The Sheku Bayoh Public Inquiry

Witness Statement

Dr Richard Stevenson

Taken by [redacted]

At Glasgow Royal Infirmary and thereafter by Teams

on Friday 8 September and Thursday 14 September 2023

Witness details

1. My name is Richard Stevenson. My year of birth is 1975. My contact details are known to the Inquiry.

2. I am an Emergency Medicine Consultant at Glasgow Royal Infirmary. My medical degree is MBCHB. I have a BMSc (Hons) in forensic medicine. I have my MRCP, MFFLM, FRCEM, a diploma in forensic medical sciences and a diploma in medical toxicology.

Professional Background and Qualifications

3. I qualified in medicine from the University of Dundee in 1999. I then worked as a Junior Doctor for seven years. I worked as a police surgeon for two years and then

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went back into emergency medicine. I carried on training and became a consultant in 2014.

4. I became a special constable with the British Transport Police in July 2013 and continue to undertake that role to the present day. I have undertaken officer safety training as part of that role and attend yearly refresher training for that.

Appointment as Lead Medical Advisor to Police Scotland

5. In 2017 I was appointed as lead medical advisor and clinical governance advisor to Police Scotland. At the time I was a member of the working group formulated to address legal highs. I met Inspector James Young there. He told me that Police Scotland struggled to get medical representation on the group and I volunteered my services to provide medical opinion for the group.

6. Before I was fully appointed, I worked with Inspector Young giving advice on Police Scotland training materials, just to check if there was anything glaringly amiss for the training program. I was giving most input into Operational Safety Training (OST). I can't remember if it was First Aid as well because they're combined into one document, so there was some First Aid in the manual as well as Operational Safety Training and I think I would have commented on the whole manual provided to me.

7. The complete version of the manual that I have is this is a hard-bound, loose-leaf folder, Operational Safety Training Course Manual, running from module one on use of force through to module 21, custody awareness package. This is version 1.2 dated 2017.

8. I am asked how the process of providing input to the OST manual worked when I was first appointed as the lead advisor in 2017. I had the first meeting with a multitude of different people: police, occupational health and a couple of other

specialities as well. We were all involved in Police Scotland as an organisation. We discussed matters at a meeting and then would go away and it would be my job to look through materials that they referred to me. I would read those documents and provide comment and approval or recommendations for change.

9. I am asked if I saw materials beyond the course manual, such as PowerPoints presentation. I did; I vaguely remember them but it was a long time ago, and I've seen a lot of PowerPoints since then.

10. I am asked how this worked on an ongoing basis. I am not presented with the materials yearly and asked to review them. It's usually up to me to see if anything is new or has been introduced through developments in medical understanding that could be considered for First Aid purposes in Police Scotland. They may come to me with requests, but it's my responsibility to say if there's anything major that requires change.

11. I am asked if I only advise on the written content or whether I am asked for advice on the Police training in practice, in scenario training or practical training for officers. I've been doing quite a bit of scenario training recently with the firearms trainers and the public order trainers. Not so much with the first aid trainers. I've been assisting with the delivery and the training techniques that have been used by firearms and counter terrorism.

12. I have not been hugely involved in the standard probationer training or recertification training for ordinary constables who may be involved in restraint or dealing with knife incidents. I'm asked to look at a broad overview to see if there's anything glaringly obvious that would be considered a lack of safety, but not a huge amount. They seem to run their own process. I'm not involved in lesson plans. If anything new comes in they will approach me and discuss anything with me over the phone or by email. For example, if they're taking about applying assisted

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respiration to a casualty, the face mask and how you use it, how it can be used, how it can go wrong. Areas like handcuff injuries as well. These are all standard injuries and techniques that are taught currently in most police training courses.

13. I have never attended Tulliallan to watch any of the initial probationer training or seen any of the recertification training other than one training session many years ago. It was a session involving the officers doing their OST refresher training, applying handcuffs, taking people to the ground and managing weapons, people coming at them with a knife etc.

14. I have been shown Police Scotland Position Statement 11 (SBPI-00351), at paragraph 59. This quotes from my letter of appointment:

> *"With respect to physical use of force tactics and operational first aid, clinical governance continues to be provided by the independent Clinical Governance advisor, Dr Richard Stevenson, who was formally appointed as the* ***Lead Medical Advisor*** *on 3 July 2017. The following are the terms of appointment to this role:*
>
> - *'Advise the force on medical issues*
> - *Where appropriate & necessary develop & maintain operating procedures and procedural guides;*
> - *Quality assurance of the training of medical skills including delivery, materials and practice;*
> - *Review significant incidents to identify any required changes in practice, training or equipment;*
> - *Review any complaints received in relation to medical care delivered by police officers;*
> - *Provide a single point of contact for medical equipment evaluation & purchase at the first instance; and*
> - *Monitor use of medical skills by police staff"*

15. I am asked whether, in practice, I am asked to provide input on all of these matters. No, not all of it. I advise the force on medical issues, including on the content of operating procedures and procedural guides. I provide a single point of contact for

medical equipment evaluation and purchase. For example, tourniquets, or oxygen monitors, oxygen cylinders, who can carry them, what the risks are. Also, I was involved in the delivery of naloxone training to certain groups of the police to treat heroin overdoses.

16. I've not been involved in any review of complaints, significant injuries or significant incidents. Where it says "*Quality assurance of the training of medical skills including delivery materials and practice*", that is in relation to operational safety training rather than for, for example, first aid. For the first aid, I'm not quite sure what the regulating body is but they have a syllabus. Their lesson plans are designed around that particular syllabus set by health and safety regulations.

Acute Behavioural Disturbance (ABD)

17. I am asked about how ABD became a specialist interest. I experienced a case of it at work in the NHS. This took place in around 2014/2015. A man was brought in to accident and emergency with a whole cadre of police and ambulance crews. Despite their assistance and the help of nursing staff, we just couldn't manage him to provide treatment. We couldn't treat him and he was extremely dangerous to staff because he was punching and kicking as hard as he could. We weren't able to reason with him at all. So we were giving him sedation as much as we could, but that probably wasn't the ideal way to be. We believed that the man's behaviour was out of a fear response more than anything. We gave him a general anaesthetic and put him to sleep for his safety and the safety of the team. Then about 24/48 hours later he woke and was back up to normal and discharged himself from hospital. At that time we didn't have any treatment modalities to address the agitation. It was quite a horrific patient presentation.

