SHERIFFDOM OF SHERIFF COURT TAYSIDE CENTRAL AND FIFE AT STIRLING

[2021] FAI 4

STI-B81/19

DETERMINATION

BY

SHERIFF SG COLLINS QC

UNDER THE INQUIRIES INTO FATAL ACCIDENTS AND SUDDEN DEATHS ETC (SCOTLAND) ACT 2016

into the death of

ANGUS McASKILL

Stirling, 5 January 2021

Determination

The sheriff, having considered the evidence and submissions presented at the inquiry:

1. In terms of section 26(1)(a) of the Inquiries into Fatal Accidents and Sudden Deaths etc. (Scotland) Act 2016 (hereinafter referred to as "the 2016 Act"), determines as follows:

(a) In terms of section 26(2)(a) (when and where the death occurred):

That the late Angus McAskill, date of birth 4 October 1960, was pronounced dead at 11.50am on 21 March 2017 within the Cardiology Ward at Forth Valley Royal Hospital.

(b) In terms of section 26(2)(b) (when and where any accident resulting in death occurred):

Not applicable. The death did not result from an accident.

(c) In terms of section 26(2)(c) (the cause or causes of death):

That the cause of death was a myocardial infarct ('heart attack') which had occurred on 12 February 2017 and the complications arising therefrom.

(d) In terms of section 26(2)(d) (the cause or causes of any accident resulting in death):

Not applicable. The death did not result from an accident.

(e) In terms of section 26(2)(e) (any precautions which (i) could reasonably have been taken, and (ii) had they been taken, might realistically have resulted in death, or any accident resulting in death, being avoided):

At around 03.40am on 12 February 2017 the deceased complained to prison officers on duty at HM Prison Glenochil that he was feeling unwell, and was experiencing chest pain, sweating and a sore throat. In these circumstances, and in the absence of a Nurse or other health care professional on duty in the prison who could attend and carry out an electrocardiogram on the deceased, it would have been a reasonable precaution for the officers to have sought medical attention for him by calling for an emergency ambulance to attend.

(f) In terms of section 26(2)(f) (any defects in any system of working which contributed to the death or the accident resulting in death):

The first aid training of the prison officers who attended on the deceased at 03.40am on 12 February 2017 was defective insofar as it did not ensure that they were aware that given the symptoms with which the deceased presented to them (i) there was a real possibility that he might be suffering from a heart attack; (ii) that whether or not he was so suffering could be conclusively determined by an electrocardiogram test; and (iii) that medical attention should be sought urgently in such form as to enable such a test to be carried out.

(g) In terms of section 26(2)(g) (any other facts which are relevant to the circumstances of the death):

Given that by 11.20am on 12 February 2017 the deceased had a presenting complaint of persistent chest pain which did not ease on rest, painful arms and sore throat, that his blood pressure was abnormally low, and that an abnormal electrocardiogram reading had been obtained showing in particular the presence of ST elevation, an emergency ambulance should have been requested to attend at HM Prison Glenochil in order that the deceased could be taken to hospital as soon as possible.

2. In terms of section 26(1)(b) of the 2016 Act (recommendations (if any) as to (a) the taking of reasonable precautions, (b) the making of improvements to any system of working, (c) the introduction of a system of working, (d) the taking of any other steps, which might realistically prevent other deaths in similar circumstances) recommends:

(i) That the Scottish Prison Service should review and revise standing orders for prison officers so as to secure that, where a prisoner complains of feeling unwell, with chest pains, sweating, and a sore throat, at a time when no medical or nursing staff able to carry out an electrocardiogram are on duty within the prison, the prison officer in charge should – whether or not he also seeks advice from a police custody Nurse – direct that a call be made for an emergency ambulance to attend.

(ii) That the Scottish Prison Service should review and revise prison officers' first aid training in the light of the evidence led at this inquiry, and this determination, so as to ensure that prison officers are made aware that where a prisoner is complaining of symptoms such as those reported by the deceased at 03.40am on 12 February 2017 (i) there is a real possibility that he might be suffering from a heart attack; (ii) that whether or not he is so suffering can be conclusively determined by an electrocardiogram test; and (iii) that medical attention should be sought urgently in such form as to enable such a test to be carried out.

(iii) That inquiry should be made by the Scottish Prison Service and the Scottish Ambulance Service in relation to the connectivity of the mobile phones used by ambulance staff when in and around the precincts of HM Prison Glenochil, to determine (i) whether there is problem of impaired connectivity, and if so (ii) the extent of this impairment; (iii) the cause of it; and (iv) the

measures required to ensure that connectivity is improved, or alternatively (v) to put in place back up measures which can ensure effective communication between ambulance staff and receiving hospitals in the event that mobile phone communication is unavailable.

NOTE

Introduction

[1] This inquiry was held into the death of Angus McAskill. Mr McAskill was a serving prisoner at HM Prison Glenochil who died in the cardiology ward of Forth Valley Hospital on 21 March 2017. His death was reported to the Procurator Fiscal and preliminary hearings in the inquiry were held on 2 August 2019 and 27 September 2019. Evidence was led but not concluded on 23 October 2019. A procedural hearing took place on 17 December 2019. Thereafter further evidence was led and concluded on 25, 26, 27 and 28 February 2020. Parties put their submissions into writing and at my request an oral hearing on submissions was held, by telephone conference call, on 29 June 2020.

[2] The Crown was represented by Mr Lewis Crosbie, Procurator Fiscal Depute ("PFD"). Also appearing at the inquiry were Ms McCabe, solicitor, for the Scottish Prison Service ("SPS"), Ms Watts, advocate, for NHS Forth Valley ("FVHB"), Mr Hamilton, advocate, for the Scottish Ambulance Service ("SAS"), and Mr Rodgers, solicitor, for the Scottish Prison Officers' Association ("SPOA"). I am grateful to all of

them for their contributions to the inquiry. The deceased's family was not represented. Like all other parties, I offer my condolences to them.

[3] I heard oral evidence from the following witnesses:

1. Paul McKean, the deceased's brother in law
2. Robin Craven, prison officer
3. Richard Cochrane, prison officer
4. Aileen Kidd, Nurse
5. Karen Murphy, Nurse
6. Dr Oliver Frenschock, general medical practitioner
7. Stephanie Jones, SAS clinical hub manager
8. Jordan Tuff, ambulance technician
9. James Martin, ambulance technician
10. Colin Kemp, paramedic
11. Lucy Chapman, Nurse
12. Kirsten Lennox, healthcare assistant
13. Fiona Szanyi, rehabilitation support worker
14. Dr Stephen Glen, consultant cardiologist
15. Dr Jahangir Khan, general medical practitioner
16. Dr Ahmed Abouzaid, cardiologist
17. Professor Adrian Brady, professor of cardiology
18. Douglas Elder, consultant cardiologist
19. Dr Craig Sayers, clinical lead, SPS forensic services

An affidavit was lodged by SPS in respect of Traycie Elder, a training manager, and by agreement this was taken in lieu of hearing oral evidence from her. Two joint minutes were lodged, dated 17 January 2020 and 28 February 2020. These helpfully agreed a number of matters of substance and the provenance of a number of productions thereby shortening the hearing appreciably. Audio recordings of seven telephone calls made on 12 February 2017 between unidentified SPS staff at Glenochil and SAS control staff were played to the inquiry. Transcripts were lodged, the provenance of the audio recordings having been agreed.

The Legal Framework

[4] This inquiry was held in terms of section 1 of the 2016 Act. Mr McAskill died while in custody as a convicted prisoner, and, therefore, the inquiry was a mandatory inquiry held in terms of section 2. The inquiry was governed by the Act of Sederunt (Fatal Accident Inquiry Rules) 2017 (hereinafter "the 2017 Rules") and was an inquisitorial process. The PFD represented the public interest.

[5] The purpose of the inquiry was, in terms of section 1(3) of the 2016 Act, to establish the circumstances of the death of Mr McAskill and to consider what steps (if any) might be taken to prevent other deaths in similar circumstances. It was not the purpose of the inquiry to establish civil or criminal liability (see section 1(4) of the 2016 Act). The manner in which evidence is presented to an inquiry is not restricted. Information may be presented to an inquiry in any manner and the court is entitled to reach conclusions based on that information (see Rule 4.1 of the 2017 Rules).

[6] Section 26 of the 2016 Act sets out what must be determined by the inquiry.

Section 26 of the 2016 Act is in the following terms:

"26 The sheriff's determination

(1) As soon as possible after the conclusion of the evidence and submissions in an inquiry, the sheriff must make a determination setting out—

(a) in relation to the death to which the inquiry relates, the sheriff's findings as to the circumstances mentioned in subsection (2), and

(b) such recommendations (if any) as to any of the matters mentioned in subsection (4) as the sheriff considers appropriate.

