The Sheku Bayoh Public Inquiry

Witness Statement

Dr Anthony Bleetman

Taken by [redacted]

Via MS Teams

on Friday 3rd February 2023

Witness Details

1. My name is Anthony Bleetman. My contact details are known to the Inquiry.

2. I am a consultant in emergency medicine, formerly trained as a surgeon.

Professional Background and Qualifications

3. My qualifications are MD, PhD, FRCSEd, FRCEM, DipIMC RCSEd. The Diploma in Immediate Medical Care by the Royal College of Surgeons of Edinburgh (1992). I received a PhD in Occupational Health from the University of Birmingham in 2000.

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4. I have been providing medical opinion on Use of Force matters for about 20 years. I have been in clinical practice since the 1990s. Since the late 1990s, I've been involved in Use of Force matters, having worked with the police, mental health and other sectors in which force may need to be applied. This arose from my PhD work with University of Birmingham on development of body armour and subsequent work with the police. I also serve on the Ministry of Defence Committee looking at the medical implications of less lethal weapons and associated Use of Force matters.

5. I am still a practising consultant. I came out of the NHS a few years ago. I do freelance locuming, most of it in Elgin in Scotland. I also have a part-time contract doing emergency medicine in a big centre in Israel for ten days a month.

6. I qualified as a police instructor for unarmed defence tactics, safe restraint, handcuffing, tactical communication skills, incapacitant sprays and knife defence. I qualified in 1998. I was current from 1998 until approximately 2008 – 2009. I used to go and instruct with the police of Northamptonshire and I was also involved with the introduction of a package called SPEAR training. I was involved with the development of SPEAR Training which is now part of the College of Policing Syllabus but since then I have not been current in police training of unarmed defensive skills. However, I remain familiar with the current police syllabus and how it's trained, although I have not been involved in such training for about 10-15 years.

7. I personally didn't have to do any refresher training. I did some research work with the Strathclyde Police back in the early 90s and I was told by a senior police officer that it would be really helpful for me to understand how police train and what they train on. I would be far more credible when it comes to medically examining Use of Force issues. So, I took a month off work and trained in that material.

8. I have both expertise in both the Use of Force and giving medical opinions on the medical aspect of Use of Force. In terms of the delivery of the Use of Force,

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subsequent to my involvement with the police, I have also been asked to get involved with Use of Force in mental health, special education, airlines, cruise ships, transports and organisations. In order to do that, I have undergone and continue to undergo training in physical intervention packages across the whole sector to the extent that I am now heading a Masters degree programme at Queen Mary University of London, which is to be launched later this year, entitled, "Enhancing the Safety and Wellbeing of Persons in Care or Custody."

9. A lot of that deals with the Use of Force considerations: the training, skill selection, simulation training and the medical effects of physical interventions. In addition to that, because I've been providing expert opinion in Use of Force cases, I got together with a lawyer who's very active in the field, and a couple of years ago we formed a company called SWC Experts. We have advised the Scottish Prison Service on their Use of Force package among many other organisations. So, although I have not been personally directly trained by the police in the last 10 to 15 years, I remain very current in the training and delivery of Use of Force packages across a broader sector.

10. I want to state that in the case of Sheku Bayoh, I am not prepared to provide an opinion on the mechanics of the restraint and whether use of force was reasonable, proportionate or necessary. In my view, it is for a Use of Force expert to comment on the restraint that was undertaken. Regarding the standard operating procedure for Police Scotland, for example, I would also defer to the opinion of a Use of Force expert. What I can comment on is the general state of the detainee i.e. Mr Bayoh and what happened that led to his death. When it comes to techniques that were employed, I can speak about which techniques can be applied and about the risks to the person that they are being applied to, the risks to the person applying them and the risks to any third party that might be in the area. I will give expert opinion on the medical effects of the use of force but not about the of the appropriateness or lawfulness of any force that was used.

11. I have written hundreds reports medical effects of the Use of Force and given evidence in court a handful of times in the last 20 years. No negative comments

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have ever been made by a judge about my evidence. I have given evidence to Coroner's Courts a fair amount of times as an expert in relation to the medical effects of Use of Force.

12. I have also done work for the Home Office. I was largely involved with body armour, knife defence and had less to do with hands-on physical skills. That is more for police agencies and the IOPC. I did not undertake any related work on Use of Force matters working for the Home Office. I did so mostly in individual police forces and IOPC where I was involved with hands-on physical skills. I have also been indirectly involved the Ministry of Defence, dealing with less lethal weapons. I've been on the MoD group for about ten years and I have just been reappointed last year, so I remain active in this area.

Letter of Instruction

13. I have been referred to my letter of instruction (COPFS-00138). It states:

> *"Please accept this letter as a formal instruction for you to produce an expert witness report based on the information provided within the attached package."*

14. I have been asked if I recall what material was provided to me in the package I was given. If memory serves, this may have been delivered as a paper bundle and may have been taken off me when I finished my report. I was provided with police statements, civilian statements and CCTV footage. It's difficult to recall accurately as this was around 8 years ago.

15. What I can say is I commented on every piece of evidence I was given. So, if you go through the report there is a briefing paper on medical history. Summary of events, that's provided by PIRC. Then it gets involved in the summary of events of restraint and arrest of the deceased. This was all taken from PIRC material.

16. I received a lot of redacted witness statements. I don't remember how I got to see the CCTV, I think it might have been on a memory stick. I reviewed police witness statements, medical records and the CCTV footage. I think it's quite possible that the files were on a memory stick. I remember this because I met PIRC representatives near to where I live. There were two people who handed it to me and I believe I had to return it after I completed my report.

17. I have been referred to paragraph A in my letter of instruction (COPFS-00138) where I am asked about the physiological effect of the physical restraint of the deceased. I have been asked whether paragraph B and C was within my expertise. At paragraph B I was asked whether in the circumstances outlined in the attached package the restraint was appropriate and then at C whether the officers who arrested and restrained the deceased adhered to police standard operating procedures on restraint and Use of Force, including whether the measures they took were concomitant with the level of threat presented or perceived to be presented by the deceased.