18. At that time, there were no formal guidelines and no formal understanding of ABD as an entity itself. So I went into the literature review. I attended a talk back in 2015/2016 about ABD and its existence or its denial. Thereafter, I developed a

recognition plan for ABD in my department to say what it is, what it mostly features, how it can present, and a treatment plan. While I didn't work for the Prison Service, they asked me to come in and do a training program on ABD around 2015/2016. They'd had an unfortunate death in custody in 2012.

19. I am asked if I have encountered any more individuals suffering from ABD since the incident in 2014/2015. I have personally been involved in the care of 10 individuals, but there have been more that have been coming through and treated by other doctors. It's not something we're dealing with in the emergency department every week. Maybe every fortnight. I wrote a guideline on how to recognise it, how to treat it, involving safety of staff and patient. The guideline also included treatment medications, those that work and those that don't. I highlighted that it is an acute, life-threatening condition, and the important thing is to get sedation in as fast as possible.

20. I am asked about the age and ethnicity of the man. He was white and in his mid-30s. We were told anecdotally his condition was caused by cocaine. He was a regular cocaine user and had been using cocaine that particular night.

21. It has been explained to me that there is a concern that black men are disproportionately labelled as suffering from excited delirium, particularly where the person has died following restraint by the police. I can't comment on how that label is used in the UK or elsewhere. However, my own experience of dealing with individuals suffering from excited delirium, to what I would described as acute behavioural disturbance, is that these individuals have been white men. This may reflect something of the demographic of the area covered by my A and E department. Certainly, ABD is to do with the overwhelming psychological state that the person's in and not a person's ethnicity.

OST Powerpoint

22. I have been shown a historic OST Theory PowerPoint (PS17208). It has been explained this was used to train probationer police officers pre-May 2015. I have been referred to page 23 to 25 and its content regarding positional asphyxia, which states: *"Positional asphyxia is likely to occur when a subject is in a position that interferes with inhalation and/or exhalation and cannot escape that position. Death can occur rapidly; restraints can increase the risk."*

23. The risk factors are identified as:
    - *"Body position which restricts/blocks airway,*
    - *alcohol/drug intoxication,*
    - *inability to escape position,*
    - *subject is prone/pinned against a surface/slumped forward,*
    - *obesity,*
    - *restraint,*
    - *stress,*
    - *respiratory muscle fatigue."*

24. The signs and symptoms are identified as
    - *"Active to passive/loud to quiet,*
    - *Gurgling/gasping sounds,*
    - *Cyanosis.*
    - *Verbals"*

25. I am asked whether I have any comment on this training content by medical standards in 2015. In relation to the signs and symptoms on that last slide, these are very late signs of positional asphyxia. I would say that once you've got to that stage, the person's probably about to suffer a cardiac arrest. In relation to cyanosis, it's a very difficult sign to see. Medical people can fail to recognise cyanosis, and they're trained to recognise it. It's particularly difficult to see, in the dark or, low

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lighting. I would imagine they put that in there to try and help the police identify someone that's seriously unwell – but it is unlikely they will be able to see cyanosis in the scenarios they encounter.

26. I am asked if there are any earlier signs and symptoms evident in positional asphyxia that could be identified for police officers in relation to positional asphyxia, that the person is having difficulty breathing. Yes. It's difficult to identify when someone is fighting and being restrained, and then they suddenly go into a peri-arrest situation. In medical cases, we see people that are coming in and they're overweight with a high BMI. They're panting and suddenly they've just suddenly stopped breathing altogether. Rapid breathing can be a sign of severe exercise (which happens when a detainee struggles with arresting officers) and not just related to positional asphyxia.

27. I am asked what advice I would expect to be given to police officers about positional asphyxia, in addition to the list of risk factors. I agree that positional asphyxia is, in general, something to think about when a person is restrained or using mechanical restraints, particularly if they are in a police van or on the ground, and the training does not necessarily highlight the risks of that position. With ABD it was limited to one slide and then I believe it was expanded on in the OST manual and the first aid training. So in terms of positional asphyxia they could increase their presentation of it and expand out the training materials.

28. I am asked whether there was sufficient understanding of positional asphyxia in 2015 to have expanded the materials. It is my opinion that this topic could have been expanded upon to explain the nature of positional asphyxia and the abnormal physiology (assisted with medical understanding); it is a complex interplay of factors, not limited to chest pressure alone.

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29. I have been shown the slides on excited delirium from that same OST theory PowerPoint (PS17208). There are two slides at pages 29 and 30. The first slide at page 29 states what appears to be the signs of excited delirium: *"A person exhibits violent behaviour in a bizarre and manic way; constant, purposeless, often violent, activity; meaningless speech and hallucinations with paranoid delusions; abnormal strength and pain tolerance; CS [spray] may not work."*

30. I am asked whether this list might help a police officer identify a case of excited delirium. I would expect them to be thinking about it, but not diagnosing it. ABD or excited delirium is a medical condition. I would expect, from this training manual, that the police would be aware of excited delirium as it was then.

31. I am asked if there are any obvious symptoms that you see in a case of excited delirium or ABD that are not present in this list. The body may also feel really hot to the touch. Otherwise the symptoms listed there. But like I say the main thing is high temperature. They're hot to the touch, you would not need a thermometer. It's as simple as a touch to the forehead.

32. I am asked if you need to display all these symptoms. No. The diagnosis is clinical on the balance of probabilities. You might ask yourself if it is likely to be the hyperthyroid crisis. If you don't think so you might consider if there's a high probability that it is likely to be a drug induced state. You would then do blood tests to look at the metabolic stress of the person and use that information along with a history of the presentation to come to a conclusion of ABD.

33. I am asked what would show on the metabolic tests, if the person is under physiological stress. There's a blood test called a test of blood gases. It measures carbon dioxide, oxygen levels, the amount of lactate in the blood (lactic acid, such as when people go running), and also how acid their blood is. The body likes to have it neutral, pH7.4, and if it goes one way or the other, it will strive to restore

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balance. With ABD it's dangerously acidotic and the lactates are usually really high as well. Normally lactate would be less than 2 mmol/L and for people with ABD it might be about 20, which is significant to us in looking at their physiology.

34. The next slide, at page 30, states the causes of Excited Delirium as being: "*drug/alcohol intoxication, psychiatric illness, or a combination of the above*". I am asked if I have a comment on that. Drugs and alcohol are the main causes, and out of those drug intoxication is the number one precipitating cause, without question.

35. I am asked if excited delirium could have another medical cause other than those listed. Yes, other conditions like hyperthyroidism; or a head injury could be a possibility, a brain bleed; but the main cause is drugs.

