	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** • **The College of Paramedics** • **The Association of Ambulance Chief Executives (AACE)** • **NHS Pathways (NHS Digital)** • **Advanced Medical Priority Dispatch (AMPDS)**
1	**CORONER** I am Miss Emma Brown, the Area Coroner for Birmingham and Solihull
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 19 September 2019 I commenced an investigation into the death of Adam Marshall Elliot STONE. The investigation concluded at the end of the inquest on the 25th January 2022. The narrative conclusion of the Jury was as follows: “Adam was spotted at 7:30pm walking at pace around Earlswood Lakes in his motorcycle outfit. At 7:45pm, a scream was heard from a man, now known to be Adam, walking into oncoming traffic in the middle of Lower Valley Road. Adam was described as screaming for help, distressed, agitated and paranoid. Three 999 calls were made detailing this presentation with a female caller suggesting that she was initially scared. At this time, Adam displayed signs of Acute Behavioural Disturbance (ABD), triggered by the use of cocaine and feelings of anxiety. The police arrived on scene within 15 minutes, at 8:06pm. Adam was crawling about on the floor. Members of the public described Adam banging his right hand and head repeatedly against the road, continuing to shout and scream in an incoherent manner. One officer focused on Adam's welfare, reassuring him and placing him into the recovery position, whilst the other gathered information from members of the public. Shortly after, at 8:08pm, Adam jumped to his feet and ran in to the middle of the road. Police attempted to verbally contain Adam using clear and simple commands, whilst still providing reassurance. When it became clear that their efforts to contain were ineffective and Adam was not capable of complying, officers made the decision to use a controlled take-down to the floor, cuffing Adam to the rear. Given the environmental risks from the neighbouring ditch, oncoming traffic and nearby reservoir, as well as Adam's erratic behaviour presenting a potential danger to himself and others, this was an appropriate decision and manoeuvre to the ground, in compliance with police training. At 8:10pm, Adam disclosed to officers that he had taken cocaine, confirmed later by hospital blood tests. At 8:11pm, a Police Sergeant identified ABD radioing in 'excited delirium' back to control, wanting to expedite the arrival of the ambulance called for upon initial police arrival at the scene. Adam's condition deteriorated whilst awaiting the ambulance becoming more agitated and described as experiencing 'fits of rage' and 'super-human strength', resisting the restraint of police and the handcuffs. Leg restraints were applied to Adam's upper and lower legs at 8:16pm and 8:25pm respectively. This again complied with police guidance and was appropriate in the

	situation. The Ambulance Service received a number of calls about the incident from 7:59pm onwards, including those from the police. The call was correctly triaged as Category 2 and 'excited delirium' recorded. Paramedics arrived on scene at 8:26pm, within the guidelines of a Category 2 response. The timing of their arrival did not cause or contribute to Adam's death. Though initially in a conscious, but agitated state, once in the back of the ambulance Adam lost consciousness at 8:30pm and went into respiratory arrest at 8:32pm. Paramedics administered appropriate treatment based on the presenting symptoms, providing ambubag ventilation, iv fluids and naloxone. Adam was taken to Heartlands Hospital, arriving at 9:12pm. Whilst at hospital, Adam's condition deteriorated. Doctors noted arterial blood gas analysis, showing severe metabolic acidosis, incompatible with life, leading to multi-organ failure. Appropriate lifesaving treatment was provided, however Adam showed no sign of improvement. Adam was pronounced deceased at 1:15pm on 12 September 2019. Adam's death was multi-factorial, caused by cocaine toxicity and pre-existing severe coronary atheroma, contributed to by the physiological burden of ABD. There were clear additional burdens on Adam's physiological state from his initial levels of exertion and agitation and later resistance to restraint. It cannot be said that Adam would have survived had he not been restrained. Both cocaine ingestion and ABD increased the physiological burden on Adam's heart, which was already in a compromised state. The combination of these factors led to Adam's death. Police training on ABD is adequate at providing the police with knowledge of the condition. The use of video footage of live events is key in the absence of real world experience.”
4	**CIRCUMSTANCES OF THE DEATH** The circumstances were set out in the Jury’s narrative conclusion above. Based on evidence from medical experts, including the pathologist who had carried out a forensic post mortem examination on the 16th September 2019, the medical cause of death was determined to be: **1a CONSEQUENCES OF COCAINE TOXICITY AND CORONARY ARTERY ATHEROMA WITH ACUTE BEHAVIOURAL DISTURBANCE** **1b** **1c** **II**
5	**<u>CORONER'S CONCERNS</u>** 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. 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. 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. 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. 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. 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.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you 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 24 March 2022. 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: • Family • West Midlands Police • West Midlands Ambulance Service • IOPC • Independent Officers 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	**27 January 2022**  Signature: **Miss Emma Brown** **HM Area Coroner for Birmingham and Solihull**