(2) The circumstances referred to in subsection (1)(a) are—

(a) when and where the death occurred,
(b) when and where any accident resulting in the death occurred,
(c) the cause or causes of the death,
(d) the cause or causes of any accident resulting in the death,
(e any precautions which—

(i) could reasonably have been taken, and
(ii) had they been taken, might realistically have resulted in the death, or any accident resulting in the death, being avoided,

(f) any defects in any system of working which contributed to the death or any accident resulting in the death,
(g) any other facts which are relevant to the circumstances of the death.

(3) For the purposes of subsection (2)(e) and (f), it does not matter whether it was foreseeable before the death or accident that the death or accident might occur—

(a) if the precautions were not taken, or
(b) as the case may be, as a result of the defects.

(4) The matters referred to in subsection (1)(b) are—

(a) the taking of reasonable precautions,
(b) the making of improvements to any system of working,

(c) the introduction of a system of working,
(d) the taking of any other steps,

which might realistically prevent other deaths in similar circumstances.

(5) A recommendation under subsection (1)(b) may (but need not) be addressed to—

(a) a participant in the inquiry,
(b) a body or office-holder appearing to the sheriff to have an interest in the prevention of deaths in similar circumstances.

(6) A determination is not admissible in evidence, and may not be founded on, in any judicial proceedings of any nature."

The Facts

[7] I found the following facts admitted or proved:

1. Angus McAskill (hereinafter referred to as "the deceased"), was born on 4 October 1960. He died on 21 March 2017 and accordingly was 57 years old at the time of his death.

2. The deceased smoked 20 to 40 cigarettes a day throughout most of his adult life. He had presented to his GP with shortness of breath in 2014 and been diagnosed with chronic obstructive pulmonary disease and provided with an inhaler. Chest x-ray and ECG tests at this time showed no heart failure.

3. On 13 January 2016 the deceased was sentenced at the High Court in Glasgow to eight years imprisonment. He was in lawful custody at HM Prison Glenochil, King O' Muirs Avenue, Glenochil ("Glenochil") at the time of his death.

4. The deceased was a generally cheerful and positive individual and not given to complaining about his health. Prior to the events hereinafter narrated he had while in prison not previously sought assistance at night in connection with a medical problem. Nor had he incurred any misconduct reports or positive mandatory drug tests.

5. During the night of Saturday 11 to Sunday 12 February 2017 the deceased was locked in his cell in Glenochil. He shared this cell with another prisoner, William Smith.

6. Between around 23.00pm on 11 February 2017 and 01.00am on 12 February 2017 the deceased had a heart attack. More particularly he had at that time a complete occlusion of his proximal right coronary artery causing an established inferior ST segment myocardial infarction. This is the most serious type of heart attack, which involves a long interruption of the blood supply to the heart.

7. Given the nature and extent of the deceased's heart attack, emergency admission to hospital and urgent surgical intervention to reopen his right coronary artery were required. The greatest benefit to him of this procedure would have been if it had been carried out within one hour of the onset of the heart attack. If it were carried out within around six hours of onset then there would be a real possibility of long term survival. But if it was not carried out within this timeframe then the damage to the deceased's heart would likely

become irreversible, and thus his prospects of survival in even the short to medium term would be very poor.

8. At around 03.40am the deceased contacted prison staff via his cell intercom. He spoke to Prison Officer Robin Craven. The deceased said that he was sweating, had pain in his chest and was feeling unwell. Officer Craven had had no prior knowledge of or contact with the deceased. Officer Craven went to the deceased's cell and spoke to him through the observation hatch. The deceased told him that he had been suffering pains across his chest, that he had been sweating quite a bit and had some soreness in his throat.

9. Officer Craven reported the deceased's complaint to Officer Richard Cochrane, the night shift manager. Officer Cochrane then attended at the deceased's cell along with officers Craven, Ian Smith and Robert Pews. Officer Cochrane had had no prior knowledge of or contact with the deceased. He opened and entered the deceased's cell around 03.55am. Officer Craven was behind Officer Cochrane. Officers Smith and Pews remained outside the cell. Officer Cochrane, as night shift manager, was the senior, responsible, officer. In terms of the Glenochil night duty standing orders (production 1/2 for SPS) he was required to "ascertain the seriousness of the [deceased's] illness".

10. The deceased was sitting in a chair watching television. William Smith was asleep in his bunk. Officer Cochrane spoke to the deceased. Their conversation lasted two or three minutes. Officer Cochrane asked him what was wrong. The deceased told him that he felt unwell, had pains in his chest, a sore

throat, a fever and was sweating. Officer Cochrane asked the deceased how bad the chest pain was and he downplayed it, replying "not that bad". Officer Cochrane asked him if he had pain down his left arm and he replied that he did not. Officer Cochrane asked the deceased what he, the deceased, thought was wrong with him. The deceased said that he did not know. Officer Cochrane asked the deceased if he had had a heart attack before, and he said no.

11. Officer Cochrane thought that the deceased was not having a heart attack. He told him so. He thought it was more likely that the deceased had a heavy cold, although he did not hear him coughing. Again, he told the deceased this, and said that he would ask the nurses to come and see him in the morning. He ordered two paracetamol, for which the deceased thanked him. Officer Cochrane said to the deceased that if he got any worse he should contact the officers on the intercom. He directed Officer Craven to check on this.

12. Officer Cochrane had no medical qualification, training or experience. However he was first aid trained, having attended SPS courses in first aid at work in 2004 and 2011. He was also qualified to train others in first aid, although this qualification did not itself involve any greater knowledge of first aid. Officers Craven and Pews were also first aid trained, having both attended the SPS first aid at work course in 2016.

13. The SPS first aid at work course, as taught at the time of the deceased's death, is as described in the affidavit by Traycie Elder, SPS Training Manager, dated 21 February 2020. It included guidance on how to identify signs and

symptoms of a heart attack and as to the correct treatment for it. In particular the signs of a heart attack are described as follows: "persisting central crushing vice like pain radiating from the heart often spreading to the jaw and down the left arm; does not ease with rest unlike angina; breathlessness and upper abdominal discomfort like severe indigestion; sudden faintness or giddiness; sense of impending doom; ashen skin; blueness of the lips; rapid pulse becoming weaker; collapse often without warning." Where a prisoner is having a heart attack prison officers are instructed by their training to aim "to minimise the work of the heart. To summon urgent medical aid and arrange urgent removal to hospital."

14. Although the SPS first aid training correctly identifies common symptoms of a heart attack, it fails to teach that a person may have a heart attack without some or all of these symptoms. It failed to teach that the symptoms reported by the deceased were indicative of a possible heart attack. Given their training, therefore, and the symptoms which the deceased reported to them, the prison officers who attended on him in the early hours of 12 February 2017 failed to recognise that there was a real possibility that the deceased was having a heart attack. Had they recognised that this was a real possibility, and given the short timeframes within which medical intervention would be required if the deceased was indeed having a heart attack, they should have sought medical advice and assistance for him as a matter of urgency.

15. There were no nursing staff on duty in the prison overnight. Prior to 2006 a nurse, employed by SPS, had been on duty in every Scottish prison overnight. SPS conducted an audit and determined that healthcare delivery by nurses in prisons overnight was minimal and so discontinued this service. By so doing the policy intention was to reallocate resources and improve daytime prison nursing care. Nursing staff continued to work in prisons during the day, between around 08.00am and 22.00pm. SPS also maintained a rota of out of hours GPs contactable by prison officers outwith these hours and at weekends. Four GPs were on the Glenochil rota, one being on call each night and each weekend. Until 2011 the dayshift nurses continued to be employed by SPS. Since then the National Health Service has taken over responsibility for all prison nursing services and nursing staff working in prisons are employed by local health boards.

16. Accordingly although there were no medical or nursing staff on duty in the prison overnight, it would have been open to Officer Cochrane to have phoned the on-call, out of hours general practitioner. He could have sought advice about the deceased's symptoms and so placed the responsibility for his care and treatment into the hands of a qualified medical practitioner. Had he done so the on call GP could have sought further information from Officer Cochrane regarding the deceased's condition, attended to examine the deceased personally, or recommended that an ambulance be called and the deceased conveyed to hospital for examination and treatment. Short of attending at the

prison, the GP could not however have spoken to the deceased directly, for example, to seek to better understand his history and symptoms.

17. Had Officer Cochrane been aware that there was a real possibility that the deceased was having a heart attack he could and would have requested the Glenochil control room to call SAS and request an emergency ambulance attend. Had he done so the deceased would have been attended on by trained ambulance staff, including a paramedic, within a few minutes. These staff would have been in a position to quickly assess whether the deceased was indeed having a heart attack, and if so to secure his transfer and admission to hospital for treatment as a matter of urgency.

18. However Officer Cochrane was not aware that there was a real possibility that the deceased was having a heart attack. He did not contact the on call GP and did not call for an ambulance. Instead, the officers left and secured the deceased's cell at about 0400 hours. Officer Craven checked periodically thereafter to see whether the deceased had sought to make further contact with prison officers via the cell intercom prior to the end of the nightshift. He did not do so. Officer Cochrane then typed a note regarding his attendance on the deceased (Crown Production 2/85). It states in particular that "On asking [the deceased] how he was feeling he said that he had a sore chest and sore throat and was sweating. He did not present any signs or symptoms of a heart attack. I informed him of this saying it was more like a cold virus…" This note was left in the prison health centre for the day shift nurses to collect.