36. The slide continues that excited delirium is a *"medical emergency, to expect sudden collapse, and acute exhaustive mania can be fatal".* I agree it is correct to expect a sudden collapse. However, acute exhaustive mania is a term that's used back in 1900s, so we wouldn't use that term. We wouldn't use excited delirium either now. I don't think that officers wouldn't know what exhaustive mania was.

37. I am asked whether I would recommend that slides like this included advice in terms of how to deal with the person. The slides include symptoms, the fact that it's a medical emergency, and the causes but they do not give advice on how to handle the situation. I am asked what advice I would expect to see. Back in 2015, the training would be simple to get the person to hospital based on the fact it was a medical emergency. Now, it's about trying to contain them in an area rather than restrain them for an extended period of time. It's more likely you're going to have to restrain because of the nature of the condition, so they're going to be in restraints and their body is going to be reacting to that and it will become more acidotic. So you need to get them to a hospital as fast as possible. The police are doing that

now. They now present and tell us they have a case of ABD, and then they go straight into the resuscitation area.

OST Manual – Pre May 2015

38. I have been shown pages 23 and 24 from the Probationer OST manual dated September 2013 (PS10938) ("2013 OST Manual"). I have been shown page 23 "Medical Considerations", which covers positional asphyxia and excited delirium. The information in the manual here is consistent with the PowerPoint (PS17208). In relation to positional asphyxia, it lists the risk factors that we have already seen in the PowerPoint. It includes the following: *"The subject's body position results in partial or complete airway constriction."*. This is not the most user-friendly wording. It's also not wholly correct in that it might not be airway obstruction. It might just be chest impingement, and they can still breathe to an extent but their airways are actually open.

39. The page describes alcohol and drug intoxication being major risk factors, as well as inability to escape position. It also includes *"The subject is prone, obesity, age, stress…"*. I am asked if this means the older you are the more likely it is to happen. I would say the older you are the higher the risk is. The page doesn't explain that.

40. The page talks about stress, *"Respiratory muscle fatigue related to prior violent muscular activity, such as fighting with police officers."*. I am asked if that is a risk factor for positional asphyxia. It is. They're unable to ventilate and blow off carbon dioxide, and that's why they become more acidotic.

41. The page does give more detail on how to recognise cyanosis: "*bluish discolouration of the extremities".* I am asked whether I would expect materials from 2015 to explain what cyanosis would look like in a person of colour. Cyanosis has been around for years as a clinical sign but it's difficult for a lay person to see

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it. If a restraint is taking place in the street and it's raining, a lay person is highly unlikely to notice cyanosis. It would be better for this to highlight that it is a difficult sign to identify.

42. The page includes other symptoms including verbalising that they cannot breathe. I am asked if that is a late sign. Not necessarily, it can be really early. It might be a response to panicking which would lead to hyperventilating and they would feel like they can't breathe, and it would continue until they die.

43. I am shown the paragraph on page 23 which states:

"When a subject has been involved in a physical and violent struggle, the exertion causes the muscles to use oxygen at an increased rate. The process can cause oxygen debt in the muscles, and the physiological response to that is accelerated breathing. When a subject is restrained, ventilation, i.e. the process of getting air into and out of the lungs, can become more difficult due to the internal organs exerting pressure on the diaphragm. This is particularly evident when a subject is placed in the prone position or pressed against a surface."

44. I am asked whether being placed in the prone position in and of itself would make it more difficult to breathe. It would, even without pressure being applied to the body. The vast majority of respiratory function comes from your diaphragm moving up and down. The prone position restricts that, so you can't use your diaphragm as much as you normally would. Then, you'll start to use the other muscles as accessory respiration, but they aren't as effective as diaphragmatic breathing. It will be a long process to become unwell lying prone, but that's we have seen some people who have died and have been face down.

45. I am asked about prone ventilation of patients during COVID. Prone ventilation is a method of ventilating individuals who are under anaesthetic and their airways are

ventilated using positive pressure. It's under debate what is scientifically valid. Sometimes it works, sometimes it doesn't and we haven't got evidence to say for definite.

46. I am shown the sentence, again at page 23, *"The process of restraining often requires the upper body to be held down, sometimes by an officer's own body weight. This chain of events may trigger positional asphyxia."* I agree with this.

47. I am shown the paragraph at the bottom of page 23: *"Officers are encouraged to remove the subject from the prone position as soon as possible following restraint. The subject can then breathe without distraction, and the officer can still carry out search procedures before executing the safe get-up technique."* I am asked if I agree with this statement. I do agree with that, once control has been achieved. I am asked if there is a limit on how long a person should be restrained in the prone position. There is not. It's dependent on many factors. Body size, body weight, intoxication, level of fighting, size of the officers that are restraining the individual as well.

48. In relation to excited delirium, I am shown the paragraph on page 24: *"This is when a subject exhibits violent behaviour in a bizarre and manic way. Excited delirium is a rare form of severe mania which may form part of the spectrum of manic-depressive psychosis and chronic schizophrenia."* I would say that isn't accurate. As a doctor, I wouldn't describe it in that way even in 2015. Manic depression (now known as bipolar disorder) is a chronic or episodic mental illness. Schizophrenia, similarly, is a long term mental health condition. Mental illness may predispose to an episode of acute behavioural disturbance; however, it is far more likely that drug or alcohol use is going to cause it.

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49. I have been shown the sentence on page 24 "*It [excited delirium] is characterised by constant, purposeless, often violent activity, with incoherent or meaningless speech and hallucinations with paranoid delusions.".* I agree this is accurate.

50. I have been shown the sentence *"Subjects can be dangerous and may die of 'acute exhaustive mania.".* As I have previously said, we don't use that phrase.

51. At page 24 the manual explains why the why excited delirium is of concern and states *"Subjects suffering from excited delirium can die suddenly during, or shortly after, a violent struggle. This could occur whilst at hospital or in custody."*

52. I have been shown the section at page 24 headed "*How is it caused?*" which states *"A combination of either drug intoxication, alcohol intoxication, or psychiatric illness. Cocaine is the most commonly associated drug with this condition. However, other drugs have the potential to induce ABD."*

53. I note that this does not refer to legal highs, which are a common drug associated with ABD. However, this is probably because it was from a time when people were starting to become aware of them.

