The Sheku Bayoh Public Inquiry

Witness Statement

Dr Maurice Lipsedge

Taken by [redacted]

Via MS Teams

on 22 and 30 December 2022

Witness details

1. My name is Maurice Lipsedge. My contact details are known to the Inquiry.

2. I am currently an Emeritus Consultant Psychiatrist at the South London and Maudsley NHS Foundation Trust and Honorary Clinical Senior Lecturer in the Department of Psychological Medicine at Guy's, King's and St Thomas' School of Medical Education. I am also currently Visiting Psychiatrist at Brook Ward, a medium secure forensic unit in River House at Bethlem Royal Hospital. The Consultant Psychiatrist in charge of Brook Ward is Dr Raj Mohan.

Professional Background and Qualifications

3. My qualifications are MB BS, M Phil, FRCP, FRCPsych and FFOM(Hon). I have been a consultant in general adult psychiatry since 1974, initially at the City and Hackney Health District and from 1980 at Guy's Hospital and subsequently at the South London and Maudsley NHS Foundation Trust. I retired from the National Health Service in 2001 at the age of 65. I have provided psychiatric medico-legal reports in relation to cases involving deaths in custody. I was a member of the Royal College of Psychiatrists' Expert Reference Group on Acute Behavioural Disturbance and Excited Delirium which produced their Position Statement "'Acute behavioural disturbance' and 'excited delirium'" (September 2022).

Experience of providing evidence at Inquests

4. I have given evidence as a consultant clinical psychiatrist over the years at several inquests dealing with deaths in custody where the individual had a psychiatric or drug-related disorder. These include the following cases:
    - Winston Rose (Died 1981): Mr Rose had a history of mental illness and was detained under the Mental Health Act by the police. He was restrained by several police officers and died in a police van while being transported by the police to a Place of Safety. I provided a report in that case. The Inquest verdict was unlawful killing.
    - Ibrahima Sey (Died 1996 – Inquest 1997): Mr Sey was a Gambian asylum seeker. Mr Sey was acutely mentally ill; his wife called the police as she was alarmed by her husband's frightening behaviour. Mr Sey eventually went with the police without a struggle because of the calming influence of a good friend from the Gambia who was allowed to accompany him in their

vehicle. Once they reached the police station, the friend was not allowed to accompany Mr Sey into the police station and, at that point, Mr Sey started to struggle. In the course of the struggle, Mr Sey was sprayed with CS gas and restrained by several police officers. He was restrained in the prone position for over 15 minutes and died. At the Inquest, the jury returned a verdict of unlawful killing.

- David Bennett (Died 1998 - Inquest 2001): Mr Bennett was a Black man who had been detained in an NHS medium secure psychiatric unit. He died following an incident involving prolonged prone restraint. At the Inquest in 2001, the jury returned a verdict of accidental death aggravated by neglect and said that the cause of death was due to prolonged restraint and long-term antipsychotic drug therapy. I gave evidence at both the Inquest and the subsequent Public Inquiry.
- Roger Sylvester (Died 1999 – Inquest 2003): Mr Sylvester was a Black man with a previous history of mental illness. He was detained outside his home and restrained by eight police officers. Mr Sylvester's behaviour was strange – he was removing furniture from his home in the middle of the night. However, he was not being violent or aggressive. He had used cannabis. At the Inquest, the jury verdict was that of unlawful killing; however, this verdict was quashed on appeal to the High Court.

Leon Briggs Inquest

5. Most recently, I gave evidence in 2021 at the Inquest into the death of Leon Briggs who had died in 2013. This is a case that is relevant to this Inquiry in various respects, i.e., Mr Briggs' recreational drug-induced paranoid psychosis

leading to his frightening behaviour and culmination in a necessary police response. Leon Briggs hadn't hurt anybody and wasn't armed, although he was behaving in a very bizarre way, going up and down the street, doing outlandish things such as jumping on parked cars, running in front of traffic and moving in and out of shops aimlessly. The behaviour was alarming but not sufficiently to cause anyone to feel that their own life was in danger. Members of the public called the police. The nearest police available - passing in a car – were a firearms team. There was no attempt at de-escalation, a restraint followed and he died. I initially did a report for the IPCC (as it was at that time) in this case.

6. Later, I was instructed by the Coroner and gave evidence at the Inquest. I felt, when I was presenting my report, that if it had been sort of an old-fashioned policeman on the beat he would have tried to have a conversation, said something like, “Let’s sit down and have a cup of tea in this café”, or some other way of establishing a rapport and attempting to calm the situation.

7. Mr Briggs had consumed a large amount of amphetamine and this contributed in a very serious way to his mental state. It also would probably have altered his physiology, so he was at high risk. The amphetamines alone would not have inevitably caused his death. However, his paranoid psychiatric condition, due to the stimulants, combined with the adverse physiological effects of the amphetamines, then combined with the faulty restraint depriving him of oxygen, greatly increased his vulnerability. If the police had taken him straight to A&E, he might have survived.

8. The jury criticised the restraint by the Police, which they found to be mostly in the prone position with the application of inappropriate use of force. They also criticised a failure to recognise Mr Briggs as a medical emergency, inadequate assessments and a failure to monitor him. These failures contributed to his death. The jury also found a number of serious failings by the ambulance service.

Experience of individuals suffering from ABD or psychostimulant psychosis

9. I have been asked about my experience of dealings with individuals who have ABD or a psychostimulant psychosis. From approximately 1970 till 1995, I worked in acute psychiatry. Typically, the police would bring patients in a disturbed state into the A & E department or I'd be called to see individuals in the community in deprived inner city areas. This might be domiciliary visits to see such individuals in their homes or an emergency call out by police to assess individuals displaying acutely disturbed behaviour. Commonly, the person would be taken into a Place of Safety which, in those days, often meant a police station. The Alpha-PVP Mr Bayoh took wasn't around in my acute psychiatry days. However, in my years working in acute psychiatry, in terms of drug-induced states, we saw amphetamine psychosis, and some severe cocaine-induced psychological and behavioural reactions, but novel psychoactive substances or designer drugs such as Alpha-PVP were not circulating at that time.

Letter of Instruction

10. I have had sight of the letter of Instruction to me from PIRC dated 19 November 2015 (COPFS-06007). In that letter I'm asked to *"specifically look at the potential*

impact of the drugs identified in the attached package on the behaviour of the deceased, and as described by the police and civilian witnesses." The letter also requests that I consider *"any behavioural science aspects of the case including in particular reference to whether the actions of the officers are indicative to particular mind set indicating that the officers were behaving as a group rather than as individuals".* However, this latter aspect wasn't a question that I was qualified to answer, and I state this in my report.