19. Nurses Aileen Kidd and Karen Murphy both came on duty at around 08.00am on the morning of Sunday 12 February 2017. They were the only nurses on duty that morning. Nurse Kidd took responsibility for attending to the prisoners in Abercrombie Hall, where the deceased was accommodated, and so received Officer Cochrane's note. From around 08.20am she did a round of the Hall, attending to various prisoners and dispensing medication where required. Sometime in the course of this round she attended on the deceased in his cell, took a history from him and carried out an examination.

20. Nurse Kidd returned to the health centre and made the following entry on the deceased's computerised medical records: "Consultation 10.25 see (sic.) in the hall after c/o chest pain during the night. Has had central chest pain for the last 2 days, and painful arms and sore throat. BP 88/58 sats 99, pulse 75, temp 36.1 resps 20. Eating and drinking and going to the toilet ok no dizziness, feels the pain gets worse when he lies down. Advised to prop himself up with pillows when in bed. Maybe gastric, gaviscon issued pcm ECG to be done then on call doctor phoned" (Crown Production 6/60). The timing of 10.25am was the time when the entry was made, not when Nurse Kidd saw the deceased, which cannot more precisely be determined.

21. A blood pressure reading of 88/58 is very low. Taken together with a history of persistent central chest pain which did not ease on rest, pain in both arms, a sore throat, and sweating (as mentioned in Officer Cochrane's note), the deceased's clinical presentation to Nurse Kidd was strongly indicative of his

having, or having had, a heart attack. Nurse Kidd had discussed the deceased's case with Nurse Murphy before making her note at 10.25am. It was Nurse Murphy who suggested that as a precaution an electrocardiogram ("ECG") test be carried out.

22. An ECG is a very straightforward and non-invasive procedure to test the rhythm and electrical activity of a patient's heart. Twelve sticky electrodes are attached to the patient's arms, legs and chest wall. These are then connected to a machine which measures the voltages between different combinations of the electrodes, over a ten second period. A graphic print out is automatically produced by the machine with 12 different traces measuring electrical activity. An ECG test will detect the presence of a heart attack, particularly in cases where this is not clear from the patient's clinical presentation. Although the procedure is very straightforward, interpretation of the results on the graphic print out can be challenging, and is normally a matter for an experienced clinician.

23. As a result of her previous experience working in cardiology, Nurse Murphy knew how to operate an ECG machine, although she was not trained to interpret the results. There was an ECG machine located in the Glenochil health centre. Most of the nurses working at Glenochil knew how to operate it, although Nurse Kidd did not.

24. The deceased was brought to the health centre and Nurse Murphy carried out an ECG on him at around 11.00am. Along with graphic information showing the deceased's heart activity, the printout contained the following information,

automatically generated by the machine: "Inferior ST elevation, consider infarct of acute occurrence. Abnormal ECG." The ST segment is particular part of the heart's electrical activity when beating. The reference to "ST elevation" was in itself a clear indicator that the deceased had suffered a serious heart attack involving blockage of one his heart's major arteries, and that an emergency transfer to hospital was appropriate. This should have obvious to even a newly qualified doctor, although not necessarily to a nurse. However an infarct is a small localised area of dead tissue resulting from a failure of blood supply. The instruction to consider an acute infarct, together with the reference to abnormality, taken along with the clinical presentation and history already noted by Nurse Kidd, was therefore a further indicator that the deceased had had or was having a heart attack.

25. The graphic readout on the ECG taken by Nurse Murphy showed that the deceased had normal heart rhythm, but recorded changes to his Q waves. These changes were consistent with him having had a completed heart attack. In other words, the ECG showed that the deceased's right coronary artery had been blocked off completely, starving his heart muscle of blood and oxygen. It showed that this had occurred more than six hours previously. Accordingly, given this time period, the ECG made clear that irreversible damage to the deceased's heart had already been done, and that this damage could no longer be repaired by re-opening the blocked artery. All this would however only have

been apparent to a clinician experienced in interpreting ECG readouts, such as a consultant cardiologist.

26. It being a weekend, there were no doctors on duty in the prison during the day. Dr Oliver Frenschock was the out of hours general practitioner on duty, and was available for Nurses Kidd and Murphy to call for advice. Nurse Kidd telephoned Dr Frenschock. She did not fax or otherwise provide him with a copy of the ECG report. It cannot be determined what she said to him. But in the light of their conversation he instructed her to call a one hour ambulance to have the deceased taken to hospital.

27. SAS has developed a system for prioritising dispatch of ambulances where the request is made by or on behalf of a health care professional ("HCP"). This is set out in flow chart form in SAS production 2, "A Guide to Booking an Ambulance", dated April 2016 and updated November 2016. The assumption underlying the system is that the HCP has already triaged the patient and assessed the degree of urgency. If the condition is said to be "immediately life threatening… eg Cardiac/Respiratory Arrest or other", then an emergency, 999 call should be made, triggering "highest priority response – blue lights/siren" ("an emergency ambulance"). If not, and the patient is not "acutely unwell with… heart problems", does not have "any other condition requiring an emergency ambulance", but that "it is possible they may need medical assistance but are currently stable", then an urgent response ambulance should be called, specifying a 1, 2, 3 or 4 hour response time.

28. Nurse Kidd ought to have made Dr Frenschock aware of the deceased's clinical presentation and blood pressure reading, as noted in her entry in the records at 10.25am, and also of the finding of ST Elevation on the ECG report. If she did so, Dr Frenschock should have recognised that the deceased was gravely ill and in need of emergency attention and treatment in hospital. In this event he should have directed Nurse Kidd to call an emergency ambulance for that purpose, and not a one hour ambulance. However it cannot be determined what exactly Nurse Kidd told Dr Frenschock.

29. At around 11.20am Nurse Murphy completed a SBAR (Situation, Background, Assessment, Recommendation) form (Crown Production 6/74). Contrary to proper practice she did this in Nurse Kidd's name, not her own. Under "Background" Nurse Murphy wrote that "OBS taken, BP low, ECG done, indicates ST Elevation, no prior history". Under "Assessment" she wrote that "chest pains ongoing 2 days worsened over night". Under "Recommendation" she wrote "To be sent out to A+E, Bed Manager aware, staff organising 1 [hour] ambulance". At the foot of the printed form are the words "Name of the GP you spoke with", following which Nurse Murphy has written "Frenschock".

30. Nurse Murphy or Nurse Kidd then spoke to an unidentified prison officer and asked them to arrange for a one hour ambulance to take the deceased to hospital. That officer contacted Glenochil control room. At 11.33am a phone call was made from Glenochil control room to the SAS control room. Although the call to SAS was being made by a prison officer it is sufficiently apparent from

what this officer said to the SAS call handler that the deceased had been seen by a HCP, and that the request for a one hour ambulance was being made on this basis. The name of the HCP requesting the one hour ambulance should have been noted by the SAS call handler, but it was neither asked for nor provided.

31. Either Nurse Kidd or Nurse Murphy made a call to the Accident and Emergency Department at Forth Valley Royal Hospital to alert them of the situation, it being then anticipated that the deceased would be taken to this hospital by the ambulance.

32. At 11.39am Nurse Murphy printed off an admissions summary to give to SAS staff when the ambulance arrived to take the deceased to hospital (Crown Production 6/24). This included a print out of the "last 5 consultations" from the deceased's computerised medical records. Nurse Murphy also hand wrote the following: "GP requested to send this man out to A+E has been experiencing chest pain ongoing 2 days worsening overnight, Abnormal ECG Low BP. See SBAR".

33. Either Nurse Kidd or Nurse Murphy later made the following entry in the deceased's medical records (Crown Production 6/60): "Consultation spoke to on call gp advised to send out 1 hour ambulance to A&E after ECG done, phoned FVRH advised patient to attend they are aware and sps staff to organise 1 hour ambulance SBAR completed K Murphy A Kidd Dr Michael Blackmore."
Dr Blackmore was another of the prison on call GPs. His name was entered on the record in error.

34. The deceased remained in the prison health centre and waited for the ambulance to arrive. Nurses Kidd and Murphy attended to other duties.

35. At around 11.41am the SAS control room staff checked whether there was an ambulance unit available to dispatch to Glenochil. No appropriate units were available to respond to a one hour urgent request. SAS staff continued to check on availability of a one hour urgent ambulance, but none became available within that time period. Had an emergency request been made, however, an emergency ambulance could and would have been dispatched to Glenochil and would have arrived there within around 5 minutes of receipt of the initial call.

36. At 12.36pm a phone call was made from a prison officer at Glenochil to the SAS control room. The purpose of that call was to seek an update on the expected time of arrival of an ambulance at Glenochil. SAS staff advised that given emergency calls it had not been possible to allocate an ambulance within the hour, and apologised for that.