18. At the time I was more confident in that sort of thing. I didn't really delve into these questions and avoided them. I believe that I challenged the substance of instruction in a phone call indicating that I did not want to get involved with the use of force issue. I think there was likely to have been a phone call in which I advised that I did not want to deal with the issue of lawfulness of the restraint or anything to do with compliance with police procedures, guidelines and training. This was not within my area of expertise. I, perhaps, should have written in my report that I would deal with the medical implications of use of force but not with other elements of the case.

Draft Report

19. I have been referred to a chain of two emails (PIRC-03416). The first email sent by me and dated 15 December states I have attached a draft report and asks for feedback on any areas requiring clarification or further

work. There is then an email reply dated 16 December 2015 from William Little stating

> *"Many thanks for your draft report. I and John will have a good read through this and get back to you with any feedback."*

20. I have been informed that the Inquiry has no draft report on record, just the final report dated 12 May 2016. I have been asked whether I have any recollection of William Little or anyone from PIRC coming back to me with feedback in relation to the draft. I do not. I think I submitted it and they didn't come back with anything that needed changing. I think the final report is in the same terms of the draft report but I can't be certain.

Pre-hospital emergency work experience

21. I have been referred to my report (COPFS-00028). In my report I mention having experience of pre-hospital emergency work and that I flew on air ambulances, providing an emergency medical and trauma service.

22. I have been asked what sorts of pre-hospital emergency work I attended and whether I have any experience of attending patients who have excited delirium, ABD or psychostimulant intoxication. I would say I have experience from dozens of cases at least. I was an active pre-hospital doctor from 1994. I flew on air ambulances from 2003 for over a decade and was in full-time clinical practise as a consultant in Emergency Medicine at the time.

23. I was medical director of the medical air ambulance units in the Midlands for five years, and then I was moved to help set up a new unit in Bristol. So, in terms of pre-hospital care, my credentials are sound. I was an air ambulance doctor, medical director of air ambulance services for West Midlands. I worked for 12 years on air ambulances, and from 1994, I was responding to calls to offer medical support for the ambulance service and I stopped responding in 2014. So, at the time, I was still active but just about finishing with pre-hospital work.

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So, I would consider that I have extensive experience in pre-hospital emergency work.

24. In terms of attending patients with excited delirium or ABD, I have attended many dozens. That was one of the reasons that they would activate the air ambulance, or a doctor-led crew because we could go out and offer rapid tranquilization. And also, I would go beyond that and say that in my routine clinical practice working in emergency departments, the police would bring in patients like this not infrequently. So I have a lot of clinical experience in this area.

25. I have been asked how it would work in practise in terms of call to the pre-hospital being instigated. It usually starts with the police getting there first. Normally, there has been a person acting in a worrying manner in a public place, occasionally in a home. Police would get there, recognise that there's a problem and call for the ambulance service. The ambulance service may report that the individual is violent; kicking, fighting, biting and will request help. The ambulance service were limited in what they could give in terms of drugs to get on top of that situation. Now they've got more advanced skills and more of them can deal with it. We could be called specifically for these situations. It was often a combined police and medical approach to control these cases. Ambulance crews were not trained to restrain, although this is changing now. The police would be there. In certain jurisdictions the police would say that they won't hold onto a person for the ambulance crew to administer drugs.

26. In terms of helicopter response to those cases, I have more than a dozen cases worth of experience. These cases tend to be very, very dramatic and very memorable. I would like to get across that these individuals, when they get to that state are very loud, very violent, very unwell, and there's no reasoning with them and de-escalation techniques are unlikely to be effective once a person has reached this level of agitation.

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27. You can witness things getting worse and worse as you stand there. In fact, the presence of medical personnel will often make it worse, or certainly the police presence will usually make it worse. It's frightening for all parties involved. Absolutely terrifying because you know that they're likely to exhibit massive resistance. You know that the risk of injury is high to everybody involved, and you know that this person is in medical crisis and is at risk of collapse and death. Put all that together, you're facing a situation that is terrifying. Not only that, the remedy that you have for it is by use of extremely powerful drugs which may stop them breathing, which may drop their blood pressure and must be used with caution. It's extremely challenging and it's frightening because whatever you do or don't do carries a significant risk.

28. De-escalation techniques would have been attempted potentially by the police or by paramedics before they would get to the point of calling me as part of a pre-hospital emergency team. In the Royal College of Emergency Medicine – Best Practice Guidelines – Acute Behavioural Disturbance in Emergency Departments (SBPI-00294), at page 8, there is a section on de-escalation that states:

> *"Verbal de-escalation is a valuable tool with which to facilitate patient care and potentially avoid any requirements for restraint. Staff should make attempts to verbally de-escalate the situation. This may feel futile if a patient will know or is unable to engage but is an important step in ensuring the use of restraint and rapid tranquilization are justified. A clear record of de-escalation will provide reassurance to family and the public in cases where an adverse outcome leads to review."*

29. I agree with this completely. Another point is that when we talk about ABD, it's not a binary thing, it's not a question if you don't have it or you do have it. There will be varying degrees of it. An individual with ABD requiring response from a pre-hospital emergency team will often be towards the higher end. I think that

point is written very well because what it is saying is in a case like Mr Bayoh's. "Was there any attempt to de-escalate? What did you do to justify use of force? Or did you keep your distance? Try and talk him down? Could you have tried offering options? Could you have set some boundaries?" and it gives you some basic advice in that document. But, again, it's not a binary thing and for people at the lower end of that spectrum who are agitated, they may have punched a hole in a wall, or they may have thrown a computer at you or similar. Sometimes you can talk them down. Often you can't.

30. There are different degrees of acute behavioural disturbance. Sometimes, more often in the hospital setting, patients will be more amenable to de-escalation, and in that situation, when that happens, it's a massive sense of relief because you can de-escalate and then you can say, "Look you're upset, let's take a break. You can actually give them oral drugs which are way safer, and you can avoid going down the intubate, ventilate, intensive care route which is often what is going to happen at the higher end.

31. A regular front-line ambulance crew may call for advanced medical resources at scene (a helicopter or pre-hospital medical support or the West Midlands team or Rishi Sunak's 800 mental health ambulances) when they recognise that they need help. To deal with the higher end threat, you need physical control (safe restraint) and then to rapidly go down the medical route. You need to get on top of the physiology that is threatening their lives. They need to be cooled, the acidosis corrected, fluids given, the oxygen deficit corrected among other physiological derangements that are often present in acute behavioural disturbance.