11. The letter mentions material being shared with me "in the attached package" to allow me to carry out my report. However, there isn't a schedule or an appendix attached to the version of the letter I have been shown to say what that information was. I do recall that they did send me police statements and civilian statements. Additionally, I saw videos, which I've described in my report. The letter states *"Please let me know if you require any additional information to assist you in this regard."* I can confirm that I didn't request any further information from the PIRC.

12. I have been referred to my report dated 18 January 2016 (COPFS-00130). In producing my report, I largely relied on the civilian statements. The reason for that is I didn't want to get involved in the issue of how the police handled this frightening situation. I really wanted to stick to how the drugs the deceased had taken, plus alcohol, could have produced the frightening behaviour that he showed. I looked at the police witness statements. I didn't think they added anything to what the civilian witnesses said. I thought the civilian statements were very helpful indeed, and they were more or less consistent with each other.

However, the actual physical encounter between the police and Mr Bayoh, I didn't feel that was going to be my domain, because this was really a matter for experts on restraint. I didn't feel qualified to comment on the restraint, so I wanted to focus to the behavioural impact, psychological impact, of the drugs that had been confirmed to be present in Mr Bayoh's body at the post-mortem.

13. The civilian witnesses B and C both stated that there had been previous, less serious reactions to recreational drugs, to a total of something like four or five times. That's an important observation because illicit drugs might sensitise the brain, so the person reacts in a more volatile way, in a more aggressive way, when they're exposed again. Essentially, previous drug use increases your vulnerability. Not everybody will react in this extremely aggressive way or develop paranoia, etc. However, for people who are prone to it, as in this case with Mr Bayoh, previous exposure makes it more likely that the individual will react in a similar way when again exposed to the same drug. That's the significance of their statements, that Mr Bayoh had been like this before. I suspect that he probably hadn't been as bad as this before. Witness B, in particular, was his best friend, and the others were his close friends; that in itself made me feel that their statements were valid.

14. I have been asked about the mention of Mr Bayoh taking alcohol at page two of my report. In the witness statements from some of his friends, there is mention of Mr Bayoh drinking alcohol. I'm asked whether I was aware that the toxicology report relating to blood taken from Mr Bayoh at the hospital tested negative for alcohol. I'm very surprised. The statements speak of him drinking Parrot Bay

rum. Of course, we don't know how much he drank. Now, the toxicologist may say, "The fact that they didn't find alcohol is not inconsistent with him taking alcohol" and could speak to how rapidly alcohol would have been excreted. Of course, I'm not a toxicologist. I think it's terribly important for psychiatrists to stick to their clinical area of expertise but, having said that, I'm very surprised that they didn't find alcohol.

15. I will go ahead with what I know of alcohol and behaviour and the likely impact of alcohol plus recreational drugs. Alcohol alone can induce aggressive and violent behaviour without the involvement of recreational drugs. The way that comes about is it makes a person disinhibited, makes them less anxious, and makes them less sensitive to pain. Alcohol alone may cause disinhibition and recklessness. This is combined, at times, with suspiciousness of other people including friends. These effects are well recorded in the medical literature. There used to be a debate in the literature about whether a small amount of alcohol can trigger aggressive behaviour, but we've moved on from that. It's unlikely that a small amount can do it. However, it can be difficult to quantify what a small amount of alcohol might be. Now, then the thing is Mr Bayoh was taking alcohol at the same time as the recreational drugs. They compound their effects both ways; they interact with each other and make it more likely there'll be suspicious, aggressive, hostile, and unmanageable behaviour.

16. If the amount of alcohol taken by Mr Bayoh was, in fact, minimal, then we're seeing the effects of the drugs alone. To be clear, if a toxicologist confirms that the negative toxicology result means that it's unlikely Mr Bayoh had consumed

anything more than a small quality of alcohol this does not change the conclusions outlined in my report in any way. It is very important to emphasise you do not need any alcohol to have this extreme paranoid and aggressive reaction because that type of behaviour is well-recognised with this group of drugs called cathinones. With synthetic cathinones, this is a well-recognised pattern of behaviour.

17. The recreational drug that may be debated a bit is MDMA/ecstasy because, **taken alone**, that particular drug has the opposite effect to causing aggression; it makes people feel close to each other and more intimate. You don't tend to get violence or extreme paranoia with MDMA when taken alone.

18. I also considered the anabolic steroids Mr Bayoh was taking. In the past there have been reports of paranoia and violence, in people who use anabolic steroids for bodybuilding. However, those individuals very often used illicit drugs as well, especially amphetamines. My understanding is that the current view on this is that there might've been false reports that anabolic steroids were making people paranoid because they didn't take into account any stimulant drugs that were being taken at the same time.

19. I have been asked about page 14 of my report where I state, *"It has been suggested that in the community setting, anabolic androgenic steroids might interact with psychoactive drugs such as alcohol to produced significant behavioural and neurophysiological effects (Dodge and Hoagland 2011)."* Psychiatric teachers are at great pains not to separate alcohol from drugs. Psychiatrists, in general, now prefer to group drugs, including recreational drugs

and alcohol into the same bracket. The difference is that one is illegal and the other is legal. The reference to "psychoactive drugs" includes MDMA and Alpha-PVP.

20. In my report I discuss the drug Alpha PVP and its effects from pages 14 to 16. At page 15, my report states:

> "*Ross et al (2011) describe the clinical picture as one of 'extreme sympathetic stimulation and profoundly altered mental state.' The adrenergic effects may include rapid heartbeat, high blood pressure, raised temperature and seizures. Fatalities have been reported. As with other stimulant drugs, the psychiatric effects include severe panic attacks, extreme agitation, paranoia, hallucinations and violent behaviour.*"

21. The term "sympathetic" here refers to the sympathetic nervous system which underlies the "fight or flight" response. The word adrenergic refers to the release of adrenaline and noradrenaline. These are two neurotransmitters which are released by psychostimulants and as part of the "fight or flight" response. The release of these neurotransmitters leads, among other things, to rapid heartbeat, high blood pressure, and probably also the sensation of increased energy. It's a risky situation and there may be a disturbance of the heart's rhythm leading to cardiac arrest.

22. At page 16 of my report, I comment on MDMA and its effects:

"Ecstasy/MDMA use alone is not generally associated with aggressive behaviour (Parrot, 2001). On the contrary, it induces a feeling of increased camaraderie and closeness to others (Semple and Smythe, 2013).

Although MDMA (Ecstasy) can be associated with an acute paranoid psychosis this appears to be a relatively rare event with the drug.

However, it is recognised that Ecstasy users can also be polydrug users, as in the study by Parrot, Sisk and Turner, 2000, and the concurrent use of amphetamine or cocaine, or other drugs, can be the cause of psychiatric disorders in these ecstasy users."

This is essentially the situation we have with Mr Bayoh in that he was using the MDMA in combination with another drug, Alpha PVP.