37. At 12.41pm the SAS control room phoned Glenochil. As per SAS procedure, given that it had not been possible to dispatch an urgent ambulance within the time frame requested, the purpose of this call was to ascertain the condition of the deceased and whether there had been any material change in it. Had his condition deteriorated, the request for an ambulance could and would have been escalated by SAS to an emergency, and an ambulance dispatched immediately. The prison officer who took the call was therefore asked whether the deceased's condition had changed or altered. He replied "Not that I am

aware of – no its still chest pains". He did not seek an update on the deceased's condition from an HCP, and this was not requested by SAS. Accordingly SAS advised that an ambulance would be dispatched "as soon as possible".

38. At 12.48pm an ambulance was allocated by SAS control centre to attend at Glenochil. The ambulance was mobilised at 12.53pm. At 13.04pm, therefore one hour and 31 minutes after the request had been made, the ambulance arrived outside the prison. Being an urgent rather than an emergency response ambulance it was crewed by two ambulance technicians, Jordan Tuff and James Martin. Had it been an emergency ambulance, at least one of the crew members would likely have been a paramedic.

39. From the time of their arrival outside Glenochil it took Mr Tuff and Mr Martin around 10 to 15 minutes to be able to enter the prison building and attend on the deceased. They were required to wait in their vehicle outside the main gate then, when it was opened, to drive through and into a holding area, park, and then follow certain security procedures including handing over their personal mobile phones. They were then escorted by a prison officer into the prison building. These procedures are the same for both urgent and emergency ambulance attendances at Glenochil.

40. Given the time taken to gain access to Glenochil the ambulance technicians did not meet with the deceased until around 13.20pm. He was sitting in a wheelchair in or near the health centre. A Nurse and several prison officers were present with him.

41. The ambulance technicians took a brief history from the deceased. They noted his vital signs at 13.25pm. They received and considered the print out of the ECG taken by Nurse Murphy earlier, but carried out a further ECG themselves anyway on their own equipment. They also measured the deceased's blood pressure and oxygen saturation. In the case of a patient with chest pains an ECG is the main diagnostic tool which ambulance staff use in order to assess whether they have had a heart attack.

42. The deceased was stressed and in discomfort when examined by the technicians. He complained of central chest pain and pain in his arms and neck. He told the technicians that the pain had started around 04.00am. He reported his pain level as being 10 on a scale of 1 to 10. The technicians administered pain relief in the form of aspirin at 13.32pm, GTN spray at 13.34 pm and Entonox at 13.40pm, but none of these alleviated the deceased's reported pain level.

43. Aspirin was given to the deceased not only to try to relieve his pain, but because this drug acts to thin the blood, and may therefore have benefit to a patient who is suffering a heart attack. The deceased had not been given aspirin by Nurse Kidd or Nurse Murphy prior to the ambulance technicians arriving at Glenochil.

44. From the point when the ambulance arrived at Glenochil and the further ECG was carried out by the technicians, the decision as to the appropriate hospital to which they should thereafter transport the deceased for further care

was a decision solely for the medical staff at the specialist cardiology unit at the Royal Infirmary of Edinburgh ("RIE").

45. Accordingly having carried out an ECG on the deceased the technicians attempted to send the results to RIE, using a mobile phone device in the ambulance connected to their ECG machine via bluetooth. Given the ECG results, the deceased's clinical presentation, and his reported pain level, the technicians had quickly recognised that the deceased had had a heart attack and that he was in need of emergency hospital treatment. They were however unable to send the ECG result to RIE as they could not get a mobile phone signal. They would have phoned RIE and relayed the information verbally, but they were unable to get a signal on their SAS issue mobile phones either.

46. The technicians were however able to make contact with RIE using their SAS issue radios. They did a further ECG and were then able to transmit the report to the RIE. They then waited for this report to be reviewed by clinical staff at RIE, and to be told to which hospital they should convey the deceased. The technicians would normally have expected such call back within 2 to 5 minutes. On this occasion there was an unexplained delay. Such was the delay that the technicians tried calling RIE again, but there was no answer. At 13.57pm, one of the ambulance technicians called the SAS control centre to ask it to contact RIE on their behalf and phone them back.

47. At 14.00pm the SAS control centre called the ambulance technicians back. They were told that RIE had been trying to contact them but that their calls had been crossing with each other. They were advised to call the unit again.

48. Meantime the technicians requested assistance from SAS control room in the form of a paramedic. This was in order that increased pain relief by way of morphine could be administered to the deceased. Given the deceased's level of pain they were concerned for his comfort and safety if transported by ambulance without morphine. As ambulance technicians Mr Martin and Mr Tuff were not authorised to administer morphine. In response to the technicians' request, at 14.02 pm the SAS control centre made a call to a paramedic, Colin Kemp, asking him to urgently attend at Glenochil.

49. At 14.12 pm Mr Kemp's vehicle arrived at Glenochil. At the same time one of the ambulance technicians made a further call to the control centre requesting a call back. The purpose of so doing was to ascertain the whereabouts of the paramedic. The technician was informed that the paramedic was now on scene. The technicians drove their ambulance out of the prison and met with Mr Kemp's vehicle outside the gates. From this point Mr Kemp was the senior member of SAS staff on site and took charge.

50. Mr Kemp was able to get a signal and to contact a member of clinical staff at RIE via mobile phone. He gave them a history of events. He told them that the deceased was having a heart attack. He told them that the deceased had said that the onset of his chest pain had been around 04.00am. He was then advised

that the deceased was outwith RIE's acceptance criteria and he should be taken to FVRH. This was because more than 4 hours had passed since the onset of chest pain, and that given the results of the ECG it was likely that the damage to the deceased's heart was already irreversible. Accordingly there was nothing that the specialist cardiology unit at RIE could provide by way of treatment for the deceased that could not also be provided at FVRH.

51. At 14.30pm Mr Kemp administered morphine to the deceased. This reduced his pain score from 10 to 5. Subsequent doses further reduced his pain score to 4.

52. At 14.36pm and 14.37pm respectively the paramedic's vehicle and the ambulance left Glenochil, with blue lights and siren operating, arriving at Forth Valley Hospital ("FVH") at 15.00pm.

53. Following assessment at FVRH at around 15.21pm, the deceased was transferred to RIE at 15.54pm. It is unclear why he was transferred, given that he was, as noted, outwith the RIE's acceptance criteria. However further assessment at RIE confirmed that the deceased had an established myocardial infarct, that is, a heart attack that had completed. Therefore the heart muscle in the affected region was beyond salvage by re-opening the artery as an emergency. Accordingly a decision was made to proceed with treatment the following day.

54. At 17.00pm the deceased was reviewed by a consultant cardiologist. He was prescribed treatment with antiplatelet drugs and a beta blocker.

55. At around 09.00am on 13 February 2017 the deceased underwent coronary angiography. An angiogram is a cardiology x-ray test where contrast is injected into the heart arteries and pictures taken. This disclosed diffuse disease in the deceased's left anterior descending coronary artery, a 90% narrowing of the proximal circumflex artery (a small vessel) and a complete occlusion of the right coronary artery. Angioplasty (reopening of the blocked artery) and stenting (insertion of a tube into the artery to keep it open) was carried out of the deceased's blocked right artery, without complication.

56. The deceased's post-operative condition was satisfactory, in the circumstances, and on 14 February 2017 he was discharged back to Glenochil. A copy of his discharge letter (Crown Production 6/28) accompanied him on his return. Around eight primary care nurses and three mental health nurses worked shifts in Glenochil at that time. They were made aware that the deceased had had a heart attack, and appropriate procedures were put in place to check and monitor his health.

57. The deceased was discharged from hospital with a prescription for medication appropriate for his condition, in particular clopidogrel (an anti-platelet drug), a beta blocker, asprin, ibubrofen and a GTN spray. He had not been prescribed medication prior to his heart attack. He was reviewed on 15 February 2017 by Dr Jahangir Khan, one of the general practitioners working in Glenochil. He was also given instruction by nursing staff in relation to his medication, in particular in relation to how to use a GTN spray. His blood

pressure, pulse, oxygen saturations and respiration were regularly checked by nursing staff, who updated Dr Khan regarding his condition. He was advised about stopping smoking and prescribed nicotine replacement patches.

58. Following his return to Glenochil the deceased was significantly weakened by the effects of his heart attack. He spent a lot of time in his bed in his cell. He was unsteady on his feet, and sometimes made use of a wheelchair to mobilise in and around the hall. He was reluctant to use a walking stick. Although he generally tried to remain positive in presentation, he complained of weakness, tiredness and sometimes appeared short of breath. He was provided with occupational therapy and rehabilitation, in particular, by a support worker, Fiona Szanyi. The deceased tried to do what was recommended for him by Ms Szanyi. His appetite was poor and he was encouraged to drink fluids. He was given advice in relation to pacing himself. Against advice, he continued to smoke.