32. In 2015, there was less awareness about this. Today there's greater awareness. This can be seen in training and with the Royal College of Emergency Medicine's Best Practice Guidelines on Acute Behavioural Disturbance in Emergency Departments. I'm working on a project that will provide the ambulance with formal training in restraint. We're working on the syllabus now. I'm working on

a national project, and one of the drivers behind this is to provide ambulance crew with the skills to manage a very agitated patient. Currently a mapping exercise is underway to identify exactly which skills are required.

33. At page 40 of my report (COPFS-00028), I state:

> *"Without the availability of taser or medical staff to administer rapid tranquilization, police officers will have to physically restrain these individuals with manual force or body weight. Pain compliance techniques will often fail to terminate the struggle."*

34. I have been asked what sort of procedures and protocols are in place, if any, to equip pre-hospital emergency doctors to go to a call of this sort. I would say that it is available, almost, if not, universally. Critical care paramedics have become more available in the last decade. This continues to expand. It certainly exists in England and Scotland. I work in Elgin on a part-time basis. Scotland is generally well-provided with pre-hospital emergency teams. Following a call to the police, an ambulance will be called. Alternatively, an ambulance attending the scene may recognise the need for police support and will call them. In any event, both agencies will often be present at scene. An ambulance crew without police support will be unable to evacuate a person suffering from acute behavioural disturbance to hospital because that person will be unmanageable; kicking, fighting, biting and is ill. This is a medical emergency. In most parts of the country you're probably going to get additional support from either a HEMS unit, or in London it would be the physician response unit, (the PRU). Every area in the UK has got its own arrangement to get advanced medical care to scene. These units bring more powerful drugs up to and including administrations of sedation or a general anaesthetic and ventilation. Medical control is required so you can start to reverse the catastrophic physiological problems that they have.

35. But this case is back in 2015 at Kirkcaldy on a Sunday morning. Pre-hospital emergency teams were far less available then than they are today – they may

not have been available in this area of Scotland at that time. I cannot say for sure. I think the attending police officers asked for firearms backup because they didn't have tasers back then. They recognized that they were going to struggle to deal with this situation. There was, I believe, a perception that Sheku Bayoh might have been armed with a knife at some point, from the information provided in the initial 999 calls. But going back to what the police officers did, they had their hands, they had batons and handcuffs and a spray.

36. There are two routes of activating an advanced medical service. The first would be from the first ambulance crew on scene. The other option would be following the initial call to the ambulance control centre. In most ambulance control rooms there is a special ops desk. Usually, an advanced paramedic who will be screening calls, looking at the calls coming through and interrogating them, and dispatching advanced resources which would include the air ambulance, a physician response unit, or the HART team i.e. the hazardous area and response team. So, most have a special ops desk where an advanced clinician will sit, screen the calls, and dispatch advanced resources as required. There are various names for it in different control centres but it's a special ops desk.

37. The activation would either be on the strength of the initial call. What would happen today is that call would be screened and somebody would take a decision to send a physician response unit or an aircraft or the HART team to back up a crew. The other route would be the first ambulance crew got there and decided they needed advanced help. If that police call went in today, they would probably recognize that this is somebody with acute behavioural disturbance who is likely to requite advanced medical care. So they would probably consider sending an advanced pre-hospital medical resource.

PIRC Meeting 25 November 2015

38. On page 2 of my report (COPFS-00028), it summarises a verbal overview which was provided to me by Billy Little and John McSporran of PIRC at a meeting on 25 November 2015. Included in the overview was the following information:

"The first police car arrived. The Deceased reportedly dropped the knife onto grass and was not seen by the first officers on the scene. The Deceased was reportedly not communicative, staring ahead and non-compliant."

39. I have been informed that the information that as the police car arrived the deceased dropped the knife onto the grass is inaccurate, that while the knife was found on grass nearby to where Sheku was first seen, it is not known how or when this happened. This page reflects what I wrote down during my meeting with William Little and John McSporran. This is what they told me.

40. I picked up two things from the initial conversation with PIRC. I should state this is my subjective opinion. When I got the initial phone call, I asked them to send me the material and they said they would come down. They drove for about eight hours to get to the material to me. We sat in a coffee shop and two things came out of that meeting. The tone of the conversation was that Sheku Bayoh was 'off his head' on drugs and they're trying to make a case against the police. The police perception was that the call was a high risk one, he was reportedly armed, and they were concerned about it being terror related etc and the tone was that they felt that blame was unreasonably being apportioned.' That was the tone of it. No one said that, but that was my subjective feeling.

41. In the subsequent week, I think there was a change in tone in the sense that I think the gravity of the case was appreciated more. Again, it's my subjective feeling from those weeks. We're talking seven/eight years ago now. It's a long time but, I remember it was an odd one because they drove eight hours to come and see me. I'm fairly certain I met one of them again and I think that was probably to give back the material.

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42. I have not kept any notes from the conversation in the initial meeting with William Little and John McSporran from PIRC.

Consultation with the Crown

43. I remember having a meeting with the Crown. I think it was in London a good while after I produced my report. I don't remember the details of the meeting. I don't remember seeing a copy of the consultation note after the consultation. I am told that the meeting took place on 9 May 2018.

44. I have been referred to a note of the consultation on 9 May 2018. This forms part of a larger document called Additional Materials Index 5 Consultation with Dr Tony Bleetman 9 May 2018 (COPFS-05627). Pages 1 and 2 of this document is the note recording the consultation. It is noted as taking place in London with Ashley Edwards and Les Brown. On the whole, the note appears consistent with what I would have said at this meeting. It records comments on Sheku Bayoh's body positions and the latest research on prone restraint and risk associated with that. I also state that I have no experience with Alpha-PVP as a drug. That is still the case today. I may have encountered patients who had taken it but I am not aware of it. When it comes to a patient presenting after taking recreational drugs, you rarely know what they've taken with any accuracy.