Opinion

23. My report outlines my opinion from page 18, and states that:

"The rapid changes in Mr Bayoh's mental state and behaviour from apparent normality at about 4 a.m. on 3rd May, are consistent with psychostimulant intoxication.

His condition evolved rapidly in a pattern that is well recognised in descriptions of drug-induced intoxication following the recent ingestion of sympathomimetic drugs such as amphetamines and cocaine. [...]

Psychostimulant psychosis evolves from a period of increasing restlessness, suspiciousness and ideas of reference. The patient misinterprets everyday events or conversations in a delusional fashion, believing that people are plotting against him or are about to attack him. The patient may act on these beliefs with extremely violent behaviour."

24. Ideas of reference means being out of touch with reality or reading too much into a situation: this is always suggestive of a psychosis. Very often it might be that the newsreader on television says something that the patient interprets as being referring to them or, in this case, it was hearing a conversation. Mr Bayoh was party to a conversation between his friends. They were talking about somebody at work who they felt was a difficult colleague, and he heard that conversation but interpreted it to mean they were talking about him, that it referred to him. There were several references to that in the witness statements. It's often the first stage of a progression into psychosis.

25. My report continues "*Although some pathologists and toxicologists use the term 'excited delirium' to describe this clinical picture, most British psychiatrists prefer to use the term 'psychostimulant psychosis' when there is toxicological evidence of the use of amphetamines, cocaine or cathinones."* Psychostimulant psychosis is a psychotic state induced by stimulants like cocaine, amphetamine, and the cathinones. It is not interchangeable with the term excited delirium.

Use of the term delirium

26. The term delirium is a legitimate medical term. People of my generation may remember (when antibiotics weren't always available), if we had something like pneumonia as children, we would be delirious, which is like being in a waking but nightmare state. It's a horrible state to be in; you're confused, you're disorientated, you're extremely frightened, you may not recognize your parents, you think you're being killed, etc. Typically now, it happens post operatively, typically in middle-aged to elderly people. It's very common in general hospitals, and it's also found in withdrawal from alcohol, delirium tremens, which is one of the subcategories of delirium characterised by severe tremor. Delirium has multiple potential causes, I have mentioned intoxication. You can be intoxicated by illicit or prescribed drugs or delirium can be caused by infection, such as septicaemia, meningitis or encephalitis or, it can follow a head injury or stroke or hypoglycaemia. Furthermore, the cause of delirium may be endocrine or metabolic e.g. kidney failure liver failure, respiratory failure, cardiac failure, etc.

History of the term excited delirium

27. The term excited delirium has a legitimate use within medicine and has done since Hippocrates. I did a survey of doctors, asking them, “What do you understand by the term excited delirium?” and they all gave answers which included the words “elderly”, “fragile”, “confused”, “disorientated”, “uncooperative”, “trying to climb out of the hospital bed”, “pulling out their intravenous lines”, etc. I also looked at the figures for agitated delirium in this country, and something like two-thirds or half of people post operatively show

delirium. The older you are, the more likely you are to go into a confused state like this. It's called excited delirium as opposed to stuperose delirium, in which the individual goes into a stupor, and if you wake them up they've no idea where they are, and they don't recognise their relatives and so on. So excited delirium has a legitimate and time-honoured medical use.

28. In the 1980s the term excited delirium was appropriated by Wetli and Fishbain to describe extremely disturbed behaviour in a number of crack cocaine users. This was in the context of an epidemic of crack cocaine use in Florida. They described individuals who were severely disinhibited and uncontrollably agitated, some of these individuals died after being restrained. Significantly, their blood levels of cocaine were only a tenth of the lethal level. Subsequently, the term excited delirium became widely used in the United States as the cause of death in restrained cocaine users. Because their cocaine levels were sub-lethal, pathologists and medical examiners such as Karch and Vilke claimed that they must have died from excited delirium. This provided an alternative cause of death to the possibility of death due to faulty restraint.

29. In my 2022 article, Terry McGuinness and I describe what we mean by faulty restraint, which was, in the American context, strangleholds, choke holds, pressing the carotid arteries, deliberately making the person unconscious, etc. which were, in fact, probably the cause of death in themselves or at the very least a contributory factor given the perilous physiological state of the restrained individual.

30. Over the next couple of decades, the term excited delirium gradually lost its status as a drug induced state as proponents of the term went far beyond using it for cocaine or other drug users. The book that is often quoted as a reference text by the proponents of excited delirium, is a book called “Excited Delirium Syndrome – cause of death and prevention” by DiMaio and DiMaio. In this book, the authors applied the term excited delirium even to people who hadn't actually taken drugs at all. There's one extraordinary statement in which DiMaio says pretty well anybody who's behaving in an excited way, even if they've not taken drugs, has excited delirium. It became a term that was used for individuals in any state of agitation, especially in young, Black people.

31. One example I recall from the DiMaio’s book was of a young Black woman in a mental hospital in Texas. She was a teenager herself and saw another Black teenager being mistreated by staff. She intervened to protect the abused girl and she was restrained and died. The cause of her death, the DiMaios said, “was a typical case of excited delirium.” Why? Because the young woman had physically intervened in a physically powerful way, and she’d then been restrained and had died. So that shows how the term excited delirium has become so capacious that it can include pretty well any disruptive and troublesome behaviour.

32. Another point of concern is that the book by the DiMaios used to be given as a gift by the Taser company to police officers in the US, following a death in custody. This was to assist the police department with the defence of any

criminal or civil case brought against them. Overall, it was a promotion of excited delirium by a commercial interest as it provided an alternative cause for death during restraint. Thus, the medical experts who picked up the term excited delirium, such as Vilke and Karch presented excited delirium as a specific diagnosis in its own right.

33. They were supported by Deborah Mash who claimed to be finding in brain samples from people who died in custody what she called biomarkers of excited delirium. None of the work carried out by Mash has been replicated, it had commercial value for her and legal value, of course, for law enforcement officers who'd been involved in deaths in custody. It's my understanding that this research has since been discredited. Mash, a professor at Miami University, had a practice of sending out kits to collect brain samples, to police officers, wherever there had been a death in custody, saying: "I want to test the brain of the deceased for excited delirium, and the result will help you in litigation." I managed to get pictures of those advertisements off the internet. I have provided copies of these to the Inquiry (WIT-00033). These advertisements have since been taken down because they're so discredited now. It was astonishing. There were huge commercial interests in excited delirium.

Current thinking about excited delirium

34. I'm highly critical of excited delirium as a diagnostic entity when used as a cause of death. At the time the term was misappropriated in the United States, there were appropriate terms to cover severely agitated behaviour

associated with recreational drug use for example, cocaine or drug induced agitation or psychosis. The term excited delirium is not a recognised diagnosis in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) or the International Classification of Diseases (ICD-11). In the UK, the Royal College of Pathologists and the Royal College of Psychiatrists have condemned the use of the term. In the US, the American Medical Association has banned the use of the term along with the American Psychiatric Association, and much of the medical profession is abandoning the use of the term.