59. Dr Khan reviewed the deceased on 16 March 2017. He noted him to be experiencing upper abdominal pain which was worse at night when lying down. He reported no beneficial effect from using the GTN spray. He appeared orientated, un-distressed and was not sweating. His pulse was 80 bpm, and oxygen saturation and blood pressure were normal. His heart sounds were pure and his chest was clear. Dr Khan discontinued the ibuprofen prescription, although the deceased had not taken it for several weeks. Dr Khan found no evidence of a further cardiac event.

60. At around 11.00am on 17 March 2017 the deceased's heart rate, heart pressure and pulse were subject to a further, routine check by a health care assistant, Kirsten Lennox. She found that his pulse was raised, being around 140 bpm. He did not complain of feeling unwell. This was reviewed by Staff Nurse Fiona McCainish, and the deceased was sent back to the hall, to be reviewed later in the day. At around 14.00pm Ms Lennox checked on the deceased again in his cell and found his pulse still raised.

61. At 15.00pm the deceased was reviewed by Nurses Murphy and Lucy Chapman in the health centre. An ECG test was carried out. Like Nurse Murphy, Nurse Chapman was not trained to interpret its results. A doctor, Dr Zahid Shah, who was on-site in the prison at the time, was contacted, and immediately attended on the deceased. The deceased told him that he had had chest pain since the morning. In the light of the ECG, the deceased's clinical presentation, and his past medical history, Dr Shah directed that an emergency ambulance be called.

62. SPS received the call for an emergency ambulance at 15.28pm. The ambulance arrived at Glenochil at 15.42pm, and left for the hospital with the deceased at 16.20pm. He was admitted to FVRH at 17.04pm and triaged by a Nurse immediately thereafter. He was then assessed by an experienced accident and emergency consultant, Dr Pitt, at 18.07pm. Clinical staff had access to the admissions summary (Crown Production 7/36) provided by the nurses at

Glenochil, and which accompanied the deceased on his ambulance journey to FVRH.

63. The deceased presented to Dr Pitt with chest pain, shortness of breath and reported a pain level of 5/10 in severity. His chest was found to be clear on examination, with no crackles suggesting fluid on the lungs. No oedema was found in his calves or ankles. No abnormal heart sounds were heard. There was no increased prominence to the jugular venous pulse. His blood pressure was normal. All of these findings suggested that the deceased was not in heart failure. However the deceased's heart rate was raised, being measured at 140 bpm. Dr Pitt recognised that the deceased's fast heart rate was either atrial flutter or sinus tachycardia,

64. Atrial flutter can be descried as an abnormal shivering rhythm at the top of the heart, around 300 bpm. This is too fast for the bottom of the heart to keep up. But the heart has an internal rate limiting mechanism which acts to slow the bottom of the heart to around half the rate of the flutter, or slightly slower. Sinus tachycardia, by contrast, is normal heart rhythm, only faster, for example as might be experienced after running. It can be very difficult to distinguish between the two, and it is possible for a patient to flip between them. Anyone can develop atrial flutter, but the risk is higher if the pressure is higher inside the heart. If there is heart muscle damage, due to a heart attack, this can stretch the heart muscle and trigger flutter. It is usually well tolerated, in the absence of

exercise. Concerns arise if the patient's blood pressure or oxygen levels drop, or there is a build-up of fluid.

65. An ECG is the best test for distinguishing between flutter and sinus tachycardia. It is appropriate to repeat the test, to try to get a better signal, but also by attaching the electrical leads in slightly different places, so better to detect the flutter rates. It is appropriate to perform one ECG on admission, and another if the patient's condition changes. It is also possible to administer a drug called adenosine. This is given intravenously, and is active for a matter of seconds. It works by temporarily stopping electrical signals getting from the top to the bottom of the heart – in effect, causing a cardiac arrest – and thus enabling an accurate reading to be obtained on the heart trace. This as an unpleasant thing to do, and if it is not necessary to do it, then it should not be done.

66. The focus of investigation, correctly, was into why the deceased's heart rate was raised. Dr Pitt was concerned about the possibility of a pulmonary embolism (blood clot), altered heart rhythm due to the heart attack, or a possible chest infection. Accordingly blood tests were carried out while the deceased was still in A&E. The two main tests which caused concern were the troponin test (a measure of heart muscle damage or irritation) and the D Dimer test (which looks for activation of blood clotting). In the light of these tests Dr Pitt directed that the deceased be admitted for further evaluation to the Acute Assessment Unit. She instructed a chest x-ray and a CT scan.

67. Accordingly Dr Pitt carried out a detailed and well recorded assessment, instructed appropriate tests, satisfied herself that there were no signs of heart failure, and directed the deceased on to an appropriate treatment team within the hospital. There was no reason why the deceased should have been sent straight to a cardiology ward initially, rather than to the acute assessment unit. This unit was very well equipped and staffed and able to effectively triage the deceased, given his presentation, pending any onward transfer to a speciality ward.

68. On admission to the acute assessment unit the deceased was further assessed, this time by a registrar, Dr Ahmed Abouzaid. Although working at the time within the general medicine team Dr Abouzaid was an experienced doctor and a speciality trainee in cardiology, and so had some experience in this field of medicine.

69. Dr Abouzaid examined the deceased and considered an ECG taken from the deceased. He correctly interpreted the results as showing atrial flutter. However the prognosis at this stage remained unclear, as it was unknown how much heart muscle damage had taken place during the deceased's heart attack. Nor did Dr Abouzaid yet have the results of the angiogram taken at RIE prior to the deceased's angioplasty and stenting on 13 February 2017. His discharge letter had not yet been received by FVHB. However this would not have changed the deceased's initial management. It was known that the deceased had had a heart attack and stents fitted and that he was on medication for this.

70. A chest x-ray was carried out on the deceased in the acute assessment unit around 23.30pm on 17 March 2017. This showed no focal lesion or pulmonary congestion. Dr Abouzaid's examination of the deceased's chest showed good air entry, with no wheeze or crepitus. In the light of these findings Dr Abouzaid was satisfied, correctly, that the deceased was not experiencing heart failure. Dr Abouzaid's plan was to rule out the presence of pulmonary embolism via a CT scan.

71. At around 10.20am on 18 March 2017 the deceased was assessed by Dr Tim Herron. Dr Herron was a consultant, but not a cardiologist. He recorded similar concerns to those already noted by Drs Pitt and Abouzaid, in particular tachycardia, raised troponin and D Dimer levels. Pending the carrying out of the CT scan there remained the question of whether the deceased had a pulmonary embolism. Dr Herron's clinical examination found no signs of heart failure.

72. The CT scan was carried out at around 19.00pm on 18 March 2017 (Crown Production 7, pages 50, 77). This was within around 24 hours of admission of the deceased to FVRH and took place within a normal time frame for such a procedure. This scan showed no evidence of blood clotting and ruled out the possibility that the deceased was suffering from a pulmonary embolism. It also showed no traumatic signs of heart failure. However the CT scan did show that the deceased's heart was enlarged and damaged in the pumping chambers on both the right and left sides, consistent with the heart attack sustained by the deceased on 12 February 2017.

73. Since admission the deceased's blood pressure had remained normal, and he was generally reported as appearing comfortable and showing no signs of heart failure. Unsuccessful attempts were made to bring down his high heart rate by administration of a bisoprolol, a beta blocker. As the deceased was not in heart failure, this was the recommended first line treatment in terms of both national guidance (Sign Guidelines, Sign 152, September 2018: *Cardiac arrhythmias in coronary heart disease*, page 11-12, paragraph 4.1.2, lodged as production 1 for FVHB) and European guidance (ESC guidelines, *Diagnosis and treatment of acute and chronic heart failure*, May 2016, page 2159, paragraph 10.1.2; *Management of atrial fibrillation developed in collaboration with EACTS,* August 2016, page 2928, paragraph 10.1, lodged as productions 2 and 3 for FVHB).

74. In the light of the CT scan Dr Herron took advice from clinicians at the specialist coronary unit at RIE, at around 11.36pm on 19 March 2017. Although FVRH is a large district hospital, it relies on tertiary centres in Edinburgh and Glasgow for provision of specialist treatment and advice, including cardiology. In discussion with RIE, the first question was whether the deceased had suffered a new heart attack, or whether his symptoms were attributable to the heart attack on 12 February 2017. The answer was the latter, given the results of the above mentioned assessments. In particular there was no concern regarding acute coronary syndrome as the deceased's troponin levels had been found to be falling. It was also confirmed that in the circumstances the use of bisoprolol was

the correct treatment to use to attempt to slow down the deceased's heart rate. It was suggested that this medication could be increased.

75. RIE was also asked by Dr Herron whether the deceased's symptoms could be due to Dressler's syndrome, an inflammation of the lining of the heart which can sometimes occur in the weeks after a cardiac event. Medication (colchicine) was suggested to manage this if it was diagnosed. RIE advised a local cardiology review and an echocardiogram be carried out the following day. These recommendations from RIE were all appropriate and were followed by clinical staff at FVRH.

