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[redacted]

Miss Emma Brown
HM Area Coroner for Birmingham and Solihull
The Birmingham and Solihull Coroner's Court
Steelhouse Lane
Birmingham
B4 6BJ

By email: **coroner@birmingham.gov.uk**

22nd March 2022

[redacted]

Dear Miss Brown

NHS Digital Response to Regulation 28 Report – inquest touching the death of Adam Marshall Elliot Stone

I am writing in response to the Regulation 28 Prevention of Future Deaths report received from HM Area Coroner dated 27th January 2022. This follows the death of Adam Stone who sadly passed away on 12th September 2019. This was followed by an investigation and inquest which concluded on 25th January 2022.

Firstly, I would like to offer my sincerest condolences to Adam's family.

NHS Digital were not aware that this inquest was occurring, and therefore we did not have the opportunity to provide information to assist your inquiry.

I am Dr [redacted], and I am writing in my capacity as Chief Clinical Officer, NHS Pathways, NHS Digital.

NHS Pathways is the clinical decision support software (CDSS) used by all 111 service providers, and some 999 ambulance trusts in England. For information, we have included a short summary of the functions that NHS Pathways performs and the governance that underpins it (containing background information on NHS Pathways) in Appendix A.

In response to the matters of concern outlined in the report:

1. ***Acute Behavioural Disturbance (ABD) is an umbrella term to describe a presentation which usually includes abnormal physiology and/or behaviour. ABD is not a diagnosis or a recognised syndrome, but rather a term used to describe a combination of signs and symptoms of aggression and agitation with physiological abnormalities, often associated with a cause (drugs, mental health disturbance or medical condition). The term has been adopted by most healthcare providers in the UK. The presenting behaviour can range from mildly erratic, to a state of extreme agitation, and physical exertion. Patient has signs of sympathetic autonomic dysfunction, such as significant tachycardia, marked metabolic acidosis and hyperthermia. These are associated with multi organ failure and death. The incidence of sudden death is sometimes quoted as 10% although some studies suggest a much higher rate and current research is not sufficient to rely on this figure. Police Forces and Emergency Departments regard ABD as a medical emergency because of the risk of sudden death.***

   Comments noted.

2. ***ABD has no specific antidote or treatment as it is the underlying cause that needs to be identified and treated. However, the main principles of treatment are to calm the patient, cool them down and provide supportive treatment as much as possible, whilst maintaining safety for both the patient and the care providers. Sometimes de-escalation cannot be achieved, and restraint is required in the interests of the patient, members of the public and carers. Physical restraint should always be kept to a minimum because resistance to it increases the physiological burden to the patient and therefore the risk of death. Chemical restraint, sedation, is rarely available outside hospital. Therefore, the key to successful treatment of severe ABD is getting the patient to hospital as soon as possible to avoid or minimise restraint.***

   Comments noted.

3. ***Currently NHS Pathways, which is used by West Midlands Ambulance Services, categorises ABD (or Excited Delirium as it can also be called) as requiring a category 2 response. A category 2 response has a mean average response time of 18 minutes from categorisation of the call up to a maximum of 240 seconds from the start of the call. It is understood from the evidence that the other triaging tool used by Ambulance services in the UK, Advanced Medical Priority Dispatch (AMPDS), also gives ABD/Excited Delirium a category 2 priority.***

NHS Pathways is a triage system that assesses symptoms presented at the time of a call and directs patients to the most appropriate services based on their described symptoms. It does not provide a suggested diagnosis or rely on call handlers being able to recognise particular conditions.

Calls from members of the public

ABD (also known as Excited Delirium) is not a condition the general public are familiar with. Therefore, in respect of calls from the public, a specific disposition for ABD will not be provided, even if declared by the caller, but rather the symptoms described will be triaged.