Acute Behavioural Disturbance

35. I have been asked what symptoms are normally attributed to acute behavioural disturbance ("ABD"). In my 2016 article (PIRC-03395 (a)), there's a succinct quotation from a book by Beer and Pereira, which I don't think I can improve on: *"In their authoritative handbook, "Psychiatric Intensive Care," Beer et al. give a comprehensive descriptive definition of acute behavioural disturbance requiring urgent intervention. It usually manifests with mood, thought or behavioural signs and symptoms, and can either be transient, episodic or long-lasting. It can have either a medical or psychological aetiology and may reflect a person's limited capacity to cope with social, domestic or environmental stressors. The use of illicit substances or alcohol can accompany an episode of acute disturbance or can be causative. The acute disturbance can involve threatening or actual violence towards others, the destruction of property, emotional upset, physiological distress, acts of self-harming behaviour, verbal abuse, hallucinatory behaviour, disinhibition,*

disorientated or confused behaviour and extreme physical over-activity." As this suggests, the symptoms of ABD are a very wide-ranging picture. We regard it as an umbrella term, completely nonspecific, and covering many psychological and physical causes.

36. In terms of how it is normally diagnosed, it may be by a person presenting within a hospital. However, in a public place a person might be observed running around in a distressed way, sometimes in a threatening way. If the behaviour is threatening or frightening, then usually, members of the public will call the police. It's important to know that patients presenting with symptoms of ABD don't always need restraint. Having a conversation with them is step one.

Concerns regarding use of the term ABD

37. I have been asked about the use of the term acute behavioural disturbance ("ABD"). In my 2016 article, I think I rather welcomed it as something much better than excited delirium. When we thought of acute behavioural disturbance, we used that term in a very umbrella sort of way so that it did not imply a single underlying biochemical disorder within the brain with a specific behavioural expression. It simply meant a person being very upset, very distressed or agitated but sometimes being psychotic due to a whole range of causes. The problem is that, in the English jurisdiction, there've been cases where pathologists and others have used the term "ABD" as a substitute for excited delirium, with the implication that the person would've died anyway.

To be clear, acute behavioural disturbance is not a recognised diagnosis in the DSM-5 or the ICD-11.

38. The Royal College of Psychiatrists' Position Statement on acute behavioural disturbance and excited delirium contains an annex which lists police-contact related deaths where either ABD or excited delirium have been referenced as part of IOPC investigations and/or inquests, since 2005. One such case was that of Kevin Clarke. He was a psychiatric patient. During a relapse of schizophrenia, he became disturbed in a public place and the police were called. The police restrained Mr Clarke when he appeared mentally unwell and he was restrained in a risky way and died. At the Inquest, the term "acute behavioural disturbance" was raised by a pathologist as the cause of death.

Best practice in dealing with a person displaying signs of ABD

39. I have been asked, in my experience, what is the best way to approach a person who is displaying signs of ABD. I suggested the acronym, SAPID (severely agitated person in distress) as an alternative to ABD – it covers the same broad range of symptoms e.g., a person who has had sudden and shocking bad news. There are cultural variations on how you respond to bad news. You see that, sadly, in footage from the war in Ukraine, Syria and elsewhere, there are culturally almost standardised ways of reacting in grief. Some presentations of ABD involve crying, agitation, falling to the ground, running, etc. right through a spectrum of behaviour which might include alarm and fearful behaviour due to psychosis.

40. I wanted to introduce an adjectival description of a distressed human being as opposed to naming a syndrome. First, when a Severely Agitated Person In Distress (SAPID) is seen in a public place, like Mr Bayoh in this case, at that point it would be reasonable to say that this person is acutely disturbed and that some intervention is required. Ideally, this would be an attempt at de-escalation. If talking and a non-confrontational approach fails to reassure and calm down the individual, and if they are behaving in a way that is likely to cause damage to themselves or other people, then restraint would be required. There's nothing wrong with saying acutely disturbed person because that's what they are, but that is not a diagnosis in itself: it's just descriptive term.

41. Approaching such a person in a non-threatening way is essential. Some people obviously are better at this than others. Some people have the ability to appear less threatening or more amiable, or less frightening. This involves a person's body language, their way of speaking to the individual. You'd introduce yourself by your name, say who you are and why you're there, for example, "the shopkeeper called me because he was a bit worried that you may not be well", something like that, and try and establish a conversation. We try and use both non-verbal and verbal de-escalation; if appropriate try to sit next to the person, offering them a proverbial cup of tea, if that's available, can be very effective. I think posture and how you position yourself in a reassuring and non-threatening way are very important.

42. When the individual remains severely agitated and a risk to themselves or to other people, and where the situation cannot be deescalated, and the cooperation of the individual can't be obtained, then you have to move to restraint. There should be no delay in going to hospital because of the potential medical risks to themselves as well as the possibility of physical harm to others or to themselves.

43. In a hospital setting this would be restraint by nurses and then probably rapid tranquilisation with medication. In a community setting, the response will range from trying to have a dialogue with the individual to calling on the emergency services (ambulance and police) to convey the person to a place of safety, so it depends what you can ascertain to be the cause.

44. For example, a lady who's had a bereavement or some terrible news, you wouldn't call the emergency services. You'd want to provide comfort, sit down, talk and listen and so on. Not everybody needs an ambulance when they're publicly distressed; transport to hospital with the help of the emergency services may not be necessary. So, we wouldn't want to say that every single person who's distressed in public needs to be taken by ambulance to the hospital. That would be absurd, so judgement does come into it.

45. At the other extreme, somebody who's intoxicated with drugs and behaving dangerously, this should be treated as an emergency and if non-verbal and verbal de-escalation failed, you would have to rely on the emergency services to convey the person to A&E. Where they would receive emergency

treatment including life support measures, rehydration, cooling, monitoring the heart and kidney function etc in addition to rapid tranquilisation.

46. So, if we go to Leon Briggs, who was seen to be severely agitated, there was no doubt that he should have been taken by ambulance to A&E, even if the police could not have known that he had a drug-induced psychosis. In the event, they drove past the hospital and they took him to the police station. The officers did not seem to be aware of the medical dangers that the individual was in. Ambulance people did turn up, but they felt this was a police matter. They stood back and said, "We haven't been trained to deal with these situations."

47. The ambulance crew refused to get involved while he was being restrained, whereas obviously they should have been there to assist the police to protect the patient from physiological things going wrong. What I mean by this is the combination of an extremely overactive autonomic nervous system and the intense physiological stress associated with resisting restraint which can eventually have a fatal outcome. In many cases involving psychosis or drugs, the police will be called. I think it's reasonable for the police to know that in many, many cases an ambulance will be needed. There are a lot of lessons to be learned from that case.