76. The deceased's heart rate remained at around 140 beats per minute through 19 March 2017.

77. On the morning of 20 March 2017 the deceased was reviewed by Dr Stephen Glen, consultant cardiologist. He had received the images from RIE relative to the angiogram carried out on 13 February 2017, and saw the extent of the damage to both the deceased's right and left coronary arteries. Dr Glen too was satisfied that the deceased had atrial flutter, due to the previous heart attack, rather than a blood clot. He too was also satisfied that there were no signs of heart failure.

78. The focus of Dr Glen's treatment plan was not to remove the flutter at the top of the deceased's heart, but to continue to try to slow the deceased's heart rate in the lower, pumping chambers of the heart, by gradually increasing the dose of bisoprolol. This was, in circumstances where the deceased appeared

otherwise stable, a preferable course to attempting rhythm control, that is, seeking to stop the flutter. The deceased was also to be transferred to the cardiology unit, and given an echocardiogram.

79. The deceased was transferred to the cardiology unit at around 18.20pm on 20 March 2017. That he had remained in the acute assessment unit until then had no adverse effect on the nature or standard of care and treatment which he received.

80. At around 20.00pm on 20 March 2017 the deceased complained of chest pain and breathlessness. He was reviewed and the dose of beta blocker was increased at around 23.00pm.

81. At around 07.45am on 21 March 2017 the deceased's heart rate was found to have increased to more than 240 beats per minute. This was a very dangerous change in his condition. It indicated that the internal mechanisms of the heart were failing to stop the electrical signals causing the flutter at the top of the heart from also causing the lower chambers to beat at close to the same rate. This change was unpredicted, as beta blocker treatment is generally very effective in preventing this type of development. It is unclear why the deceased's heart rate increased as it did, when it did, other than electrical instability within the heart caused by his earlier heart attack.

82. An echocardiogram was carried out around 08.15am on 21 March 2017. This was done in particular as a screen test for possible mechanical problems in the heart which might be amenable to treatment. However it showed instead

irreversible severe left and right heart muscle damage affecting heart function. This was not new damage, but damage resulting directly from the deceased's heart attack on 12 February 2017. Management of the deceased's condition would not have been different even had an echocardiogram been carried out on admission on 17 March 2017.

83. The deceased became acutely unwell, and very agitated, with shortness of breath. He was given amiodarone, in an attempt to slow the heart rate. Amiodarone is a toxic, powerful drug. Administration of it is invasive, as it is administered intravenously via a central line. There are risks associated with this. In a patient such as the deceased, prescribed blood thinning medication following his heart attack, there is a risk of bleeding. Given this, and the limited evidence of mortality benefit from amiodarone, it was not an appropriate first line treatment for the deceased, but was administered at this point given the failure to control his heart rate by use of bisopralol. An infusion of amiodarone was also considered, but not proceeded with, as the deceased's heart rhythm returned to flutter at around 08.40am.

84. The deceased was found to be experiencing discomfort in his abdomen, indicating that his heart was not pumping enough blood around his body, including to his liver and kidneys. Opinion was sought from a consultant surgeon who advised a CT scan of the abdomen in order to assess whether the deceased's heart could survive surgery. This was carried out at around 09.40am and showed narrowing of arteries in the abdomen and that blood was not

reaching the bowel. Notwithstanding his high heart rate the deceased then ceased to have a recordable blood pressure. He appeared grey, and became less responsive. His oxygen saturation decreased and he became cold and breathless. He had decompensated into heart failure by this stage, due to the ongoing strain of uncontrolled atrial flutter and abnormally fast heart rate on an already seriously damaged heart. It became clear that his situation was not recoverable, and palliative care was thereafter instructed.

85. At around 11.30am on 21 March 2017 the deceased was seen on the ward by members of his family in attendance. At around 11.45am he sustained a cardiac arrest. Cardio pulmonary resuscitation was started but then discontinued, after discussion with the clinical team and the deceased's family. The deceased ceased to have a measurable pulse, blood pressure, or brain stem activity. He was declared dead at 11.50am. The deceased had been unable to tolerate the continued increase in his heart rate due to the pre-existing damage to the heart muscle. This was damage which had already occurred by the time that Nurse Murphy carried out her ECG of the deceased on the morning of 12 February 2017.

86. The deceased was appropriately diagnosed and treated throughout his admission to FVRH between 17 and 21 March 2017. There were no deficiencies in care or treatment throughout this admission. Every reasonable effort was made by the clinicians at FVRH to save his life.

87. The deceased was the subject of post mortem examination on 27 March 2017 by Dr Kerryanne Shearer, consultant forensic pathologist. Dr Shearer later produced a report, dated 19 May 2017, now Crown Production 1, which is a true and accurate report of her findings and conclusions. In particular Dr Shearer accurately certified the deceased's cause of death as "1a Complications of a myocardial infarct", this being the heart attack which the deceased had suffered on or around 12 February 2017.

88. Subsequent to the deceased's death the arrangements for night time health care in Glenochil and all other Scottish prisons have been changed. There is no longer an out of hours GP on call. SPS was unable to find enough GPs willing or able to staff prison specific out of hours rotas. An attempt has therefore been made to provide a service equivalent to that provided in the community via NHS 24, whereby all triage is by telephone conversation with a nurse. However NHS 24 was unwilling to take on this role for Scottish prisons.

89. Accordingly telephone advice is now available from police custody nurses. There is a single point of contact for prison officers. If an officer calls for advice, their request is logged and timed by an Edinburgh based controller. It is then allocated to an available Nurse in one of the police custody nurses on duty in Fife, Forth Valley and Lothian and Borders. These nurses are employed by the NHS. The Nurse will phone the prison officer back. The contract expectation is that this will be done within an hour, and this expectation is currently being met. If the Nurse requires assistance they can speak directly to an out of hours GP

service in a manner akin to that available via NHS 24. In practice police custody nurses are often familiar with the particular medical problems commonly arising in the prison population.

90. This new system does not enable the prisoner to contact the Nurse on his or her own initiative, and does not enable the Nurse to speak directly to the prisoner if a request for assistance is made. Decisions to seek advice from a custody Nurse are made by prison officers, and all communication with the Nurse is through prison officers. This may adversely affect effective triage of the prisoner's presenting complaint.

91. SPS has also revised its first aid at work course for prison officers. These changes were made in 2019 and are detailed in Traycie Elder's affidavit of 21 February 2020. These revisions acknowledge that only a few of the classic signs and symptoms may be present in a heart attack, that it may be difficult to differentiate between a heart attack and angina, and that up to a quarter of heart attacks are not accompanied by any chest pain. They do not specifically address the combination of symptoms such as those with which the deceased presented to prison officers at around 03.40 hours nor emphasise the need, if only as a precaution, for urgent medical assessment and an ECG test in such circumstances.

Submissions

[8] Lengthy and detailed written submissions were lodged by all parties. FVHB also lodged a supplementary written submission addressing a number of specific points on which I had invited submissions. Full copies of all these written submissions are available in process. However in short summary:

1. The PFD submitted in relation to section 26(2)(e) of the 2016 Act (reasonable precautions) that had the deceased received medical attention and been taken to hospital for treatment soon after he complained of feeling unwell to the prison officers between around 03.00 hours and 04.00 hours on 12 February 2017, then it is likely that his death a number of weeks later would have been avoided. As regards section 26(2)(f) (defects in a system of working), the PFD submitted that there was an appropriate system in place, (the availability of an on call GP to officers at 04.00am on 12 February 2017, or the option to call an emergency ambulance), but there was insufficient use of it on this occasion. There was a defect in the system insofar as it was not utilised. There could be guidance that where a prisoner is complaining of one or more symptoms of a heart attack then medical advice should be sought. As regards the calling of an ambulance in the late morning of 12 February 2017 the PFD submitted that the court might make a finding under section 26(2)(g) (any other relevant facts), namely given that the deceased had suffered a myocardial infarction, was in pain and suffering, and due to further complications which may arise after one has suffered an MI, an emergency ambulance should have

been requested to attend the prison to ensure he was taken to hospital as soon as was possible after this had been ascertained. Finally, the PFD submitted that the following recommendation under section 26(4)(a) might be appropriate: that where a prisoner is complaining of chest pains and/or other symptoms which may be cardiac in nature out with the opening hours of the health centre the prison officer in charge should contact the custody Nurse through the dedicated phone number to seek medical advice on what, if any, further action should be taken.