54. I have been shown the paragraph at page 24 "*how do officers identify a subject in a state of excited delirium?"*

"• They will be abnormally strong
• They will be abnormally tolerant to pain
• Incapacitant sprays may not work on them
• Their skin may be hot
• They may be hallucinating, hiding behind objects, running around or pulling their clothes off

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• *They may suddenly become subdued or collapse after a bout of extreme violence"*

55. I have been asked to comment on this. I agree with this list of symptoms. In terms of the individuals showing abnormal strength, this is correct. I've seen six police officers trying to hold down a male with this condition and being thrown off by the individual, who was not a muscular individual at all. Additionally, due to possibly paranoia they may feel that the police or emergency support staff intend to harm them and consequently, they are in a fight for their life.

56. Police control techniques are the use of pain compliance techniques. The wrists are held with handcuffs, or their arms are locked with a hammerlock on, or other techniques. You stop moving because it's sore. If you stop moving you will make it better for yourself. However, individuals suffering from ABD often have a reduced sensitivity to pain, so they keep fighting and fighting.

57. "Hot to the touch" is a reference to hyperthermia. Police officers or lay people will not have a thermometer and will not understand what hyperthermia is. So explaining the person will be "hot to touch" is more relevant as the lay person understands what that is.

58. On the same page, there is a list of *"actions to reduce death in restraining subject exhibiting excited delirium".* The list states:
"The subject should be placed onto their side or into a kneeling/seated position as soon as possible. A subject who has been restrained and exhibits symptoms of excited delirium should be visually and verbally monitored closely; The subject should not be transported in the prone position, if at all possible; Officers should be prepared to administer first aid if the subject's condition deteriorates."

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59. This doesn't mention attempting to contain the person where possible, attempting de-escalation or calling an ambulance. I have been asked whether there was a medical understanding as at May 2015 of whether these steps ought to be taken with an individual suffering from excited delirium or acute behavioural disturbance. De-escalation techniques should be attempted but are often ineffective. But before hospital you may be able to keep the person calm. If at all possible, work with them, although they may be paranoid.

60. If they recognised the symptoms as being excited delirium then they should understand it is a medical emergency. I can see from the manual at page 24 that this is made clear: this states "*Any subject exhibiting symptoms of excited delirium should be treated as a medical emergency and be assessed immediately at the hospital.*". The advice would be to call an ambulance. But the response of the ambulance service was very variable, even now, so you don't know how long you'll have to wait. You could be waiting half an hour to an hour, if not longer.

61. There is an IOPC case in England and Wales in 2011. A man taking cocaine and developed symptoms which were described as excited delirium. The man stripped naked in a public place, was behaving strangely. The officer attempted to arrest him and this resulted in him being restrained. One police officer said "we need to get him to hospital", which is the right thing to do. Another police officer said "no He will never be admitted to A&E, just take him to the cells". The officers took him to the police station. It is paramount to make the decision and say "this is a medical emergency, and we need to get them to hospital as fast as possible". You might get an ambulance to transport them. In that case you should aim to get a people carrier and transport them flat on their back if you can. Otherwise, they may suffer cardiac arrest.

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62. I am asked about pre-hospital emergency medicine. This could be mobilised by the control room for the ambulance service. This would be for the prehospital service to consider both for the individual and the people around them.

63. I am asked what I was aware of in terms of reducing risks of ABD, in the context of my study into ABD in 2015 and the guidelines I prepared for the NHS. The first thing was recognising it as an acute medical emergency rather than bad behaviour. Also recognising that, although psychiatric illness can cause it, it's not a psychiatric condition that means they should go to a psychiatric ward. They require care in a medical ward. The next thing is that the body temperature needs to be reduced. When they come in with a body temperature of 40-plus, that's a real risk of cardiac arrest. You need to ensure that the person is given IV fluids for resuscitation because they've lost a lot of fluid through heat, through ventilation and through exhaustion. You should exclude the common things like low blood sugar. It's a clinical diagnosis, as opposed to a blood test being able to confirm it is ABD.

64. I have been shown page 114 of the manual, which relates to controlling a subject with the application of leg restraints. There's a heading of "care of the subject and medical issues":

> *"Following the application of leg restraints, an officer must not leave the subject unaccompanied. They should be moved from the prone position as soon as practical. Once the control is established and the subject is compliant, the subject should be positioned on their side. Officers must maintain a high level of awareness regarding positional asphyxia and excited delirium.*
>
> *When applying LRS* [fastraps/limb restraint system]*, officers should be aware of the condition traumatic asphyxia. Traumatic asphyxia is produced by a sudden increase in venous pressure. This is common in those who have been hanged and occurs occasionally with crush injuries. As with positional asphyxia, officers should be aware of the recognition, the features and the relief and treatment from asphyxia-related conditions."*

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65. I have been asked to comment on traumatic asphyxia in the context of the use of limb restraints. I agree that traumatic asphyxia results from increased pressure on upper body. Use of fastraps may reduce blood flow from the lower limbs to the heart; however, I am not aware of any definitive studies in the medical literature and this is beyond my experience.

Current Manual – Positional Asphyxia

66. I have been shown Module 4 of the version of the Operational Safety Training manual (PS18539) current as at October 2022 ("Current OST Manual"), which is entitled "medical implications and mental health". Section 3 of that module relates to positional asphyxia. This is described as "*a form of asphyxia that occurs when a subject's position prevents them from breathing adequately.*" This is a more user friendly and understandable version than the 2013 OST Manual. As explained earlier, asphyxia, is not simply someone being stopped from breathing completely; it may also occur because someone isn't able to breathe in sufficient air to meet their body's need of oxygen. Something that may happen during a prolonged, physical struggle.

67. I have been shown the paragraph on page 3 of Module 4 the current OST manual (PS18539): *"Positional asphyxia can occurs rapidly when the subject is placed in a position that impedes the ability to inhale and exhale breath. It most commonly occurs in persons intoxicated with alcohol or drugs or to those with reduced levels of consciousness. Being placed in a prone position for an undue period of time or pressure being applied to the back or chest, have been found to be major causes of positional asphyxia in the past."* I agree with the content here. I don't have anything to add other than to observe that there is a clearer explanation of positional asphyxia here than appears in the 2013 OST manual (PS10938).

68. I have been shown the caption beneath the photograph on page 3, which says:

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"Officer staff should be aware of the increased danger if a subject has been exposed to Irritant Spray or Taser." I am asked if irritant spray makes a person more at risk of positional asphyxia. I can imagine it can trigger you if you're coughing and spluttering; you can't breathe in because it's too painful to breathe. You're wheezing and your eyes are streaming etc, but I don't believe it makes a person more at risk of positional asphyxia. I'm not aware of anyone that's died of it in this country with a spray. However, I would need to go back and do a medical literature search on that to answer more definitively.