Likely success of de-escalation with Sheku Bayoh

48. I have been asked whether, in my opinion, an attempt to de-escalate may have been successful with Sheku Bayoh. Mr Bayoh was paranoid and we

know he saw other people as enemies including his best friend. We mustn't underestimate the assault on his best friend, which was very serious indeed, and completely out of character. However, on the other hand, there is also his conversation with his neighbour, which followed shortly after his fight with his best friend. I have been advised this neighbour is called Neil Morgan. Mr Morgan took a very soft approach, asking Mr Bayoh if everything was ok and offered him a cup of tea. Mr Bayoh doesn't accept the offer of a cup of tea but there is a calm discussion and no aggression towards Mr Morgan.

49. This suggests that Mr Bayoh might have been receptive to an attempt to enter into a conversation and to de-escalate the situation. We do see people who are very disturbed and then do react well to a gentler approach, who do end up in the hospital and get the treatment they require, so it's possible. Essentially, there is no way of knowing because that didn't take place here.

50. I have been asked, if de-escalation is tried and failed with an individual, whether any information gained from the individual might be helpful in terms of providing insight into the situation. Yes, information might be provided that would give a greater understanding of the individual's preoccupations, concerns and fears and that could lead to some helpful intervention.

51. For example, a disturbed person might think that some terrible person has gone to their home and is attacking their wife and children. Now if you could elicit that information you could say, "Look, I'm going to send the police or social worker around now to your house just to check and then they'll ring us

back. Maybe I'll get the social worker to ring you from your home or put your wife on the phone, just to reassure you." So getting access to what is worrying them most is extremely important. I think it's very important to attempt that conversation because it might give you a clue as to why the person is so upset and how they're misinterpreting things.

52. I can say, in my experience of dealing with people who are acutely disturbed, a forceful or strongly assertive approach generally causes increased aggression. This is because a common feature of a psychosis, whether or not drug induced, is paranoia i.e. a belief that people wish to harm you. It's important not to raise your voice or give commands. It's common for such individuals to be suspicious of people in authority or of their neighbours or other people, and they may be concerned that they are trying to harm them. Generally, if you're too assertive, to put it mildly, then you'll alienate the person even more.

Restraint and ABD

53. I have been asked about the use of restraint with people with ABD. Where a person is a risk to themselves or to others, and attempts to deescalate the situation fails, then restraint may become necessary. In my opinion, the top priority is to avoid restraining a person in the prone position i.e face down. In the clinical setting, restraint in the prone position should never be used. In addition to consideration of the position that you restrain the person in, it is important to avoid applying weight to their back or their body.

54. Meanwhile, it is also vital to keep up a reassuring dialogue; these incidents are very traumatic for the person and very traumatic for the police, ambulance personnel or medical and nursing staff, as well as the individual's family and their community - that often gets overlooked. Dialogue is so essential. If, for example, it's a restraint that takes place out in the community, and you're waiting for the ambulance, at that point, an officer or a paramedic should sit on the ground themselves next to the person, not tower over them but actually sit down next to them and talk and listen. The situation requires dialogue and the professionals need to recognise that the patients are very frightened.

55. As I have explained, restraint should be avoided if possible because it's very humiliating to be restrained. It leads to antagonism between the restrainer and the restrainee, and possibly restrainer and the restrainee's community. Restraint should only be used as a safety measure to prevent the person from harming themselves or others.

Excited delirium and prone restraint

56. In the whole literature surrounding excited delirium and deaths in custody, the proponents of excited delirium tend to defend prone restraint. There are several articles in which restraint in the prone position is debated. One of the most relevant debates in the literature was the response to the article by Alon Steinberg in 2021[1], who criticised that mode of restraint. Among the

[1] Steinberg A, *Prone restraint cardiac arrest: A comprehensive review of the scientific literature and an explanation of the physiology* Med Sci Law. 2021 Jul;61(3):215-226
Vilke GM, Neuma T, Chan TC. *Response to: Prone restraint cardiac arrest - A comprehensive review of the scientific literature and an explanation of the physiology.* Med Sci Law. 2022 Jan;62(1):77-78.

respondents to Steinberg's critical review are Theodore Chan and Gary Vilke. Proponents of excited delirium have frequently cited research by Chan and his colleagues in which they used healthy student volunteers to purportedly mimic a restraint situation by police officers, in which the student subjects had weights placed on their backs. They've used those laboratory experiments repeatedly to show that the prone position, in the laboratory, even with weights applied to the back, does not produce a worrying physiological state.

57. Now, my objection to Chan's conclusion is that he and his colleagues were not replicating the arrest and restraint of, for example, a young Black man who might be psychotic and therefore misinterpreting what the police were doing, or who may not be psychotic but has had previous encounters with the police and is frightened for his life. You can't replicate that in the laboratory, and the student subjects knew very well that they wouldn't come to any harm because they were in a closely monitored experiment; whereas the young Black man being restrained by police has no guarantee that he'll emerge alive, so he's fighting for his life and consequently his physiology is very different. He has a magnified, multiplied fight-or-flight reaction with all the adrenaline and noradrenaline released, etc. which puts him in a perilous state.

58. I made this point in my critical article on excited delirium in 2016 (PIRC-03395 (a)). I believe that this is also Steinberg's view and well as that of the British

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Steinberg A. *Response to: Response to: Prone restraint cardiac arrest: A comprehensive review of the scientific literature and an explanation of the physiology.* Med Sci Law. 2022 Jan;62(1):79-80.
Kroll MW, *et al*. *The prone position paradox. Med Sci Law.* 2022 Jul;62(3):233-235.
Steinberg A. *Response to: The prone position paradox.* Med Sci Law. 2022 Jul;62(3):236-237.

researcher, Dr John Parkes. The respondents to Steinberg's paper, stick, I think unconvincingly, to the opposite view. They continue to quote Chan's original research with the students who were restrained in a prone position and who had weights applied to their backs. Indeed, Steinberg goes so far as to say that George Floyd's cause of death wasn't a chokehold around his neck. It was the officer or officers kneeling on his back that restricted the movement of his diaphragm, which stopped him breathing. That's pretty well the last few sentences of Steinberg's letter.[2]

Psychostimulant psychosis

59. I have been asked whether I consider that Sheku Bayoh was suffering from acute behavioural disturbance and whether psychostimulant psychosis falls within ABD. I don't think it's necessary to use the term ABD. I would state, as I did in my report originally, this was a drug-induced or psychoactive drug-induced psychosis characterised by severe paranoia and aggression.