2. Ms McCabe, for SPS, submitted that no findings should be made under section 26(2)(e) to (g) of the Act. She accepted that there was medical evidence to support the contention that had the deceased received medical attention and been taken to hospital at around 04.00am on 12 February 2017 his death may have been avoided. However she submitted that the Crown submission did not set out a reasonable precaution in the circumstances. She submitted that although there was evidence that some of the deceased's symptoms could be associated with a heart attack, it was far too simplistic to state that such symptoms will always require a prisoner to be given medical attention and taken to hospital. The prison officers followed the first aid training that they had been given. In the light of this they decided that it was not necessary to summon medical attention at 04.00am and this was not a reasonable precaution for them to take. Even Nurse Kidd did not think that the deceased was suffering from a heart attack after she examined him. Therefore the Crown recommendation

could not be made unless it was determined that Nurse Kidd was professionally negligent, and the evidence did not support that. Ultimately the deceased was simply not presenting as having a heart attack, and therefore there was no lively possibility that his death would have been avoided in the circumstances. Some cardiac events simply cannot be guarded against given the range in presentation. There was no defect in any system of working. As to the Crown's proposed recommendation under section 26(4), this should not be made. The enquiry had no evidence to support the contention that the deceased's death would have been prevented had the prison officers contacted a Nurse for advice. Again this was reinforced by the fact that when the deceased did see a nurse, she did not think an ambulance was required. Accordingly the Crown's proposed recommendation was speculative as to whether an ambulance would have been called, and the death prevented. The deceased's death should be seen as a tragic and unforeseeable event and there were no reasonable precautions identified which might have prevented it.

3. Ms Watts, for FVHB, submitted that the court should make the finding proposed by the Crown in relation to section 26(2)(e). There was ample evidence to support this finding. If prison officers had sought medical attention for the deceased when he complained of feeling unwell it would have been likely that he would have been transferred to hospital, would have undergone earlier intervention, and ultimately his death would have been avoided. There was no defect in any system of working relevant to section 26(2)(g). There was a system

in place, which provided for 24-hour access to medical advice. Had it been sought it would have been readily available. The decision not to seek it was one for individual officers and did not reflect a broader systems issue. A finding such as that proposed by the Crown under section 26(2)(g) should be made. A 999 ambulance should have been summoned for the deceased after the ECG was carried out on the morning of 12 February 2017, even if ultimately this would not have made a difference to the outcome. The findings should be that, given that the deceased had a presenting complaint of chest pain and abnormal ECG have been obtained, an emergency ambulance should have been requested to attend the prison to ensure that he was taken to hospital as soon as possible. The difference in wording from the Crown's proposal was because it was not known at the time that the deceased had suffered a heart attack. FVHB also supported the Crown's proposed recommendation under section 26(4)(a). Where a prisoner is complaining of chest pain and/or other symptoms which may be cardiac in nature, out of hours, the prison officer in charge should contact the custody Nurse through the dedicated phone number to seek their medical opinion on what if any further action should be taken. Prison officers should not be expected to diagnose chest pain as being cardiac or non-cardiac in nature. Medical advice should be sought in this scenario. As regards the allegations of deficiencies in treatment at FVRH during the deceased's second admission, as set out in Prof Brady's reports and spoken to by him in evidence, these should be rejected, and no formal findings or recommendations in this regard were

justified. In her supplementary submission Ms Watts submitted in particular that there was no evidence before the enquiry to entitle it to conclude that it would be a reasonable precaution to provide overnight nursing care in Scottish prisons. She founded on the evidence of Dr Sayers as regards the policy underlying present provision and the factors on which it was based, which the court was, in effect, in no position to disturb.

4. Mr Hamilton, for SAS, accepted and adopted the Crown's formal submissions in relation to section 26(2)(a) to (c) but made no submissions in relation to findings or recommendations under any other subsection of section 26. SAS received a request for a one-hour ambulance and acted on it. When no an ambulance became available within one hour, SAS followed appropriate procedures and contacted Glenochil, in effect, to assess whether it was necessary to escalate the request to an emergency, only to be told that it was not. As for the delay in the period between the arrival of the ambulance at 13.04pm and its departure at 14.37pm, this was explained by a number of factors, none of which were due to fault or failing by ambulance staff, whose actions in caring for the deceased and seeking to have him removed to hospital were appropriate. Fundamentally, however, the evidence before the enquiry supported the submission that the deceased had already suffered permanent damage as a consequence of a heart attack prior to the ambulance even being called to attend.

5. Mr Rodgers, for SPOA, submitted that it was not possible for the court to state with any degree of certainty precisely when the deceased suffered his first heart attack. Reliance was placed on Prof Brady's evidence that it may have occurred as early as 10 February 2017. The prison officers' account of what was communicated by the deceased in the early hours of 12 February 2017 should be accepted. On that basis it was not reasonable to have expected them to have understood the severity of the deceased's condition, given that heart attacks may present in a wide variety of ways. Even if medical assistance or an ambulance had been sought, it was submitted that it could not be determined with any accuracy whether it would have altered the outcome for the deceased. That was because it could not be known precisely when the deceased's heart attack occurred. Therefore no accurate assessment could be made as to the potential benefits of earlier intervention. It was therefore submitted that no findings should be made under section 26(2)(e) to (g) and no recommendations made under section 26(4).

Discussion

The timing of the deceased's heart attack

[9] The inquiry heard evidence from three consultant cardiologists, Dr Stephen Glen, Prof Adrian Brady, and Dr Douglas Elder. There was general agreement among them that if a person suffers a heart attack involving complete blockage of a coronary artery, and that blockage is not removed within a short period, around six hours, then the

damage caused to the heart by lack of blood and oxygen will likely become irreparable, and prospects of long term survival will be very poor. Prof Brady said that intervention in the first ("golden") hour was most likely to be of benefit. He said that after six hours the prospect of benefit decreases significantly, and by 12 hours there is likely to be very little benefit in treatment. Dr Elder spoke of a "window of opportunity" of no more than 10 to 12 hours. As a general proposition, therefore, I take it that if treatment to open the patient's blocked artery is carried out within six hours then there is at least a real possibility of long term survival. Beyond this time survival is possible, but no more likely than that. Obviously, individual cases may differ, and it is impossible to be more precise.

[10] There was also agreement among the cardiologists that in the deceased's case he did have a heart attack involving a complete blockage of his right coronary artery, on or around 11 to 12 February 2017, that this blockage was not removed before it had caused irreparable damage to his heart, and that this damage was so severe that it ultimately resulted in the deceased's death on 21 March 2017. The first question for the inquiry was therefore when the deceased's heart attack started, that is, when his coronary artery first became completely blocked such that medical intervention was required to unblock it. This is of importance because it follows from the evidence of the cardiologists just mentioned that it is only precautions which could reasonably have been taken within around six hours from this point in time which, had they been taken, might realistically have resulted in the deceased's death being avoided.

[11] An ECG of the deceased's heart was taken by Nurse Murphy sometime between 10.25am and 11.20am on the morning of 12 February 2017. The precise time was not recorded, but I shall take it as having been at around 11.00am. There was agreement among the consultant cardiologists that the print out of this examination showed that the deceased's heart attack was already completed. In other words by the time this ECG was carried out the damage to the deceased's heart, and which later caused his death, had already been done. It also shows that the window of opportunity for effective medical intervention had already passed. If that is taken to be six hours, then the complete occlusion of the deceased's coronary artery must have occurred prior to 05.00am on the morning of 12 February 2017. The question is then, how long before this did it start?

[12] The evidence of Officer Craven was that the deceased first buzzed for help at around 03.40am. Logically that must have post-dated the onset of the pain which caused him to summon the officers. Although a heart attack may occur without chest pain, there was evidence that where pain does occur it is likely to have started around the same time as the start of the heart attack. Accordingly I accept that the deceased's heart attack will have started prior to 03.40am.

[13] Next there is the evidence of Paul McKean, the deceased's brother in law. Mr McKean gave evidence about what the deceased told him when he visited him in Glenochil a couple of days after his return from hospital. He said that the deceased had told him that he had first buzzed for assistance at about 01.00am on the morning of 12 February 2017 but that it had taken the officers an hour and a half to attend. Officer

Craven was adamant however that the first contact with him had been at 03.40am and that he had responded immediately. That was consistent with Officer Cochrane's evidence. Neither suggested that the deceased had complained to them about a delay in responding.

[14] I do not doubt that Mr McKean was doing his best to tell the truth to the inquiry as to what he recalled the deceased saying to him about the night in question. But Mr McKean accepted that his recollection of events which happened nearly three years previously might have been less than wholly accurate. In particular, he was referred to an entry in the deceased's medical records for 21 March 2017 where he is recorded as stating to medical staff that the deceased had told him that he had "pressed the prison alarm buzzer about 04.30am…" And in a statement which he gave to the police on 5 August 2017 Mr McKean is recorded as stating that the deceased told him that it had been "about 4am" when he "buzzed the guards". In neither statement is there any suggestion of delay by the prison officers in responding to the intercom. In the light of this I prefer the clear and unambiguous evidence of the officers as to the timings of the deceased's initial call and their response to it and have made findings in fact accordingly.

[15] However Mr McKean's evidence at least gives me pause to consider whether, even if the deceased did not actually buzz for help at 01.00am, that he may have started experiencing chest pains at around this time, indicative of a full occlusion of his coronary artery. That he may have delayed in buzzing for help after first experiencing pain would be consistent with other evidence about the deceased's character – that he

was undemonstrative and not given to complaining about his health, etc. It provides some small support for the suggestion that the deceased's heart attack started may have started earlier than 03.40am but that he delayed in calling for help until then.