Any call from a member of the public will undergo an initial assessment for immediate life-threatening symptoms, including whether the patient has stopped breathing, is choking, is having a fit or seizure, is unconscious, has heavy blood loss, is experiencing severe breathing difficulty or a life-threatening allergic reaction. If any of these life-threatening symptoms are identified, then they receive a disposition which is mapped to a Category 1 ambulance response. Should no immediately life-threatening symptoms be identified, then the assessment progresses through further questions to establish an appropriate outcome for the clinical condition of the patient.

Calls from Healthcare Professionals

Calls which are received from healthcare professionals are dealt with by a different route to the general public. For calls received from a healthcare professional, there are initial questions about emergency symptoms and those relating to threatened loss of life, limb or sight. If answered 'no', there is then a question about mental health emergencies, which means an emergency ambulance may be required. These questions include determining whether the patient is under active restraint or in need of restraint, or whether ABD has been declared. If any of these situations apply, they receive a disposition which is mapped to a Category 2 ambulance response.

Calls from Police Officers

Calls from the Police are managed in two different ways, depending on whether the patient is with the caller. If the caller is with the patient, then a symptom-based assessment can be undertaken in the same way as if the caller was a member of the public. However, when the caller is not with the patient, it is usually not possible to complete the assessment due to a lack of available information and therefore a route called 'early exit', for a 'remote observer' is taken.

This includes questions on life-threatening symptoms, as described above. If immediately life-threatening symptoms are identified, at any stage, then a disposition is reached which is mapped to a Category 1 ambulance response.

If there are no immediately life-threatening symptoms further questions are asked to identify severe and time sensitive issues, including whether ABD has been declared. Any declaration of this will result in a disposition mapped to a Category 2 ambulance response.

Ambulance Responses

The above reflect the national ambulance frameworks embedded within NHS Pathways. People who have undergone restraint or had ABD declared by the Police or a healthcare professional require a Level 2 response, mapping to the Category 2 ambulance response standard. These frameworks were jointly developed by the Association of Ambulance Chief Executives (AACE) and NHS England, with clinical support from NHS Digital. The national ambulance frameworks are owned by NHS England:

https://www.england.nhs.uk/publication/healthcare-professional-ambulance-responses-framework/
https://www.england.nhs.uk/publication/inter-facility-transfers-framework/

NHS England, via its Emergency Call Prioritisation Advisory Group (ECPAG), determines the category of ambulance response required for a given triage code and/or clinical condition based upon advice received from the Clinical Coding Review Group (CCRG) – also a function of NHS England and chaired by an Ambulance Medical Director – and by the National Ambulance

Medical Director's group (NASMeD), a sub-function of AACE. NHS Digital has representation within CCRG and ECPAG to help inform their decisions.

Within NHS Pathways, in respect of requests for assistance from the police, prisons and healthcare professionals, the triage coding for ABD maps to the nationally agreed Category 2 ambulance response standard, as instructed by ECPAG.

We are unable to comment on the process used by AMPDS.

4. ***The inquest heard evidence from 2 expert witnesses, Dr [redacted] a Consultant in Emergency Medicine and a Medical Examiner at Poole General Hospital who sees several cases of severe ABD a year within his clinical practice, and Dr [redacted] a Consultant in Emergency and Intensive Care Medicine and a Clinical Toxicologist at Barts Health NHS Trust in London. Dr [redacted] was one of the authors of the Royal College of Emergency Medicine's Guidelines on ABD and deals with cases of ABD every few days in clinical practice. Both experts gave evidence that, in their opinion, severe ABD should be given the highest priority by Ambulance Services. Dr [redacted] explained that this was his view because, even though category 1 is reserved for patients in cardiac arrest or peri arrest, ABD is unique in that it is so difficult for any effective treatment or management to be given outside of hospital to prevent catastrophic deterioration and death, and, in fact, the often necessary intervention of restraint whilst awaiting an ambulance actually increases the risk. Dr [redacted] view was that if an effective system was used to identify ABD it would not create an undue burden on Ambulance Services as it is not a common occurrence. Dr [redacted] was in agreement with Dr [redacted] but did feel that there should be some assessment of severity as mild cases of ABD do not create the risk of death that warrants the category 1 response. Dr [redacted] evidence was that restraint could be used as the trigger for a designation of category 1 for ABD given that the need for restraint both indicates that the case is severe and is actually increasing the risk of death.***