60. I have been asked how Psychostimulant psychosis should be treated. Where a person is in an agitated state as a result of psychosis, it should be treated as a medical emergency and dealt with in the same way as that described for ABD.[3]

Risk due to the drugs

[2] At page 2, *"Officer Chauvin placing his leg on Mr Floyd's posterior neck would not have significantly occluded Mr Floyd's trachea to cause suffocation. Rather, the combination of Officer Chauvin's leg keeping Mr Floyd in a prone position as two other officers placed weight on Floyd's lower back and legs led to death by PRCA."* Steinberg A. *Response to: The prone position paradox.* Med Sci Law. 2022 Jul;62(3):236-237

[3] Paragraphs 39 to 45 above.

61. I expect the Inquiry will want to know, given the toxicity of the drugs that Mr Bayoh took, would his life have been at risk if the police either hadn't intervened, or if they'd intervened in a different way? So the key aspect of that point is: could he have died but for the restraint? The fact is that people in that state, first of all, can die by accident, by running into a busy road or by believing that, for example, they're able to jump from a height and be safe, etc. or by trying to escape from imaginary enemies – jumping into a river, etc. So, there are accidental deaths in a significant number of cases.

62. Secondly, there are medical risks, as I've described, particularly on the cardiovascular system[4]. People who take this drug i.e. Alpha-PVP and develop this toxic reaction are at risk of accidental death, or death directly from the toxic effects of the drugs. So this has nothing to do with excited delirium. This is drug-induced toxicity, which can cause death in its own right. However, the question of whether it was probable that Mr Bayoh may have died anyway, is really one for a forensic pathologist or a toxicologist.

American College of Emergency Physicians, White Paper Report on ED

63. One of the reasons the term excited delirium has been used in the UK is the influence of the original White Paper produced in 2009 by excited delirium task force from the American College of Emergency Physicians (COPFS 00028). The proponents of excited delirium, were involved in the production of this white paper, including Deborah Mash, Theodore Chan, and Gary Vilke. Certain members of the Task Force who worked on the paper had very close links with Taser, including Deborah Mash. This conflict of interest is an example of the concern raised in my 2022 Article, specifically regarding

[4] See *inter alia* paragraphs 20 and 21 above.

"Axon/TASER's activities to promote excited delirium, its financial relationship with many of those promulgating the diagnosis".[5]

64. In recent years, the American College of Emergency Physicians, have stopped using the term excited delirium. They've simply replaced it with a similar term, hyperactive delirium[6]. They haven't climbed down from their attitude to excited delirium in spite of the American Medical Association condemning the term and everything it implies. In the UK, my understanding is that the Royal College of Emergency Medicine, is moving towards the sort of view that I've expressed regarding excited delirium, but I think there's still some resistance. This might be because emergency physicians see severely disturbed people being brought in by ambulance, or by the police, who need urgent life-saving measures; some of them die and the cause or causes of death are not immediately apparent.

Article - Excited delirium: a psychiatric review[7]

65. This article from 2016 ("my 2016 article") (PIRC-03395 (a)) is a review of the medical literature on excited delirium in North America. The article covers the clinical psychiatric meaning of delirium and the development of the use of the term excited delirium in fatal cases. It explains that excited delirium is not recognised by American psychiatrists, even though it is a term used by medical examiners, and that it seems to be endorsed as a discrete diagnostic entity by the American College of Emergency Physicians. The American College of

[5] Page 8.
[6] ACEP Task Force Report on Hyperactive Delirium with Severe Agitation in Emergency Settings, June 2021 (WIT-00032)
[7] Lipsedge, M - Med Sci Law (2016) 0(0) 1–7

Emergency Physicians produced a White Paper in 2009 endorsing excited delirium as a unique entity which they call ExDS.

66. In summary, I state in my 2016 article that there's no evidence that acute behavioural disturbance alone is other than a rare cause of death, and there's no evidence that correctly restrained behaviourally disturbed patients are commonly at risk of death. The majority of cases will survive arrest, restraint and being transported to custody or to hospital. However, there is a distinct need for statistics on the frequency of restraint-related deaths and acute behavioural disturbance in all those cases where a restraint procedure has been correctly performed. I also stated that I was hoping to produce a dialogue between forensic pathologists, psychiatrists, and coroners so that we could clarify the meaning of excited delirium and work out a mutually agreed terminology. So it really was in a positive spirit that I concluded my paper.

67. I would now like to refer to the article by Alon Steinberg *Prone restraint cardiac arrest.*[8] One of the letters which was a response to the Steinberg critique of prone restraint is co-authored by Mark Kroll[9], a bioengineer who works for Axon (formerly known as Taser). He is on the board of Directors for Axon. Kroll has had to be open about his links to Taser and declare his interest in Axon. The controversy is still going on even though the American Medical Association has taken a strong stand. The American Medical Association said in 2021 that

[8] Steinberg A, *Prone restraint cardiac arrest: A comprehensive review of the scientific literature and an explanation of the physiology* Med Sci Law. 2021 Jul;61(3):215-226

[9] Kroll MW, *et al. The prone position paradox. Med Sci Law.* 2022 Jul;62(3):233-235.

current evidence does not support the use of "excited delirium" or "excited delirium syndrome" as a medical diagnosis.

Independent Review of Deaths and Serious Incidents in Police Custody

68. I am familiar with the recommendations of Dame Elish Angiolini's Report of the Independent Review of Deaths and Serious Incidents in Police Custody (WIT-00020). I have been asked specifically about chapter 2 in relation to restraint and the recommendations made in relation to that. The report recommends that "*Police practice must recognise that all restraint can cause death. Recognition must be given to the wider dangers posed by restraining someone in a heightened physical and mental state where the system can become rapidly and fatally overloaded. Position is not always the determining feature as greater danger can arise from the struggle against restraint as the restraint itself.*" This is true. The life and death struggle, or what the subject feels is a life and death struggle, that's the important thing. It's important to emphasise police never intend to kill someone with their restraint; that's not their agenda. Restraint is their agenda, but the person being restrained, may believe that whoever's restraining them is trying to kill them. They may be paranoid in a psychotic way and assume that these are agents of some hostile power.

69. The police are acting in that context, i.e. of a patient's perceived life and death struggle, yes, I would stand by that because, for example, if you're using your large muscles in your legs or your arms against restraint, you'd damage the muscles. If it's really extreme, you'd damage the muscles, and that releases

what's called myoglobulin, which are sort of molecules that circulate and clog up the kidneys and cause renal failure. In addition, that's coupled with a process, whose technical word is rhabdomyolysis, which means destruction of the skeletal muscles. That's one thing that can happen in addition to metabolic acidosis, which increases the risk of a disturbed heart rhythm and the risk of cardiac arrest.

70. I have been asked about another recommendation that, "*There should be a mandatory and accredited national training for police officers in restraint techniques, including de-escalation and supervision of vital signs during restraint.*" I absolutely agree with this. There should be standardised training in de-escalation and the monitoring of the restrained person. As for a restraint and de-escalation course, I think it has to be renewed every year and taken as seriously as, for example, firearm safety procedures. Anything that you don't use frequently, you'll forget. I imagine that the frequency with which police use restraint will vary from place to place.