45. In the next paragraph the notes state:

> "*In the hospital environment, I see a variety of things in such patients – extreme agitation, extreme psychosis. For a person in this state, you cannot talk them down. I am aware of NICE Guidance 25 on the management of short-term psychiatric patients for clinicians, but this incident preceded the advice provided.*"

46. This sounds correct. However, it probably isn't sufficiently clear that my advice was that one should always attempt verbal de-escalation as I have said before.

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What I am stating there is that in this situation involving Mr Bayoh, it is unlikely it would have been successful.

47. The part that I believe isn't an accurate reflection of what I have said in this case is the "No chance" comment in relation to whether such a person will be talked down. It looks like someone is taking notes and interpreting what I have said. I suspect I didn't utter the words "No chance." I probably would have given an explanation as I have in this statement.

Rib Fracture

48. I have been referred to page 38 of my report (COPFS-00028) under the heading "Toxicology Examination" which states:

> *"CT scanning initially raised concerns over the possibility of left-sided upper rib fractures. These were later attributed to the post-mortem examination."*

49. I have been asked about this last sentence. I am aware that the reference to the rib fracture being attributed to the post mortem here is incorrect. At page 43 of my report, I comment on the fracture of the first rib:

> *"It is unusual to fracture a first rib in isolation through blows to the body. It's difficult to see how this injury identified at post-mortem could have been caused by the violence with the police and the subsequent restraint. I say this because the first rib is very well protected by muscle. Lower ribs are not and are therefore more prone to fracture following blunt trauma or crushing. It seems more likely that the first rib fracture was caused by the use of the thumper."*

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50. It is extremely difficult to fracture the first and second ribs. It tends to occur in very high energy impacts such as plane crashes, train crashes, massive car crashes. Even if somebody maliciously kneed him with all of his weight at the top of his chest, I'd expect the clavicle to go way before the first rib. I would expect that the lower ribs to give at the side. Or if six police officers were to sit on you with all their combined weight or even if they jump on you all together you are more likely to fracture the lower ribs – they're going to give usually laterally, or you could have an anterior flail segment around the sternum if that was the case. The first rib is very deep and protected by overlying muscle, more so in a muscular individual. I find it anatomically hard to accept that the physical restraint caused it. I quote the following from an article (WIT-00031) on this subject "*First rib fractures are a marker of life-threatening injuries and major trauma, although they do not independently increase mortality."*[1] That's exactly right.

51. Mr Bayoh was put on to a 'thumper', or LUCAS machine, which is an old type of CPR machine and it's a machine that 'thumps'. It pushes the chest rhythmically to perform automated chest compressions during resuscitation. It does so with a lot of force so that you don't have to do manual compressions. At hospital, it was put on, put off and was moved during the resuscitation attempt. I think it is more likely that the first rib fracture was caused by the thumper being put inappropriately high at some stage during the resuscitation in the hospital.

52. I have been asked if I have ever seen a thumper cause an isolated first rib fracture in practise. I have not. Rib fractures, especially with the machines that would have been in use seven years ago, you can almost expect it, particularly in elderly patients. The more modern machines have got pressure sensing, they've got little cups on them, but the thumper back then was quite a brutal, unregulated device, repeatedly compressing the chest with significant force. In

[1] Sammy IA, Chatha H, Lecky F, *et al*
Are first rib fractures a marker for other life-threatening injuries in patients with major trauma? A cohort study of patients on the UK Trauma Audit and Research Network database
Emergency Medicine Journal 2017;**34:**205-211.

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my experience, usually first rib fractures are associated with other rib fractures, so fractures running continuously down to other ribs from the first rib. I have never seen an isolated first rib fracture caused by a thumper.

53. So I think that's a point when it comes to interpreting the cause of death. Are we saying it is possible that six police officers leaning on Sheku Bayoh would have fractured the first rib? I would find that challenging to accept. This injury is usually caused by high impact, massive energy. I think it's more likely to have been caused by the LUCAS thumper that was used. But when I have to prefer one version over the other, it's such a rare injury, and we're talking about the prolonged use of a thumper. If it was put too high on the chest, even momentarily, could that have done it? That's plausible because it's a focussed delivery of energy.

54. I have been pointed to Prof. Freemont's opinion on the first rib fracture. There was the physical fight between Sheku Bayoh and a friend. Then there's the interaction with the police officers and then there's the CPR (with thumper). Professor Freemont does not think it was the thumper that caused it because it mimics the effects of CPR and that if it was caused by the thumper there would have been multiple rib fractures. I personally believe that it is possible if the thumber was placed inappropriately high even for a short while. Falling on an outstretched hand has also been considered by Professor Freemont. There are a couple of reports out there, usually in elderly people with osteoporosis. But, in a physically fit, very muscular, younger person, I have never seen that.

55. I have been asked whether I have looked at the literature at all when I came to the conclusion about the thumper and whether there was anything in the literature that suggested that the thumper might be the case. The literature hasn't changed much. Rare injury, high force, very occasionally attributed to other more trivial mechanisms of injury, particularly those with advanced age or osteoporosis. It's an odd injury as an isolated injury.

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56. I just want to exercise caution on the first rib issue. There is general agreement that you need massive force to break that first rib. Fall on outstretched arm, yes, maybe in the elderly, at the wrong angle with a very weakened osteoporotic rib with no muscle mass. However, someone of Mr Bayoh's age, muscular build, goes to the gym regularly, takes anabolic steroids I don't think it is likely that falling outstretched hand could cause that. Neither do I think that fighting with a friend in a back garden is a likely cause. Again, I've seen hundreds, perhaps thousands of assault victims, who've punched each other and I can't remember encountering a first rib fracture in isolation. I've never seen it. In my view, there are two potential mechanisms: one is the police contact and restraint, the other one is the thumper. There can't be anything else.

57. I have been asked about how many first rib fractures I have seen in practise. A very small number. In terms of experience of first rib fractures in isolation, no, I have no experience of this, not to my knowledge.

Post-mortem findings

58. I have been referred to page 39 of my report (COPFS-00028) where I state:

> *"The post-mortem examination summarily excluded any identifiable pre-incident pathology that would have rendered the deceased susceptible to collapse and death. There are conditions, however, that would not have been identifiable post-mortem examination that could have rendered him susceptible to sudden death and these include cardiac conduction abnormalities such as Brugada syndrome."*

59. I have been asked, how likely it is for a person to have cardiac conduction abnormalities in my experience. I can't give a percentage without looking it up but some young people will from time to time present at hospital in cardiac arrest with no cause whatsoever, and it turns out later on that the most likely cause is

a congenital conduction defect in the heart. There's often a family history of young cardiac death. Is it likely in this circumstance? Probably not. I'm just saying there's other things that can cause it. We'll never know because we never had an ECG of Mr Bayoh from some point before he died.