The range of symptoms associated with more common emergency medical presentations and the unknown, though believed to be rare, incidence of ABD presents challenges for telephone triage and the appropriate level of emergency response. Ambulance resources are finite; Category 1 responses typically result in a robust operational resource by the ambulance service, sometimes activating specialist critical care resources and often drawing clinical resources away from other emergencies. As a result, there should be a high degree of certainty that a Category 1 response is actually required.

During the period 2020-21 an AACE led 'task and finish' group, chaired by a senior medical representative from NASMeD, and attended by NHS Digital, considered the appropriateness of a Category 1 response to ABD following a request for emergency medical assistance from the Police. The evidence reviewed, including the results of a pilot conducted by the Yorkshire Ambulance Service with South Yorkshire Police, did not support a Category 1 response. The task and finish group presented to CCRG, and subsequently to ECPAG, a recommendation that suspected ABD reported by the Police should be responded to as a Category 2 response. ECPAG approved this recommendation in September 2021.

Therefore, any change in ambulance response categorisation would be matters for the respective

NHS England and AACE groups to consider, and would need to be approved by ECPAG as a function of NHS England.

5. ***The continuance of a system which does not allow a category 1 response in severe case of ABD where restraint is taking place is putting lives at risk.***

We would like to reassure you that NHS Pathways recognises the risks associated with ABD/ Excited Delirium and also that restraint may be a factor contributing to a patient's deterioration.

As described above, NHS Pathways is fully compliant with the national ambulance response standard mandated by ECPAG for suspected ABD, with regard to healthcare professionals and Police requests for medical assistance. NHS Digital will continue to work collaboratively with our stakeholders in the ambulance sector, and under the direction of ECPAG, on the subject of ABD as new evidence arises.

In 2019, NHS Pathways produced "Spotlight on: ABD" training materials to be used by call assessors and clinicians with the 999 emergency operation centres of ambulance services that use the NHS Pathways system. This was published to raise awareness of ABD as a rare but very serious medical condition which warrants an emergency response.

If I can be of any further assistance, please let me know.

Yours sincerely

Dr [redacted]
Chief Clinical Officer
NHS Pathways
NHS Digital

Appendix A

BACKGROUND INFORMATION

Function of NHS Pathways

NHS Pathways is a programme providing the Clinical Decision Support System (CDSS) used in NHS 111 and half of English ambulance services. This triage system supports the remote assessment of over 18 million calls per annum. These calls are managed by non-clinical specially trained call handlers who refer the patient into suitable services based on the patient's health needs at the time of the call. These call handlers are supported by clinicians who are able to provide advice and guidance or who can take over the call if the situation requires it. The system is built around a clinical hierarchy, meaning that life-threatening problems assessed at the start of the call trigger ambulance responses, progressing through to less urgent problems which require a less urgent response (or "disposition") in other settings.

Governance of NHS Pathways

The safety of the clinical triage process endpoints resulting from a 111 or 999 assessment using NHS Pathways, is overseen by the National Clinical Governance Group, hosted by the Royal College of General Practitioners. This group is made up of representatives from the relevant Medical Royal Colleges. Senior clinicians from the Colleges provide independent oversight and scrutiny of the NHS Pathways clinical content. Changes to the NHS Pathways clinical content cannot be made unless there is a majority agreement at NGCC.

Alongside this independent oversight, NHS Pathways ensures its clinical content and assessment protocols are concordant with the latest advice from respected bodies that provide evidence and guidance for medical practice in the UK. In particular, we are concordant with the latest guidelines from:

- NICE (National Institute for Health and Clinical Excellence)
- The UK Resuscitation Council
- The UK Sepsis Trust