71. A further recommendation within that report is that: "*The grave dangers of prone and other forms of restraint in and of itself must be reiterated within forces in an effective manner and re-emphasized in training and retraining by all forces.*" Yes, I fully agree with this. I've commented on the dangers of prone restraint within this statement.

72. This report also recommends *"Collaboration between pathologists, psychiatrists and emergency medicine practitioners is required to clarify and*

standardise the medical understanding around restraint-related deaths involving mental health crises." This is what the Royal College of Psychiatrists' Expert Reference Group has recommended in its position paper, at page 29. I discuss this below[10].

73. Lastly, I have been asked to comment on the following recommendation at page 47, *"The restraint of anyone suffering a mental health crisis should be identified in national policy and training as a high-risk strategy giving rise to a medical emergency. Where all else has failed or life-threatening circumstances demand, it should be used for the very shortest time possible, and an ambulance should be called for immediate transportation to accident and emergency."* Overall, I agree. However, I would add a reference to psychosis due to drug misuse in addition to a mental health crisis. They need to be considered separately because of the impact of the drug, not only on the person's mental state but on the cardiac and the autonomic nervous system.

74. Once you've decided that the restraint is needed, then you need an ambulance straight away. This is because we now recognise that the restraint process, because of the physical struggle and the individual's terror can produce a medical emergency. I am using the word terror to indicate the combination of the intense fear produced by paranoid persecutory delusions combined with the conviction that the restraint process might kill them. Thus there is a vicious circle in which the more the individual struggles, the more he is restrained and the more fearful he becomes.

[10] Paragraph 80.

Royal College of Psychiatrists' Position Statement on acute behavioural disturbance and excited delirium

75. In the Royal College of Psychiatrists' position statement (WIT-00021), it was recommended that the term excited delirium should never be used. This was because, among other things, the term "excited delirium" has been used to imply an inevitable fatal outcome regardless of how the person is treated. Additionally, because excited delirium has been used in inquests to obscure the contribution to death of inappropriate restraint measures by the police or by hospital staff. In the Expert Reference Group (ERG) for the position statement, carefully considered whether or not the term acute behaviour disturbance was helpful and what it could be replaced by.

76. I wanted a term that captured a whole range of disturbed behaviour, and examples would be: a woman running down the street because she's been evicted or she has heard that her son's been arrested, or some other reaction to bad news, or a bereavement or a domestic argument. Some people do react by running down the street. Any situation that causes extreme distress can cause rather extreme behaviour, but that doesn't mean that that's the product of this alleged biochemical disturbance in the brain. It's an understandable human reaction to something dreadful happening in your life: a bereavement or whatever. So essentially a disturbance of behaviour of sudden onset.

77. The term acute behavioural disturbance was attractive at first because it covered a whole range of things. However, the ERG was worried that ABD

might simply be used as a substitute for excited delirium. As I have mentioned earlier, the College was aware of cases where this had taken place. We were aware that if we weren't careful, acute behavioural disturbance could be used as a replacement for excited delirium with the implication that the person would have died anyway. So essentially, ABD might be treated as the cause of death rather than looking for other possible causes.

78. The difficulty is finding an alternative term. I was keen to introduce adjectives rather than nouns to describe a person in distress as it's more humanising to focus on the individual rather than the disturbance. Similarly, the ERG preferred to refer to the individual in a disturbed state rather than suffering from a specific disturbance and it avoids the implication of a specific medical diagnosis. That sounds pedantic, but I think it's quite important.

79. The College addresses a further point that people who are disturbed might need an ambulance and might be in medical danger, but that doesn't apply to everybody who's disturbed. This is the part that must be difficult to teach the police and ambulance staff in the first instance: that while there are some cases, especially the drug-induced cases, where you do need urgent hospital management, there are others, for example an acutely distressed individual due to grief or a relationship breakdown etc., who isn't at physiological risk.

80. The position paper acknowledges that ABD has benefits as a shorthand for frontline services and that use of the term can facilitate effective triaging and

rapid-healthbased responses[11]. However, the position paper recommends at page 29, *"Alternative terminology which moves away from the suggestion of a distinct diagnostic entity should be urgently sought, drawing on the broader evidence-base around agitation and physiological deterioration. An adjectival description such as a "severely agitated person in distress" might offer an alternative shorthand for emergency services which humanises the person affected and carries no implication of a distinct diagnosis or cause of death. Any change in terminology should be agreed by consensus, to ensure vital consistency across services."*

81. I think the College is trying to reduce the numbers of unnecessary restraints. Furthermore, the College were conscious that Black people are disproportionately restrained in terms of numbers and population base etc. The position statement recommends, at page 35, that where the term acute behavioural disturbance is used, that subjective and potentially racialised criteria should be removed from clinical guidance. This includes criteria such as 'superhuman strength' and 'insensitivity to pain'. Further that all guidance should emphasise that 'ABD' is not a diagnosis or cause of death. These are all recommendations that I fully support.

Article: 'Excited Delirium', acute behavioural disturbance, death and diagnosis

82. I've been asked to provide a summary of the main points of my article, 'Excited delirium', acute behavioural disturbance, death and diagnosis, which

[11] Pages 5 to 7

was co-authored with Terry McGuiness in 2022 (“my 2022 article”) (WIT-00018). We explore how “excited delirium” developed and how it became a term that was used to exclude or to downplay the role of faulty restraint in deaths in custody. We trace the history of how that developed. We've mentioned that the term has been severely criticised, e.g. by Judge Braidwood in Canada and more recently by the American Medical Association etc.

83. In this country, the Royal College of Pathologists has banned the use of the term “excited delirium,” which is an important move. Although it's been discredited, excited delirium still has its advocates. I was inclined to recommend “acute behavioural disturbance” as a substitute in 2016, but there is some evidence in subsequent inquests that acute behavioural disturbance might be regarded as a substitute for excited delirium. This shows how there might be a tendency to cling to the term “excited delirium” even though it's been discredited in many circles.

84. In my 2016 article and in our 2022 article, in summary we state that there's no evidence that acute behavioural disturbance alone is other than a rare cause of death, and there's no evidence that correctly restrained behaviourally disturbed patients are commonly at risk of death. The majority of cases will survive arrest, restraint and being transported to custody or to hospital. However, there is a distinct need for statistics on the frequency of restraint-related deaths and acute behavioural disturbance in all those cases where a restraint procedure has been performed.