69. I have been shown page 4 which states the following: *"Factors making an individual more susceptible to positional asphyxia: age; obesity; alcohol and or drugs; exhaustion/fatigue; respiratory illness; disability (Including pre-existing conditions such as epilepsy and asthma); physical position (in car/van footwells, slumped face down); and restraint."* Respiratory illness is noted here and this was not listed as a factor in the historic training materials I have been shown. I can't think of anything of significance that is missing from the list in the current OST manual. "In car/van footwells" is one of the big risk factors. "Slumped face down" is the classic drug overdose, when they've been injected with heroin and they've slumped into a position perhaps with the head's down and it impacts their breathing. My comments on age are as those earlier; that age is a particular risk to the old or very young.

70. I have been shown the list of signs and symptoms on page 4 of Module 4 the current OST manual (PS18539):

- *"Difficulty breathing; subject verbalises that they cannot breathe;*
- *panic;*
- *swelling in the face or neck, expansion of veins in the neck;*
- *behavioural change – an active subject suddenly becomes passive, or a loud subject becomes quiet;*

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- *cyanosis (Lips/nail beds/gums are discoloured). This is a late sign and difficult to identify."*

71. I don't think it's appropriate for a lay person to be looking for these because clinically they are subtle signs even for trained medical personnel to identify. A lay person is not going to be able to determine the veins distended in the neck. They might do but I wouldn't rely on it.

72. I am asked if I would be happy if the document indicated that this is difficult for a lay person to identify in relation to *"swelling of the face and neck; expansion of the veins in the neck"*. I would. I think the police are expected to know more than a lay person, and they're a lay person from a medical perspective. They aren't specialists in resuscitation. They do the basics, which is important and that's what I feel they should be doing.

73. I have been shown page 5 of Module 4 the current OST manual (PS18539) which discusses restraint:

"If a subject is placed in the prone position during restraint breathing can become difficult due to the internal organs putting pressure on the diaphragm. If the subjects arms are restrained to the rear, the pectoral muscles can be affected, this can also restrict the ability to breathe".

74. Again, the effect of restraining the arms isn't specifically mentioned in the historic training documents I have seen. This is important information to be included here.

75. I have been shown the next paragraph on page 5 which states:

"During the process of restraining a subject the officer/staff may be required to use body weight to restrain a subject. This additional pressure to the upper body, in addition to police restraint techniques may restrict the subjects ability

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to breathe, and subsequently cause the subject to struggle harder in an attempt to breathe. This struggling could be misinterpreted as an act of violence directed towards the officer/staff, who as a natural response might apply additional pressure to the subject in an attempt to restrain them further. Officers/staff should be aware of this cycle of events, and the possibility of causing Positional Asphyxia."

76. Again, this isn't discussed in the historic training documents but it is crucial information to make officer aware of.

77. Overall, having reviewed pages 3 and 4 in relation to positional asphyxia, the guidance is up to date and appropriate for non-medical staff.

Current Manual – Acute Behavioural Disturbance

78. I have been shown Section 4 on page 6 (within Module 4 the current OST manual (PS18539)) which covers Acute Behavioural Disturbance. The description provided is: *"Just as abnormal brain function can be associated with stupor or loss of consciousness, it can also cause confusion or agitation. A severe brain agitation is sometimes known as "Excited Delirium" or "agitated delirium" or more commonly to the police as Acute Behavioural Disturbance."* It goes on to say *"It has been described as when a subject exhibits violent behaviour in a bizarre and manic way, rather than being simply violent"*

79. I take issue with the use of the term manic. It's probably not the best to use manic because, for a doctor, it's a specific set of behaviours and mental illness as opposed to someone in an agitated state.

80. Page 6 continues *"ABD a rare form of severe mania and sometimes considered part of the spectrum of manic depressive psychosis and chronic schizophrenia".*

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This is very similar wording to a section that I have already commented one in the 2013 OST manual (PS10938). I'll repeat my comment here that essentially this isn't accurate. "Severe mania is very out of date terminology. Further, manic depression (now known as bipolar disorder) is a chronic or episodic mental illness. Schizophrenia, similarly, is a long term mental health condition. There are many mental health problems out there which may cause an episode of ABD. However, it is far more likely that drug or alcohol use is going to trigger it.

81. I should also add that the paragraph does not appear in the version of the manual Police Scotland had provided to me, which was Version 1.2, dated October 2017. This was, until a few days ago, the most up to date version of the manual that I had.

82. Page 6 of Module 4 the current OST manual (PS18539): also lists the possible causes of ABD. These are: *"Drug intoxication (including new psychoactive substances, 'legal highs'; alcohol intoxication; drug and/or alcohol withdrawal states; psychiatric illness; acute brain injury; acute illnesses resulting in brain inflammation; metabolic problems or limited supply of oxygen to the brain; Hypoglycaemia (low blood sugar).* This is a comprehensive list of possible causes of ABD. In A and E, we would screen for these conditions for patients brought in with suspected ABD. However, I would not expect a police officer to be aware of these underlying conditions.

83. Page 7 of Module 4 the current OST manual (PS18539) outlines management of person with ABD. I have been shown a paragraph that states:

"It's recognised that controlling a subject suffering from ABD will always be very difficult. Officers and staff may have to place them face down in the ground in order to handcuff them safely. Officer/staff must remember the risks of positional asphyxia affecting a subject, as agitation are far greater than that of a normal violent subject. Subjects may be very difficult to control and can

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continue to struggle beyond the point of exhaustion, making them very difficult to stop whether or not handcuffs are applied. Once handcuffed, officers should not try to restrain a subject face down. Subjects should be placed onto their side or into a sitting, kneeling or standing position as soon as it's safe to do so. They may continue to kick out and the officer staff may have to consider the application of Fastraps.

Such bizarre, exhaustive and persistent violent resistance is a classic indication of ABD. The subject must be monitored carefully as they could collapse or suffer from cardiac arrest at any time. ***Officers/staff must treat subjects suffering from ABD as a medical emergency.***

Subjects affected by ABD must be treated at hospital as a matter of urgency even if they suddenly calm down before they get there. If officers and staff suspect they may be dealing with an ABD subject, then the subject must be checked out of hospital as soon as possible. Officers will not be criticised for taking action. Subjects suffering from ABD can collapse very suddenly and attempts at resuscitation are often unsuccessful."