60. Sheku Bayoh was under the influence of drugs having an acute mental health crisis and he was subjected to a restraint by the police, and he died. If somebody is born with Brugada syndrome or one of the similar syndromes, it is possible that the additional physical exertion that he was undergoing due to the mental health crisis and the struggle with the police afterwards triggered cardiac arrhythmia and death. It is possible – not likely – but possible that that happened.

61. I agree with Mary Sheppard's statement that 70 per cent of people who have a channelopathy are asymptomatic prior to death (SBPI-00293, para.55). While saying this, any symptoms experienced may be very trivial, very minor: a little palpitation, a little ache. They're not going to be massive symptoms and the danger of these sorts of things is people don't get to hospital with them because it's a bit of a flutter after exertion, a bit out of breath, a bit lightheaded, and thinking that perhaps they have overdone with their exercise regime. The only way to be sure is through DNA testing. You may only get a positive DNA test at about 20 per cent of cases so it doesn't mean that if you have a negative result that you don't have a channelopathy. So I'm just saying it needs to be considered in the context of this case albeit in my view it's not likely; it just needs to be thought about.

Excited Delirium

62. My opinion largely focuses on Sheku Bayoh's general state and what was going on with him in the days preceding the police intervention. Excited delirium is now better referred to as 'acute behavioural disturbance'. There are three landmark publications that have come out about it. The most recent and the most intelligent that I've seen was published February 2022 by the Royal College of Emergency Medicine – Best Practice Guidelines - Acute Behavioural Disturbance in

Emergency Departments (SBPI-00294). I understand Version 2 was published in September 2022.

63. Even back in 1998, there was police awareness about what was called "excited delirium" and how it links with positional asphyxia. Even back in my time, in 1998, it appeared in police manuals but not in great depth. The police are largely aware of the problem of acute behavioural disturbance. Ambulance crews tend to be aware also.

64. Junior doctors working in emergency departments tend to be less aware of acute behavioural disturbance. The Royal College of Emergency Medicine – Best Practice Guidelines on Acute Behavioural Disturbance in Emergency Departments (SBPI-00294), summarizes it beautifully, and it was aimed to educate doctors in emergency departments. The paper emphasizes and confirms where I was at the time of writing my report. It talks about restraint:

> *"While the link between restraint and death is debated in the literature, there is no high-quality data to suggest that there are risk-free methods to restrain an undifferentiated, potentially co-morbid patient with ABD. Prolonged restraint should prompt consideration of rapid tranquilisation. It has previously been suggested that restraint in the prone position contributed to deaths. Although this theory has not been supported by recent research, it will be prudent to ensure there is no obstruction to ventilation to minimise the risk of asphyxiation."*

65. The paper recognizes that these individuals are at risk, and as soon as you get involved in a restraint you need to be thinking about how you're going to terminate it safely and with medical involvement. About seven or eight years ago in the West Midlands, a special team was set up with the ambulance service, working with the police to respond specifically to these incidents. This was a spectacular success. The Prime Minister has now said he wants 800 mental

health ambulances, because there is a growing awareness that what we are discussing is a medical catastrophe and, without rapid medical intervention, these people are at risk of death. I think it is important that the Inquiry is aware regarding the vulnerability of Sheku Bayoh prior to and at the time of his contact with the police.

66. The Inquiry will no doubt require to consider what could be different today that may have averted his death had that situation been replayed today? Today, there would probably be a call for an advanced medical team to go to the scene and rapidly offer and administer rapid tranquilization and escalation to an intensive care level of care (should this be available in the area at the time).

67. What's changed is a global recognition that acute behavioural disturbance, which Sheku Bayoh was clearly suffering from and I'm very clear on that, renders somebody physiologically very, very vulnerable. Whether you intervene or not - they're in trouble. There is consensus today that rapid and safe restraint followed by swift medical intervention offers the best chance of terminating the episode as safely as possible.

Excited Delirium and American College of Emergency Physicians White Paper

68. At page 41 of my report (COPFS-00028), I make reference to the landmark American College of Emergency Physicians (ACEP) White paper on excited delirium and I attach a copy of the white paper to my report. The so-called "excited delirium" state has always been very controversial. People have died in police custody during restraint. They talked about "excited delirium," and civil rights group said that "It doesn't exist; this is just a cover up for police brutality on black men." A breakthrough came in 2009 with this ACEP White Paper on "excited delirium." That was the first proper scientific paper behind it. The Royal College of Emergency Medicine – Best Practice Guidelines (SBPI-00294), brings this up to date and reinforces my view on this having been involved in the sector

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for a while in many of these cases. I think it is a landmark document. I would strongly recommend that it is considered in the Inquiry's deliberations.

69. The ACEP white paper states that excited delirium "is a potentially fatal syndrome in and of itself"[2]. I am asked for my comments on this. In 2015, the UK did not have the same thinking. In 2015 I think there was, certainly in hospital circles, a lot of ignorance about it. It was just an angry man in handcuffs, kicking and fighting in the department. It was perceived more as a security matter rather than a medical matter. I think that situation has changed. In 2015, the term "excited delirium" was the common term. That's now no longer the case. It's now called "acute behavioural disturbance" for the reasons that I've described.

70. In relation to the question of whether excited delirium is, in and of itself, a cause of death, there are some politics around this. It was originally called "Bell's mania" back in 1800s and then it was later called "cocaine-induced psychosis" or similar, and then people started calling it "excited delirium". This have moved on to the point that in the last five to ten years we understand that many things can lead to a state of acute mania and that would include serotonin syndrome, malignant neuroleptic syndrome among others. This is where more recent knowledge, an acute psychotic episode, drug intoxication, all of these things can present very similarly, if not identically.