Article by Tracy and Stevenson

85. There is a relevant paper by Richard Stevenson and Derek Tracy published in 2021: "Acute Behavioural Disturbance: A Physical Emergency Psychiatrists Need to Understand"[12]. Stevenson is a consultant in emergency medicine at Glasgow Royal Infirmary. Derek Tracy is a psychiatrist and Medical Director of West London NHS Trust. The paper puts tremendous emphasis on the overactivity of the sympathetic nervous system. They summarise the pathophysiology of ABD as follows: *"essentially it results from a sustained release of the sympathetic catecholamines adrenaline, noradrenaline and dopamine. These raise heart rate and blood pressure, and effect various metabolic changes. A notable occurrence in ABD is impairment of the normal homeostatic physiological processes that should ordinarily limit such release."*

86. They go on to describe the mindset of restrained individuals and suggest that, in such instances, *"most individuals, in a delirious state, believe that they are 'fighting for their lives' rather than being motivated by wishing to challenge or assault another. Their altered mental state also means that they may not recognise attempts to assist them, and indeed there are reports of individuals believing that professional services are imposters."* It was a thoughtful paper, which was carefully considered by the ERG prior to the publication of the Royal College of Psychiatrists' position statement.

87. Catecholamine excess (the surge of adrenaline, noradrenaline and dopamine) and metabolic acidosis increase the risk of sudden death during or shortly

[12] Stevenson, R, and Tracy, D, BJ of Psych Advances (2021), vol. 27, 333-342.

after restraint. This is because of the enhanced vulnerability of the heart due to the abnormal physiological state caused by drugs, fear, extreme exercise and struggle against restraint. I agree with Stevenson and Tracy's model of the disturbance in physiology in some of the individuals who are now described as suffering from ABD. But it does not cover the type of acute disturbance in a person's behaviour cause by shock or sudden grief i.e. the distressed lady running down the street I have alluded to earlier.

88. It's a very important paper because it's a corrective to me and McGuinness, in that it emphasises the precariousness of some of these people's physiology. However, it only covers those in a severely agitated state. I think we require a term that covers a very broad spectrum of publicly and conspicuously distressed individuals, who might, for example, be grieving loudly. At the other end of the spectrum Stevenson and Tracy's physiological model certainly applies to the vicious circle I described earlier.

Final Post Mortem report

89. I have had sight of the final post mortem report (PIRC-01445). I am aware that the cause of death in this report was *"Sudden death in a man intoxicated by MDMA (ecstasy) and alpha-PVP, whilst being restrained".* I have been asked to comment on the pathologists' views on excited delirium at page 16: *"Given the circumstances provided, toxicological findings and lack of another cause of death at post mortem, the possibility of excited delirium syndrome has been considered in this case. It is however a psychiatric and not a pathological diagnosis and there is some debate in the forensic community with regards to*

its application as a cause of death. That said, there is a great deal of literature looking at this syndrome especially with regards to the circumstances described in this case, but it has to remembered that it should be considered in conjunction with circumstantial information (namely a history of restraint) and toxicological findings.

Excited delirium syndrome is described as a life threatening condition that has a variety of causes but is largely associated with drug intoxication, in particular stimulant drugs (MDMA and alpha-PVP are both stimulant drugs). It can include paranoid and aggressive behaviour as was reported in this case and has no pathognomonic findings at post mortem. Individuals suffering from this condition, due to their behaviour often come to the attention of police services and often die during or shortly after restraint, as was the case here. However, it is not completely understood why such individuals die."

90. The report is not dogmatically in favour of the diagnosis of excited delirium but it's not dismissing it altogether. That's my impression from what they've said, and that they are doing their best to consider all options. The post mortem was in May 2015, that was before my paper was published in 2016 and before the Royal College of Pathologists ban on the term as a cause of death in 2020. It was more acceptable at the time of drafting the post mortem report to refer to excited delirium than it would be now. In retrospect, it's quite a measured consideration and, importantly, the report is not concluding that the pathologists believe that the person died from excited delirium.

Report of Dr Nat Cary

91. I have had sight of the report of Dr Nat Cary (COPFS-00196). I should say that I've worked with Dr Cary for many years, so I'm very sympathetic to his views. I'm asked to consider the following comment regarding excited delirium at page 6: "*this is not a diagnosis that I consider to be appropriate as a cause of death, accepting that it is used as such in North America. In my opinion, it is very much more appropriate to stick to the facts rather than invoke syndromes. The facts here are that there was an acute behavioural disturbance and stimulant drug misuse, both features that are highly relevant to the cause and circumstances of death."* I think he's expressed that extremely well and I don't have reservations about his use of the term acute behavioural disturbance because he's not using it as the cause of death. He's using it in the sense of a person whose behaviour is determined by the drugs that they've used. That's a very concise, helpful statement.

Report of Dr Steven Karch

92. I have seen the report of Dr Steven Karch (PIRC-02526(a)). He is asked the question, *"What was "the physiologic effect of the drugs detected in the toxicology sample, individually or in combination on the deceased in the circumstances of his arrest?".* In his answer, at page 3, he describes the effect of MDA, MDMA and alpha-PVP on the brain and the drugs' ability to increase dopamine concentrations in the brain. In that context he states: *"if the increase in brain dopamine is too great, disruption of normal brain function may occur with lethal consequences, sometimes in the form of a disease known as excited delirium syndrome (ExDS). Mr Bayoh, the decedent,*

exhibited many of the features of excited delirium […] The results of thorough in vitro studies of human brains harvested from those who succumb suggest that that most, probably all, of the symptoms listed are as a consequence of dopamine excess. As is apparent from a review of the list, dopamine excess could account for most of the behaviour observed in Mr Bayoh." As discussed, it is correct that psychostimulants do cause the release of dopamine and may indeed have been the cause of Mr Bayoh's behaviour. However, that is only one component of the cascade of events I have described earlier, whose outcome might be death during or shortly after restraint. The controversial aspect of Karch's conclusion here is the fact that he attributes death to dopamine excess and appears to disregard the possible contributory role of restraint.

93. Dr Karch cites Mash, D.C., et al., here and their article *Brain biomarkers for identifying excited delirium as a cause of sudden death*[13]. My understanding is that the research carried out by Mash has now been discredited because nobody has replicated her findings. Dr Karch uses the term "disease" in reference to excited delirium. No pathologist would call it a disease because a disease requires histopathological evidence. It may be that Dr Karch would say "Mash has produced evidence of the disease" but that's very doubtful. Whatever you find in the brain reflects the terminal struggle of the restrained individual and it's not the primary cause of death. I would be interested to hear what a neuropathologist would say about this. It appears to me that if Mash's work is discredited then that discredits Karch's conclusions.

[13] Forensic Sci Int, 2009.190(1-3): p. e13-9.

95. I believe the facts stated in this witness statement are true. I understand that this statement may form part of the evidence before the Inquiry and be published on the Inquiry's website.

Signature..... [redacted]

Date..... April 14, 2023 | 2:47 PM BST