NHS
East of England Ambulance Service
NHS Trust

East of England Ambulance Service NHS Trust
Whiting Way
Melbourn
Cambridgeshire
SG8 6NA

HM Coroner Sonia Hayes
Area Coroner for Essex
By email

29 January 2024

Dear Ms Hayes

I am writing further to the inquest into the death of William Brian Kin Gray, which concluded on 22 November 2023. I understand that you heard evidence from a number of Trust witnesses during the inquest. Following this you made a Regulation 28 Preventing Future Death report on 8 December 2023 outlining your concerns and I have responded to these below:

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.

It was clear from the evidence given at the inquest and from the crew's previous attendance to this patient that adrenaline could have been administered to William in accordance with the JRCALC guidelines. The crew were aware of the guidelines and this is not disputed. It was a challenging and busy scene and this contributed to the crew omitting to administer adrenaline.

The Trust has completed work over the past year in relation to human factors and how these influence behaviour at work in a way which can affect safety. Posters have been disseminated across the region and pop-up banners are being used at engagement events across the Trust. The Patient Safety Team have also included information around human factors in the Safety Matters Newsletter, which is a monthly publication shared with all staff, and released a podcast last year on human factors. There are two training modules available to staff, which have been publicised as well.

In order to raise further awareness, a case study will be included in the Safety Matters Newsletter and the Trust's pharmacist will include information around the benefits of IM adrenaline being administered to a patient with life-threatening asthma together with the appropriate point to administer this. The aim is to demonstrate to staff the physiological benefits of administering in this situation.

For adult patients, the Trust used to have access to pre-filled IM adrenaline syringes and a report will be taken to the Trust's Medicines Management Group for consideration. Paediatric patients are not administered with a set dose and the clinician needs to draw this up separately dependant on age/weight in line with JRCALC guidance.

iii. **That the 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.**

Information pertaining to the difficulties securing airways for asthmatic patients will be shared in the Safety Matters newsletter as part of the case study. The Trust has also contacted the Asthma and Lungs UK charity to establish if we could undertake shared learning or work with them to produce further resources for our staff.

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 a Local Operations Manager until HEMS took over.**

Attendance to a paediatric asthma attack that leads to cardiac arrest is very rare for ambulance clinicians to experience. A handover should be undertaken when new clinicians are arriving on scene and this is the responsibility of both parties to engage in line with human factor training. A case study of our attendance to William will be included in the Safety Matters newsletter, which will include further information relating to the importance of handover communication when new clinicians arrive on scene.

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 in 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.**

The Trust has recently recruited six Resuscitation Officers across the region. Part of their role is to improve our response to critically unwell patients by designing a new cardiac arrest training programme and provide coaching to clinicians. The delay in administering IV adrenaline and gaining intraosseous access has been brought to their attention and will be included as part of this updated training.

In terms of i) and iii), I have set out the actions the Trust is taking above.

(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.**

There is strong scientific evidence that endotracheal intubation, like any skill, requires regular exposure and practice to ensure proficiency in those moments when it is needed and there is evidence of poor success rates without regular exposure and practice. On average, research has shown that the average paramedic may be required to intubate an adult patient between 1-3 times a year. It has also shown that the need to intubate a child is even less than that and is about once every three to four years. These numbers are not sufficient to maintain competency and the skill was removed for patient safety reasons. This is in line with other NHS Ambulance Services across the country. The majority of airways in both adults and children can be managed without intubation but by the use of a Supraglottic airway.

Currently Specialist Paramedic/Advanced Paramedic/Consultant Paramedic roles in Critical Care and HEMS teams are authorised to intubate patients below the age of 12 in the East of England. There are plans to introduce Advanced Paramedics in Critical Care cars across the region, one per Integrated Care Board area, as part of the advanced practice program roll out.

Your report also referred to the Serious Incident investigation and missed opportunities for learning. Since this investigation, the Trust has implemented the Patient Safety Improvement Response Framework, which was produced by NHS England and sets out the approach to developing effective patient safety systems and learning from these incidents. The approval process for identifying actions from patient safety incidents is now more robust in that an Action Setting Group meets fortnightly to review incident reports and set appropriate actions.

I hope this provides you with assurance in relation to the actions the Trust is taking in relation to this sad event and I am happy to provide a further update on these actions in the coming months. Please do not hesitate to contact me should you require any further information.

Yours sincerely,

[redacted]

Chief Executive