71. So I think a wiser approach is to say there are a number of things that can culminate in a very similar presentation and represent a physiological threat, so why don't we put it all together and call it "acute behavioural disturbance" because we don't know what's driving it. Drugs, fever, sepsis, head injury, neuroleptic malignant syndrome, serotonin syndrome, and others. Therefore, would I write down excited delirium as 1A on a death certificate? No. What I would write down is acute behavioural disturbance, but I would probably put that down as 1B rather than 1A. So I agree it shouldn't be used as a cause of death,

[2] Page 18

Signature of Witness ... [redacted]

but acute behavioural disturbance is a catch-all term for a number of toxicological, physiological and psychological emergencies that present in a similar fashion.

72. You have to look an all the underlying factors rather than attributing death to a psychiatric state. From a medical perspective, somebody presenting with that constellation of signs and symptoms could be described as having an acute behavioural disturbance, which is a general term, which does not describe the driving force behind it: what's causing it, doesn't describe the cause. Again, I've mentioned that there can be perhaps at least half a dozen things that can lead an individual into presenting with an acute behavioural disturbance. It's like saying, "I've got an acute abdominal pain. I've got pain in my belly. It could be an appendix, it could be a pancreas, it could be a bowel obstruction, but "I've got acute pain, I don't know what's causing it." Similarly, acute behavioural disturbance is a catch-all term for somebody presenting in a very agitated state. We recognise that ABD has many causes and we need to recognise that all of those causes, culminate in a common clinical presentation. Irrespective of what is driving it, the initial medical management is the same: control them, stop the physical resistance, stop deterioration of their physiological state, and then once you've got control, then you can actually resuscitate them and later work out what caused it. The important thing to remember, and this is crucial, whatever the cause of that acute behavioural disturbance, it culminates and leads that individual to a high degree of physiological compromise. That's where it all goes wrong.

73. I have been referred to my report (COPFS-00028) at page 44 where I state:

> *"It is reasonable to assume that the actions of police officers are likely to have had a contributory role in the evolution of the deceased's collapse, and subsequent cardiac arrest by adding one more factor to an already lethal brew. In effect, the restraint precipitated the cardiovascular collapse that was already likely to have occurred."*

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74. I have been asked what I mean by the words *"already lethal"* here. When it gets to the level of agitation and the amount of time for which it had been going on, Sheku Bayoh was certainly physiologically deranged at the point of initial police contact, and his life was in danger. I am unable to quantify that, but his life was in danger at that point. Had there been no police contact, he would have likely continued being agitated to the point of collapse. If we ask the question would he have survived it? He might have done, he might not. I am unable to quantify that. It is not certain that he would have eventually collapsed but there is likelihood.

75. Sheku Bayoh's death was multifactorial. It was I believe contributed to by mental illness, ingestion of drugs, exhaustion, the physical exertion and physical demands of the restraint. Was it preventable? The Inquiry will, no doubt, give consideration to matters such as had you had a taser there, had you had an advanced medical team there what different this might have made. Yes, but that's in 2023. Back on a Sunday morning in 2015 in Kirkcaldy with no firearms officers and no advanced medical teams activated, the police officers faced a very challenging situation. Others will give evidence about the nature of the restraint carried out and whether it caused a degree of physiological compromise and whether that is relevant to the cause of death. The actions of the police officers during the restraint may have been a contributory factor. These matters aside, I think Sheku Bayoh was agitated and physiologically compromised on first contact. The best chance of avoiding an adverse outcome in this situation would have been to terminate the physical struggle as quickly as possible and to provide advanced medical care immediately thereafter. Without this, he would have remained at risk of collapse and death.

76. The term "excited delirium" relates to a constellation of signs and symptoms of physiological distress, of which one of those signs and symptoms is psychological distress. The Royal College of Emergency Medicine – Best Practice Guidelines on Acute Behavioural Disturbance in Emergency Departments (SBPI-00294), explains ABD in the following way at page 3:

> *"Acute behavioural disturbance (also previously called excited delirium, acute behavioural disorder, or agitated delirium) is an umbrella term used to describe a presentation which may include abnormal physiology and/or behaviour.*
>
> *It is important to recognise that ABD should not be considered a diagnosis or syndrome, but rather a clinical picture with a variety of presenting features and potential causes. The term ABD is widely recognised by both in-hospital and pre-hospital emergency care providers, and by the police in the UK."*

77. The guidelines continue by explaining the reason for their development:

> *"ABD patients pose a significant management challenge in the ED when their behavioural disturbance may put them and/or those around them at risk of physical injury, particularly when they have potentially life-threatening pathophysiology, such as a hyperadrenergic reaction, metabolic acidosis, or cardiotoxicity. This guideline has been written to support the emergency care of a patient with ABD whose presentation may affect the clinician's ability to ensure that the patient, staff and others are safe, and to achieve appropriate clinical investigations and management."*

78. Essentially, there are many conditions out there which will present as ABD.

79. Papers discussing excited delirium said, normally describe a typical presentation of a person suffering from excited delirium, the average age being age 29, male, with a mental health history and recent drug abuse.[3] In my view, this remains the current typical presentation today. Today, we recognise there's various

[3] For example, see 'Excited Delirium', acute behavioural disturbance, death and diagnosis by Lipsedge and McGuiness at pp1-2 (WIT-00018)

reasons for a presentation of acute behavioural disturbance and within that would be what used to be called excited delirium. Mr Bayoh matches the profile exactly of what a typical (using the old term) "excited delirium" person looks like: late 20s, mental health; drugs. It also describes a preceding deterioration in their mental health before it all goes wrong.

80. I have been asked explain what causes me to consider that Mr. Bayoh matches this profile in terms of his mental health. Having reviewed the information provided to me by PIRC, there are hints of mental illness. I record in my report, at page 4, that , *"Two months prior to his death, his partner had asked him whether he was on drugs or steroids as he could not control his temper*." I'm not saying he had a diagnosis of a paranoid schizophrenic or personality disorder or something similar, but we have someone whose behaviour had changed in the weeks prior to this event. I'm not making a case that he had a long history of established mental health disease. I'm saying the typical person who presents in an agitated state has three common factors: a male in his late 20s, drug use and mental illness.