84. I have no specific comment to make about any of that. I agree with the content.

85. Continuing with page 7 of Module 4 the current OST manual (PS18539), under "operational guidance" it reads *"All subjects who struggle, whether handcuffed or not, risk exhaustion. This increases the chances of sudden death from cardiac arrest, positional asphyxia or other medical issues. It can occur anywhere from the locus to the cells.*

86. I absolutely agree. It is very important to be aware to the fact that it can be happening anywhere, out of the street, in a police van or the cells.

87. I have been shown the paragraph, at page 7, under "operational guidance" which reads:

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"Officers/staff must consider the following actions [relative to ABD]:
recognise that the situation as a medical emergency; if possible alert the hospital staff before arrival to allow appropriate preparation.
Attempts at verbal de-escalation are often unsuccessful.
If safe to do so, subjects should be permitted comparative freedom of movement within a given area, in what would be regarded as a 'contained' situation.
Consideration, must, if possible, be given to alternative options to restraining a subject"

88. I think this could be better worded. It could be read to suggest as verbal de-escalation is often unsuccessful that it is not worth attempting. However, I agree that attempts as de-escalation with individuals suffering from ABD are often unsuccessful.

89. In relation to considering alternatives to restraint, this should be done. However, in terms of the cases that I see at the hospital, restraint has normally been necessary to get control and get the individual from the locus to hospital.

90. I am asked if I have ever seen de-escalation work with an individual suffering from ABD. Not really. We've tried de-escalation where you try and agree with them and talk them down, and what we find is that you've got this patient that's throwing themselves around on a trolley, or they're restrained and you try and talk to them, and they're just not registering what you say to them at all. They just shout at you, or they shout "Get off me. Get off me. Help, Help, Help". You get a feel for the situation when you're trying to de-escalate. You can tell if it's not going to work and you need medication.

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91. I've been shown page 8 of Module 4 the current OST manual (PS18539). This section is entitled *"Restraining a subject with acute behavioural disturbance".* I have been asked to comment on the following guidance:

- *"Subjects who appear to have this condition should be restrained only in an emergency. Restraint should be for the minimum necessary and for the shortest practical duration to facilitate transfer to definitive care.*
- *Sufficient officers/staff should be present to ensure safe restraint.*
- *The lead officer/staff should explain to the subject what's happening in a calm fashion.*
- *Immediately after the subject comes under physical control, they should be placed onto their side or into a sitting, kneeling or standing position. Prolonged restraint in the prone position must be avoided.*
- *Officer/staff should observe the subject's condition continually while being restrained as death can occur suddenly and develop beyond the point of viable resuscitation within seconds rather than minutes.*
- *Whenever possible during restraint. a safety officer should be identified. Their responsibility will be to monitor the health and welfare of the subject during restraint."*

92. I think that section is actually my wording. I recommended the inclusion of a safety officer. If you have got one police officer observing what's going on and not getting involved or distracted, they're watching to make sure the person isn't going into a flaccid state, or if they're getting cyanosis (if they can see that). That's what my recommendation was. We've learned from medical resuscitation that if you have a leader who doesn't become task focussed, the outcomes are much better. So, for example, following a car accident, the person with a head injury would come in and be handed over to us. The leader would say "Is the airway open? Is it closed? Breathing? Are they breathing? Any normal signs?" and say to check circulation,

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blood pressure, pulse etc. They aren't actually examining the person at all; they're telling everyone else what to do and that offloads them cognitively. That's why we'd recommend you have an individual observer. One of the EMRS helicopter doctors wrote a book about it: Peak Performance Under Pressure by Stephen Hearns

93. Regarding the recommendation that *"the lead officer staff should explain to the subject what is happening in a calm fashion"*. That is because if someone understands what is happening to them, their panic level can be reduced. It doesn't really work but it's something we are recommended to try from the Royal College of Emergency Medicine. It's all about trying to calm the situation rather than wind it up because the more you restrain, the worse it gets. You can talk to someone and tell them "listen, all this is going to stop now. You're going to be absolutely fine. We'll get your hands free. We'll get your legs free. Just calm down for us". That's the sort of manner we're looking at to try and bring it back down again.

94. I co-authored a paper together with Consultant Psychiatrist, Dr Derek Tracy; Acute Behavioural Disturbance – a Physical Emergency Psychiatrists need to Understand (WIT-00019). At page 336, we outline the dangerous effects of the person's distress and fear on their physiology under the heading "Pathophysiology". It states:

"The onset of delirium typically has a marked impact on individuals' mental states, commonly defined by disorientation, fear, paranoia, and a sense of persecution and terror, manifesting with attempts to escape from anyone attempting to help. The well-recognised fight-or-flight changes associated with a fear response, namely enormous physical effort and catecholamine release - lead to three interplaying factors that serve to create a perfect storm of physiological distress, hypothermia, catecholamine excess and metabolic acidosis."

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95. Again, at page 8 of Module 4 the current OST manual (PS18539), it outlines what actions should be taken in the event that a subject with suspected ABD loses consciousness. This includes:

"Place the subject in a position as to not impede their breathing. Continually monitor the airway and breathing. Commence CPR if required."

96. I have been asked about whether leg restraints and handcuffs should be removed when CPR has commenced or is ongoing. They should because the return of the blood from the legs will be compromised by Fastraps. It's a negative factor for resuscitation. For handcuffs it's probably less of an issue, because the venous return from the hands is quite low however access to the chest to perform efficient chest compressions is essential. But if you've got handcuffs at the front, they need to be taken off for resuscitation purposes. I agree it's a controversial area.

Pre-May 2015 First Aid Training

97. I have been shown the Police Scotland First Aid Manual (PS12384) dated July 2014. I have been asked to comment on page 46, which states in relation to positional asphyxia:

"The death of persons in custody has been attributed to this condition. In otherwise healthy individuals it can occur when an individual is held down or placed in a prone, face-down position. Although instances are comparatively rare, risks may be increased where the detainee is obese, drugged or intoxicated.

Most recent medical opinions suggest that it is restraint and the exertion against such restraint that may result in death, rather than the casualty's position. Some doctors put forward the view that the condition may exist exclusively in intoxicated and obese persons, particularly those persons with a beer belly.

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The term 'restraint associated death' may give a more accurate description of this condition."

98. I agree largely with the content. However, I would disagree with the line "some doctors put forward the view that the condition may exist exclusively in intoxicated and obese persons". That's not the case at all. It can happen in anybody. It's more of a risk of it happening in those individuals but it could happen to anyone; I think that would have been the understanding in 2015.

