalin during a life-threatening asthma attack in accordance with the JRCALC guidelines and that there may be additional training needs. Two paramedics attended both on 27 October 2020 and 29 May 2021 but did not consider the administration of intramuscular adrenalin on the second occasion.

ii. Whilst life-threatening asthma in children is an extremely rare call, the same two paramedics attended on 27 October and 29 May and initial treatment given differed during a life-threatening asthma attack

iii. that ambulance crew focused on the airway to exclusion of other treatment options and did not recognise the significant amount of inflation pressures that are required to manage the airway of an asthmatic child in respiratory arrest. Crew were misled in thinking that the airway adjunct equipment was not the correct size as a consequence, and were swapping the adjuncts

iv. that the same paramedic was left managing an airway throughout the arrest despite the arrival of more experienced colleagues that arrived as backup, including an LMO until HEMS took over.

The Trust did not address the issues at 3 (a) i-iv above in their annual training following William's death and no alerts or learning notes have been circulated.

(b) East of England Ambulance NHS Trust investigation did not identify a number of risks and omissions its investigation of this child death:

i. inflation pressure being a potential cause of failure to secure a paediatric airway adjunct in life threatening asthma the consequence of this being increased ventilations pressure would be required

ii. Intramuscular adrenalin was not administered for life threatening asthma for a child in respiratory arrest in accordance with JRCALC

iii. Intravenous adrenalin was not given or attempted when the patient went into cardiac arrest in accordance with the resuscitation guidelines and Intraosseous access was not attempted for a child in cardiac arrest for at least 10 minutes and only when the patient was in the ambulance.

(4) The Trust issued a Clinical Instruction on 17 September 2020 that paramedics must

not insert endotracheal tubes as a safety measure to avoid adverse incidents as there was a difficulty in keeping paramedics skills up to a level of competency. Evidence was heard that the Trust has since revised its policy and reintroduced endotracheal intubation for a specialist cohort of paramedic crew:

i. The Trust treatment for those aged 12 and over permits endotracheal intubation by those ambulance crew with specialist qualifications however, they cannot intubate children under 12 who are entirely reliant on HEMS arriving in sufficient time if the airway cannot be sufficiently managed.

ii. Essex is a large county and there are very few paramedics trained on any one shift to provide endotracheal intubation

iii. there is a difference in provision of life-saving treatment in Essex between those over 12 and for children under 12 and HEMS is a charity with very limited resource across a very large county.

Secretary of State for Health

(5) Training for health professionals who care for children and young people is not mandatory

The National Capabilities Framework for Professionals who care for Children and Young People with Asthma (NHS Health Education England) contains tiers of training and national capabilities but is not mandatory and although it sets out in the 'Forward' to that document that:

"The UK has some of the highest prevalence, emergency admission and death rates for childhood asthma in Europe and outcomes are worse for children and young people living in the most deprived areas. A number of reports produced in recent years make key recommendations for all professionals involved in the care of children and young people with asthma. The National Review of Asthma Deaths and the more recent Healthcare Safety Investigation Branch report highlight the need for healthcare professionals to be competent in the management of children and young people with asthma.
The development and implementation of the National Capabilities Framework for Professionals who care for Children and Young people with Asthma, aims to ensure that all professionals involved in their care are meeting the level of competency required for their particular role in the management of that child or young person. The adoption of this framework will ensure that competent professionals are delivering effective asthma care and will therefore drive improvements in health outcomes for children and young people with asthma, as well as education and training in the future."

and in the 'Background' to the document

" …One successful contact with a well-trained professional may be the contact that makes the difference."

Essex University Partnerships NHS Foundation Trust

(6) The Asthma & Allergy Childrens and Young Persons Service (the Service)

a. At the time of William's initial referral to the Service in 2018 this consisted of one nurse for approximately 2000 children, and this increased to two nurses in November 2020. The evidence heard is that whilst the number of nurses has increased so has the geographical area that the Service covers, and that there are ongoing plans to increase this further. The Service remains under resourced whilst attempting to expand.

b. The Service continued to operate during the pandemic and did not introduce video calls when they could not make face-to-face attendances. There was no risk assessment of the impact on the Service, and no audit of whether this was sufficient to manage the Service. There is no contingency plan in place should this issue arise again.

	c. The Service relied on telephone contact Nurses did not speak to William although he was old enough to be involved in his care.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you and 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 Monday 5th February 2024. 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: • [redacted] (Mother) • Care Quality Commission I am also 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 coroner, at the time of your response, about the release or the publication of your response by the Chief Coroner.
9	S. M. Hayes **8 December 2023** **HM Area Coroner for Essex Sonia Hayes**