Role of Restraint

81. As part of the Additional Materials Index 5, there is an email at pages 3 and 4 and dated 14 May 2018 from Les Brown at Crown Office. It requests my comments regarding Sheku Bayoh's body positions and to comment on the latest research on prone restraint and risk associated with that.

82. My response to that e-mail appears at page 3 and is dated 21 May. This states: *"At our meeting you advised me that the reconstructions had suggested that the deceased was not in a fully prone position during the restraint. I also advised you that the safety concerns in relation to prone restraint are now being challenged.*

83. Attached to this email was a peer-reviewed paper which raises doubt about the dangers of prone restraint. This is "Restraint in mental Health

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setting: is it time to declare a position?"[4] (contained at pp. 5-9 of [redacted]). The main conclusion of the article is that, at the time of writing the article in 2017, *"the limited evidence base does not support effectively 'banning' of any position. Any restraint intervention delivered poorly has the potential to lead to serious negative outcomes. More research is required before we can reliably state the level of risk attached to a particular position in a particular clinical circumstance."*

84. There is lots of debate about prone restraint versus supine restraint. However, prone restraint can be undertaken safely. In fact, in the mental health sector, particularly females who have been sexually assaulted, are terrified of supine restraints and some of them ask in their care plans to be restrained in prone position should the need arise. In my view, the prone restraint debate has changed. It used to be sacrilege to even mention prone restraint but there is no evidence behind the argument that its lethal. The opposite is true that you actually ventilate better in prone position. We put thousands of patients during COVID in the prone position to try and avoid intubation and ventilation because they breathe better. I have been asked whether lying in a prone position in a clinical setting is comparable to being restrained in the prone position. Yes, it is unless someone is applying pressure to the person's back, for example, by sitting on the person. So all of this previous science about the dangers of prone does not reflect current thinking. My view on this is supported by the Guidance for: Prone Position in Adult Critical Care published by the faculty of Intensive Care Medicine (reviewed in November 2022).[5]

85. That does not mean in any way that prolonged prone restraint is always safe and can never kill you. A poorly-executed prone restraint can be dangerous. In the case of George Floyd, Mr Floyd was restrained in the prone position with weight applied to his neck and for some of the time across his back by police officers

[4] Sethi F, Parkes J, Baskind E, Paterson B, O'Brien A. Restraint in mental health settings: is it time to declare a position? Br J Psychiatry. 2018 Mar;212(3):137-141

[5] https://ics.ac.uk/resource/prone-position-in-adult-c[redacted]

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until he stopped breathing and died. That particular prone restraint was undertaken in a dangerous way and illustrates that a poorly executed prone restraint can kill. I don't know whether this is what happened in the case of Sheku Bayoh, it's not for me to comment.

86. I have been asked the effect it would have on someone who was in a prone position if multiple police officers were lying across his body. It would have made things worse. Multiple police officers lying across an individual in the supine position will also be dangerous. The science behind the prone restraint right now is that if it's in isolation, prone restraint is unlikely to be worse or more dangerous than supine restraint, provided it is undertaken in a safe manner. If you lean on someone's chest, irrespective of the position that they're in, you're going to stop them breathing adequately. This is particularly so if you are in a physiological state of extreme distress, which Sheku Bayoh clearly was.

Restraint: hypoxia and acidosis

87. I make this point in my report at page 42 of my report (COPFS-00028):

> *"It is generally believed, but without evidence, that prone restraint is more dangerous than supine restraint, as it is postulated that chest movement will be more restricted in a prone position and inhibit the individual's ability to breathe adequately to address the oxygen debt. Any weight across the torso is likely to further restrict breathing efforts and may lead to a condition known as positional asphyxia in which progressive asphyxia occurs due to the individual's inability to breathe adequately and correct the oxygen debt. In an individual already in a severe oxygen debt due to the excited delirium state, further compromise of breathing efforts through either prone restraint or restriction of chest wall movement by putting weight across the torso will put the restrained individual at more risk of asphyxia and will hinder recovery from hypoxia and acidosis. This may reach a critical point in which cardiac arrest occurs."*

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88. I have been asked to explain the process of hypoxia and the acidosis and how it impacts on an individual. The human body operates at a certain acidity or pH level of 7.4. A number of either metabolic or respiratory problems can cause that number to deviate. So, you can become more acidotic, or you can become alkalotic depending on what's driving it. So an athlete running for many miles will generate a lot of lactic acid, lactic acidosis, and the body has to compensate for that, and that is done in that particular circumstance by increasing the breathing rate. That shifts CO2 out of the body, which changes what's called the Henderson-Hasselbach equation. So, when you become acidotic, you need to 'blow off' carbon dioxide to correct that acid-base balance. You can compensate adequately for a certain period of time. So, an athlete who is well-trained and who does this every day will have a well-developed compensatory mechanism.

89. When you take acidosis to an extreme, say below a value of 7.1, it becomes life-threatening. Life-threatening in that major organs stop working, and that can lead to cardiac arrhythmias and death. So, in a state of acute behavioural disturbance, the individual has normally been physically very active for a prolonged period of time. Sheku Bayoh was reportedly physically very active for quite a period of time, and it is likely that at the point of police contact, he was already physically fatigued. He may not have felt it, but his body was physically fatigued. He was probably acidotic. He was probably low on oxygen reserve, and then we add to that a prolonged struggle during the restraint. That ongoing struggle would make the acidosis worse because he's fighting now. How is he going to compensate? By breathing faster, breathing deeper. During that restraint, when the acidosis is getting worse, if you add on top of that any restriction of chest movement, which is his only way of compensating for that oxygen loss and blowing off the CO2, you're going to make it worse and the situation becomes life-threatening.

90. I'm not particularly concerned whether the restraint was prone, supine or on his side or perhaps in the foetal position. Anything that restricts chest movement is

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going to make the already precarious situation worse. If the restraint is poorly undertaken and you restrict chest movement, you're going to make it worse, which leads me to the conclusion, did what the police do contribute to his death? Yes, it did. Was it avoidable? That's a different question. What they did, yes, it contributed. Had it been a textbook restraint with no pressure whatsoever across his torso, would it have prevented his death? I am not certain. Sheku Bayoh was in severe physiological distress on first contact with the police. Any additional physiological distress caused by a poorly undertaken restraint would have contributed to the outcome.