99. I have been asked to comment on page 47 in relation to excited delirium. It states:
"A delirium is characterised by a severe disturbance in the level of consciousness and a change in mental state over a relatively short period of time". The signs are listed as:
- *Profuse sweating due to hyperthermia.*
- *There is a reduced clarity of awareness in their environment.*
- *The ability to focus, sustain or shift attention is impaired.*
- *The individual's attention wanders and is easily distracted by other stimuli.*
- *The individual is almost certainly disorientated and may not know what year it is, where they are, what they are doing and the impact of their behaviour.*
- *Perceptual disturbances are common and the person may hallucinate."*

100. I don't have any particular comment on that. They've got what we look for now, hyperthermia. It might be called profuse sweating today. But they've got most of the important factors for ABD.

101. I have been shown the next paragraphs which say:

> *"A delirium is the result of a serious and potentially life-threatening medical condition. Potential causes include infection, head trauma, fever and adverse reactions to medications or overdose of illegal drugs such as cocaine and methamphetamines. Any person who is delirious requires prompt medical evaluation and treatment. The delirious person is likely to*

manifest an acute behavioural disturbance. These individuals can appear normal until they are questioned, challenged or confronted.

When confronted or frightened, these individuals can become oppositional, defiant, angry, paranoid and aggressive. Further confrontation, threats and use of force will almost certainly result in further aggression and even violence. Attempting to restrain and control these individuals can be difficult because they frequently possess unusual strength, pain and sensitivity and instinctive resistance to any use of force.

As many as five to eight people may be required to restrain one delirious adult. The Police Complaints Authority recommend the following training for police officers to help them differentiate between intoxication and excited delirium syndrome:

- Learn how to recognise the signs of delirium or the initial symptoms.
- Obtain medical consultation and attention for any person who may suffer from a delirium.
- Do not excite, confront or agitate individuals who are delirious.
- Contain rather than restrain when the individual is not dangerous to self or others.
- Avoid the use of force unless individual is dangerous to self or others and use the lowest level of force necessary, as well as a method of restraint that will not cause asphyxiation.
- Be cautious and aware of potential side effects of medication."

102. I would say for the time period that it was written, that's in keeping with the understanding of excited delirium at the time.

103. Page 47 continues by outlining the recommendations of the Police Complaints Authority (PCA) in relation to training for police officers to *"help them differentiate between intoxication and excited delirium syndrome"* as follows:

- *"learn how to recognise the signs of delirium or the initial symptoms;*
- *obtain immediate medical consultation and attention for any person who may suffer from a delirium;*
- *do not excite, confront or agitate individuals who are delirious;*
- *contain rather than restrain when the individual is not dangerous to self or others;*
- *avoid the use of force unless individual is dangerous to self or others;*

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- *use the lowest level of force necessary as well as a method of restraint that will not cause asphyxiation; and*
- *Be cautious and aware of potential side effects of medication"*

104. I have been asked if the police would be able to work out the difference between excited delirium and intoxication. I don't believe so. I don't know if it's appropriate for a police officer to try and identify a delirious state or its cause because medical practitioners struggle to identify a delirious state as well. A general background knowledge would be helpful.

105. I have been asked whether alcohol can cause ABD or ED. Alcohol has never been reported as a sole cause of ABD or ED, which is surprising. However, it can be a contributory factor. With drug intoxication where someone is under the influence of a drug, they can be a little bit confused, or they can be hyperactive, or they can be sedate.

Current First Aid Training

106. I have been shown the current First Aid PowerPoint (PS18585). I am told it is the PowerPoint that Police Scotland use in their operational First Aid and was in force as at October 2022. I have been shown slide 15 which has the heading "Cardiopulmonary resuscitation" and states *"If a casualty is not breathing normally, ensure an ambulance has been called, request an AED and commence CPR. Rescue breaths are optional."* It includes a separate boxes which states: "*30 compressions, two breaths and then repeat."* and *"A rate of 100 to 120 per minute at a depth of 5 to 6 centimetres."*

107. I have been asked whether this was what they would be doing until such time the Automated External Defibrillator (AED) arrives or paramedics arrive and take over. Yes. They don't have to give mouth to mouth, or they may or not have masks

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with them to do ventilations themselves. I have been asked if rescue breaths are preferable to no rescue breaths. I think the evidence was, from memory, that it didn't make much of a difference. It's much more important to get the compressions going regularly with the correct depth and continuous compressions.

108. I am asked, if there is a mask and a bag that would allow you to provide air, whether that would be of benefit to the person being resuscitated. It would be. I can't provide statistics to say how much better it is, but it would be better for the patient to be delivering oxygen via a face mask, or by a bag valve mask. A bag valve mask is essentially a face mask connected to plastic one litre sized balloon. This is squeezed to help ventilate the patient to get their oxygen levels up. We believe it leads to better outcomes. It's a very tricky technique to acquire and it's often done wrongly, even by medical personnel.

109. I have been shown slide 31 about positional asphyxia, which says:

> *"Positional asphyxia can occur when a person is placed in a position that interferes with inhalation and/or exhalation. Risk factors include physical position and restraint(s); alcohol and/or drugs; age; obesity; exhaustion/fatigue; respiratory illness; disability."*

110. That covers the key risk factors. I am asked what disability would be referred to in terms of positional asphyxia. It would be looking at things like cystic fibrosis or asthma if particularly severe. Some people have congenital abnormalities in the chest wall. Also, Motor Neuron Disease or Muscular Dystrophy. However, I don't think it likely the police would be restraining an individual with either of these conditions.

111. Slide 32 covers signs and symptoms. It states, *"Body position; gurgling/gasping, behavioural changes; panic; verbalising that they cannot breathe."* I have been asked what body position would be in terms of a sign or symptom. It would be if the person's been restrained in the prone position, or if they're curled up in a ball. That would be a sign of risk of positional asphyxia. But

these persons are going to be thrashing about as much as possible trying to get the air into the lungs, so there won't be a specific position for them when they're not being restrained. Similarly, I have been asked what behavioural changes would be. That would be going from thrashing around to being very calm, or vice versa. I agree with the content here.

112. I have been shown the section within the same slide on treatment. This lists the following: "*Remove from prone ASAP; Treat as a medical emergency; Continue to monitor the casualty's condition; CPR if indicated*". I have been asked if I have any comment on that. It just shows that there's not a lot you can do about positional asphyxia, other than rolling the person onto their side and keeping their airway patent there are no specific interventions. Saying "treat as medical emergency" doesn't change much about what can be done. Saying "continue to monitor the casualty's condition", it would be quite a horrible scenario to stand and watch. If breathing is affected and the officer is trained, they could do assisted ventilation. The medical treatment utilises advanced airway techniques (intubation) and may use resuscitative drugs such as adrenaline.