91. I will summarise the issue of acidosis. The human body functions within a narrow band of acidity, 7.4 on the pH scale. A number of things can move you away from that. When you move away from that normal range, then the situation becomes dangerous and may culminate in cardiac arrhythmias and death. Someone in the state of acute behavioural disturbance will likely be acidotic, short of oxygen and short of glucose. There'll be lactic acidosis because of the physical exertion. An individual in the state of acute behavioural disturbance may not perceive that he/she is in physiological distress and the behaviour may continue, further exacerbating the physiological distress.

92. If you add more struggle and restriction of chest movement during a restraint, you're going to make the situation even worse, and there comes a point, a tipping point, where it all collapses, and this is before we talk about the potential toxicity of the drugs that he had taken. So, it's multifactorial. The Sheku Bayoh case has societal aspects: was there any prejudice, discrimination, stereotyping? All of that is a consideration but is not my remit. If we deal with the physiology, we've got a person who is acidotic, he's fighting for a number of minutes whilst restrained. He's in physiological distress. If, during that restraint, you restrict chest movement, you make the situation even worse. I can't tell you exactly where on that line it's going to collapse and cause cardiac arrest. The drugs that he took were likely to have potentiated his physiological collapse. The cause of Sheku Bayoh's collapse is multifactorial.

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93. I have been referred to the report of Dr Nat Cary (COPFS-00196). I have been pointed to his conclusions, at page 6, which state:

> *"In terms of any role for restraint, this cannot be separately considered from struggling. As is commonly the case in acute behavioural disturbances, the deceased displayed remarkable strength and stamina. Ongoing restraint and struggling in these circumstances is very likely to lead to significant metabolic disturbances with early breakdown of muscle, releasing potassium which can participate cardiac dysrhythmias and the development of metabolic acidosis."*

94. I agree entirely with this.

Respiratory arrest or cardiac arrest

95. I have been asked whether, in my reading of the circumstances and medical evidence, whether I have any view on whether Mr Bayoh was first in respiratory or cardiac arrest. I am not sure I agree that Sheku Bayoh suffered respiratory arrest before cardiac arrest. I don't think anyone could know that. Very often people go on breathing after their heart stops. It happens a lot so I can't agree unreservedly with this. If he did, it would not really have any significance.

96. In terms of being restrained by the police could you expect to see respiratory arrest before cardiac arrest? Either could have happened. I don't think it's of any significance whatsoever. What we do know is, once you're in that state of physiological distress, resuscitation efforts are almost universally futile because the physiology is so deranged.

97. I have been asked if I am aware of Dame Elish Anglioni's independent review of deaths and serious incidents in police custody. I am familiar with the report but not in depth. I have been referred to page 38 of a report she has conducted in

2017 into death in police custody. She talks about excited delirium and the difficulties around it. She talks about excited delirium being a contentious and controversial term. "The existence of excited delirium is strongly disputed amongst medical professionals," and then she quotes Dr Maurice Lipsedge in relation to various aspects of it. I have been referred to paragraph 2.40 where she highlights:

> *"In addition, any reference to excited delirium might itself become the focus of an investigation and the use of any restraint might be subsequently downplayed."*

98. I have been referred to paragraph 2.45:

> *"Whatever the true medical condition, there is clearly a constellation of signs and symptoms that signify that a person having acute medical crisis requires immediate medical attention and should not be restrained except in the most extreme, life-threatening circumstances."*

99. I struggle with some of that. In relation to "Except in extreme life-threatening circumstances"? The condition by itself is often life-threatening, and I think a more coherent approach or a more contemporary approach would be that you try to remove any aggravating factors; you try to de-escalate. You recognise that this is a medical emergency, then you recognise that you have to stop it. It's not realistic to say to police officers, "You can only get involved if you think it's a life-threatening emergency." I don't accept that statement. What does "life-threatening" mean? Is a person is for example headbutting a bus stop or hurling objects at people in a life-threatening state? Are we saying, "That's not life-threatening, so leave them alone"? I struggle with that statement. I do accept that those at the lower end of agitated behaviour may sometimes be talked down and successfully de-escalated.

100. Police attending somebody with acute psychiatric distress may decide that they can be detained under section 136 and taken directly to a mental health facility.

However, it is more common for them to suspect that there is something else driving the situation and that they should go to the hospital and see if there is a medical condition driving the agitation. The Police will therefore sometimes take an individual in this state to hospital. They will often call ahead to alert the hospital. In those circumstances, hospital staff have time to prepare a team and have access to powerful drugs should the need arise to start the process of terminating the medical emergency and initiate resuscitation.

101. Acute behavioural disturbance is not binary, black or white. It is a spectrum of behaviour ranging from mild agitation to extreme behaviour and severe physiological derangement. My involvement with patients like this is often at the higher end of agitation and distress. Police encountering a person in this state will need to contain them to prevent them harming themselves perhaps by running into the path of an oncoming car or jumping off a bridge.

102. So, I disagree with that statement, "Only in life-threatening circumstances." I think that's a poorly constructed sentence. In situations in which the police are relatively happy that the person is not at immediate risk but is having a mental health crisis, they take them to a section 136 centre. Where there is doubt, they will often bring them to an emergency department under section 136.

Guidelines of Emergency response staff dealing with ABD in the community

103. I have been asked if there are any guidelines in place for police, paramedics or medical practitioners attending a case of acute behavioural disturbance out in the community. For Police in England, there is the PACE guidance. In relation to custody, it talks about when you should call for medical assistance, it talks about the period of observation, what level of observation is required, whether you need to go and rouse them or just observe them through a hatch. From memory, for paramedics there's the JRCALC Guidelines that were current in 2015.

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104. JRCALC – Joint Royal Colleges Ambulance Liaison Committee – provides the clinical guidelines for ambulance personnel. If memory serves, there was a section there on the acutely disturbed psychiatric patient. That came as a result of the work we did on NICE Guidance, possibly NICE Guidance 16, and it was adopted by JRCALC. Yes, there were guidelines for ambulance crews. Whether they were in-depth is hard to say; I suspect that they were probably not in 2015. The 2022 version is likely to be more in-depth. I would also have to check that the JRCALC applies in Scotland.

105. 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.

Date April 12, 2023 | 10:59 AM BST

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