113. I have been shown slide 33 on Acute Behavioural Disturbance (ABD). It says:

"ABD is characterised by three factors:
- Delirium (altered thought processes, confusion, hallucinations)
- Agitation and/or aggression;
- Abnormal physiology – raised body temperature, fast heart rate.

Subjects can die suddenly or shortly after a violent struggle.
There are no warning signs to indicate when a subject may suffer cardiac arrest."

114. I agree with this. I think this may be content I provided to Police Scotland.

115. Slide 34 of the PowerPoint includes a video of a man that's taking drugs, is in an acute ABD state and is on the roof throwing tiles off. He jumps off the roof onto a car, breaks his spine, breaks both his ankles, and still attempts to run away and

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fight with the police. He survived. The video can't be seen in this version of the slide; however, it provides police officers with a real life example of a person suffering from ABD.

116. I have been shown slide 36 which outlines the causes of ABD:

"- Drug intoxication (including psychoactive substances)
- Cocaine is the best-known cause of drug-induced ABD
- Alcohol intoxication
- drug/alcohol withdrawal states
- psychiatric illness
- acute brain injury or illness
- inflammation or limited supply of oxygen to the brain
- hypoglycaemia"

117. I do not have any comment to make on that other than to observe that alcohol may be a contributary factor rather than a sole precipitant. It's accurate and this is also my work.

118. I have been shown slide 37 which says:

"General signs of ABD:
- Constant/near constant activity
- Abnormal strength and pain tolerance
- Irritant sprays may not work
- Rapid breathing or panting
- Non-responsive to presence of authority figures
- Unable to follow commands
- Violent shouting or panicking
- Does not fatigue
- Hot skin and sweating
- Attracted to attempt to destroy glass and reflective items
- Hallucinations
- Hiding objects
- Running around
- Pulling clothes off
- May suddenly become subdued or collapse"

119. This is my work and my recommendation. In my opinion this reflects currenting understanding of the signs of ABD. I have been asked about the section about being attracted to glass and reflective items. From my understanding, they're

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seeing a reflection of themselves that's grossly distorted in the mirror or pane of glass, and, because they're frightened, they try to smash and attack it. I don't think we'll ever truly know because no one comes back from ABD able to give us a coherent history of what they saw. We know about it because they might be in a bathroom with smashed bathroom cabinets or mirrors or doors. Or it's dark outside and light inside and it's acting as a mirror, and they smash it as much as possible because of what they see.

120. I have been shown slide 38 which states, "*ABD emergency situations: once controlled try not to hold the person face down*". This is because you don't want them in the prone position which has an increased risk of death. The slide continues:

> *"Place the person onto their side or into a sitting or kneeling position. Call for emergency medical assistance. Monitor the person's condition as cardiac arrest can occur suddenly. If the casualty becomes unconscious and stops breathing normally, begin CPR. Collapse can occur even in the recovery position, especially if the person continues to struggle against the restraint."*

121. I have been asked if I have any comment to make on that, and whether there are any updates to make post October 2022. There's nothing that has really been changed, other than the reinforcement of avoiding the prone position and to avoid sudden cardiac arrest. But you can get sudden cardiac arrest whatever position the person's body is in.

Current First Aid Manual

122. I have had sight of the current Operational First Aid Manual from Police Scotland (last amended 20 May 2021) which was current as at October 2022 ("current First Aid Manual") (PS18581).

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CPR

123. CPR for adults is covered in the current First Aid Manual at Unit 1, Lesson 2 at pages 1 to 3 (pages of 11 to 13 of the PDF document). This reflects, albeit in greater detail, the material in the corresponding PowerPoint. There is no mention regarding any consideration as to removing handcuffs or leg restraints. This is something I would recommend. I would add that using rescue breaths is at the discretion of the rescuer; chest compression alone CPR is accepted by the UK Resuscitation Council

Positional Asphyxia

124. Positional asphyxia is covered in the current First Aid Manual at Unit 1, Lesson 7 at pages 1 to 3 (pages of 35 to 37 of the PDF document). Again, this reflects the material in the corresponding first aid PowerPoint, but in greater detail. I have the following comments to make on this section: The statement on page 1 *"Death can occur rapidly as a consequence, and there have been cases where Police Officers have been found liable"* does not provide information to qualify this statement. Additionally, on page 2, it states *"During prolonged restraint, where the subject is placed in a prone position, ventilation can become more difficult, due to the internal organs exerting pressure on the diaphragm."* There is no way of quantifying "prolonged restraint", and this would be better described as the risk increases the longer the restraint is applied. I would recommend that if a detainee shows signs of positional asphyxia, then restraint devices are removed

ABD

125. ABD is covered in the current First Aid Manual at Unit 1, lesson 8 at pages 1 to 4 (pages 39 to 43 of the PDF document). This is largely reflective of the material in the first aid PowerPoint. ABD is covered in the current First Aid Manual at Unit 1, lesson 8 at pages 1 to 4 (pages 39 to 43 of the PDF document).

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This is largely reflective of the material in the current First Aid PowerPoint. In relation to the causes of ABD, again I would comment that alcohol intoxication on its own has not been associated with ABD. Otherwise, I agree with the content here.

Work with Police Scotland

126. I have been asked to explain how I normally work with Police Scotland in terms of providing advice on the content of manuals and other training materials. It is mainly done by email correspondence. The modules are emailed to me, I look over them to see if there's anything that needs to be changed from a first aid point of view and submit them back. I sit on a clinical governance group. It stopped because of COVID but I think it meets quarterly. There's a vast array of representation around the table on occupational health, training, Police Federation, normal policing, and ACC Williams who chairs the group. We discuss things there. Sometimes Police Scotland have done a piece of work and then think that they need the clinical governance team to look over it. It might not have any input of clinical governance until the very end of the project. That probably isn't the best if you need to make changes.

127. I have been asked if they normally give an indication of exactly what they want me to comment on in a document. They would usually identify a chapter, on drowning for example, or for the number of respiratory breaths in CPR. I've not been asked to review a whole manual.

128. I have been asked whether I had any email correspondence with Police Scotland requesting that I review module 4 of the manual, medical implications and mental health, in any time since the version I hold which was produced in October 2017. I know I would have had correspondence, but I don't know myself. I haven't

129. kept the emails back that far. However, Police Scotland might be able to access them, I don't know.

130. 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.

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