[16] Dr Glen did not offer an opinion on the question of when the deceased's heart attack started. That is no criticism of him. The focus of his evidence was the adequacy of the care and treatment of the deceased in FVRH between 17 and 21 March 2017. The print out of the ECG taken by Nurse Murphy was only put before him for comment in cross examination.

[17] Prof. Brady opined that the symptoms which the prison officers said that the deceased had reported to them – chest pain, sweating and sore throat – were quite typical of a heart attack. But he said that symptoms are a poor guide to onset. He said that in 30% of cases seen by clinicians in hospital the patients had no symptoms at all, and that severity of the symptoms did not necessarily correlate to the severity of the attack. His evidence about when the deceased's heart attack started was however not consistent. Initially, he asserted that the deceased's heart attack likely started "at least 24 hours" before he was presented to FVRH, which had been around 15.00pm on 12 February 2017. On consideration of the ECG taken by Nurse Murphy he modified that view and said that he was "fairly certain" that the deceased's heart attack had started 12 to 24 hours before the ECG had been taken. That would time it between 11.00am and 23.00pm on 11 February 2017. In cross examination he said that the heart attack "could have started two days earlier". He also said that it was not an exact science.

[18] Dr Elder's view was more careful and considered. He said that it was not possible to tell, from Nurse Murphy's ECG alone, exactly when the deceased's heart attack had started, other than to say that it had been recent (by which he meant within the previous two weeks). However he noted other clinical evidence, in particular the relative ease with which the clinicians at RIE had been able to reopen the deceased's artery on 13 February 2017, and the high troponin reading found after admission to RIE at 17.00pm on 12 February 2017. He said that both of these were consistent with the onset of the heart attack having been within the previous 24 hours. Dr Elder agreed that in some cases a person's artery may close, causing them pain, then open again without intervention, relieving the pain, only to close again completely and so cause their difficulties to become more acute. I understood him to agree that this might have been the situation in the deceased's case. Dr Elder also said that in his experience a person having a heart attack in the community would typically experience chest pain, which would build for 30 to 60 minutes. By this time they would have become sweaty and very unwell, and they would call 999. Ultimately, in the light of all the evidence available to him, Dr Elder's view was that it was highly likely that the deceased's artery had completely occluded 10 to 12 hours prior to Nurse Murphy's ECG being taken. That would time it to between 23.00pm on 11 February 2017 and 01.00am on 12 February 2017.

[19] The final pieces of evidence in relation to this issue are those parts of the medical records which suggest that the deceased had experienced chest pain prior to the early hours of 12 February 2017. In particular Nurse Kidd recorded the deceased in her entry

of 10.25am on 12 February 2017 as saying that he had "had central chest pain for the past 2 days". And in the RIE discharge letter of 13 February 2017 (Crown Production 6, pages 27 – 28) it is noted that the deceased "reported an episode of chest pain the previous day [which read in context would appear to mean 11 February 2017]… this lasted for 2 hours but he had not told anyone…" On the other hand there is evidence that the deceased had told both the ambulance staff and nursing staff at FVRH that the onset of pain was at 04.00am on 12 February 2017 (Crown Production 7, pages 5 and 12). And I cannot but note also that Dr Abouzaid recorded the deceased as a "difficult historian", when he assessed him on 17 March 2017 (Crown Production 7, page 44).

[20] In the light of all this I agree with the submission of the SPOA that it is not possible with certainty to state precisely when the deceased suffered a complete occlusion of his coronary artery, sufficient to start the clock ticking on the window of opportunity within which medical intervention to unblock the artery was required if irreversible and likely fatal damage was to be avoided. But that does not mean that no meaningful finding can be made. I thought Dr Elder to be an impressive witness, and preferred his evidence to that of Prof. Brady. Accordingly insofar as they differ on this matter I accept the time frame suggested by Dr Elder as more probable for the reasons he gave. I therefore accept the submission of FVHB that the likely onset of the deceased's heart attack was in the period 23.00pm on 11 February 2017 to 01.00am on 12 February 2017.

[21] I think the most likely explanation for the record of the deceased's complaints of pain the previous day, 11 February 2017, is that he was suffering temporary closures of

his artery of the sort described by Dr Elder. The deceased would have experienced pain when the artery closed but, consistent with his reportedly stoical nature, did not report it. The artery then later opened again without medical intervention, causing the pain to disappear. When the deceased's artery became permanently closed, at some point within the time frame suggested by Dr Elder, the deceased did not immediately call for help. Perhaps he thought that the pain would go away again, as it had before. Only by 03.40am was it apparent to the deceased that this was not going to happen, and accordingly he pressed the buzzer. This rather chimes with the typical picture of delay in summoning help described by Dr Elder in relation to patients in the community.

[22] Accordingly the actions and inactions of the prison officers when called to the deceased's cell at 03.40 hours have practical significance for this inquiry. Had emergency medical treatment been sought and obtained for the deceased at this time there is at least a real possibility that his artery could have been unblocked within the six hour window of opportunity described by the cardiologists, and thus that his death might have been prevented.

The response of the prison officers

[23] The evidence about the events in the deceased's cell from 03.40am on 12 February 2017 came from Prison Officers Cochrane and Craven and from Mr McKean. Neither the other prison officers present nor the deceased's cell mate had any useful evidence to give and were not called. The prison officers' evidence was

essentially consistent with each other, but was in conflict with what Mr McKean said that the deceased had told him.

[24] Mr McKean's said that the deceased had told him that he reported to the officers that he had pain in his arm, felt disorientated, and felt "as if somebody was sitting on his chest", that is, that his chest pain was severe. He had also, according to Mr McKean, said that he thought that he was having a heart attack, but that the senior officer – Officer Cochrane – had replied "No you're not." Both the prison officers denied that any of this was said. Officer Cochrane said that he asked the deceased directly about whether he had pain in his arms and that he had said no. He said that the deceased had said that his chest pains were "not too bad". Officer Cochrane accepted that he had said to the deceased that he did not think that he was having a heart attack, but denied he had used the abrupt form of words attributed to him, and denied also that the deceased had said that he thought he was having a heart attack.

[25] These factual disputes bear on the question of whether the prison officers should have recognised that the deceased had had (or was having) a heart attack. On Mr McKean's evidence the deceased expressly told the officers that he thought that he was having a heart attack and described classic symptoms, in particular crushing chest pain and arm pain. Yet the officers were dismissive of his complaint and did not call for medical assistance. On this scenario, the individual officers would have been seriously at fault. On their own evidence they should have recognised from the symptoms reported that the deceased was in need of urgent medical treatment and should have immediately called an ambulance. To have not done so because they were dismissive of

the deceased's symptoms would have suggested, at best, a degree of causal indifference to the deceased's state of his health in the face of a potentially life threatening condition.

[26] There is other evidence which suggests that the deceased did later complain to others, both that his chest pain was more severe than that which the prison officers said he had reported to them, and also that he was experiencing pain in his arms. In particular:

i. In Nurse Aileen Kidd's note, relative to the consultation recorded in the medical records at 10.25am on 12 February 2017 (Crown Production 6, page 60), it is said that the deceased "Has had central chest pain… *and painful arms* and sore throat."

ii. In the SAS patient report form (Crown Production 7, page 12) the deceased's complaint is recorded as being of "central chest pain *radiating down both arms* and Q (sic,) throat, onset about 04.00am this morning." Although it is not clear exactly when this report was recorded it most likely will have been in the period when the ambulance was at Glenochil after 13.05pm on 12 February 2017.

iii. It is also recorded on this same form (Crown Production 7, page 11) that the deceased was reporting a pain level of 10 (out of 10) between 13.34pm and 14.30pm, at which time he had to be administered morphine in order to provide effective pain relief. The evidence of the ambulance technicians was that the information on the form would have been taken from the deceased himself.

iv. References to the presence of arm pain and the severity of reported chest pain are also found in both the nurse's triage note on admission of the deceased to FVH at 15.05pm on 12 February 2017 (Crown Production 7, page 5), and in the discharge letter the following day (Crown Production 6, pages 27 – 28).

All this begs the question: if the deceased was repeatedly telling nurses and SAS staff in the late morning and afternoon of 12 February 2017 that his symptoms included pain in his arms and that his chest pain was severe, why would he not also have said this to the prison officers when they spoke to him at around 04.00am that day?

[27] One answer may be that it was only later in the morning of 12 February 2017 that the deceased's symptoms worsened. And as already noted, there was evidence from Mr McKean that the deceased was not given to complaining about his health. Although he had been in Glenochil for more than 6 months prior to his death, it appears that prior to 12 February 2017 he had never before used his cell intercom to call for assistance at night. It was presumably for this reason that Officers Cochrane and Craven, who worked only nightshift, had not previously had any dealings with him. That he did call for assistance at all therefore suggests that he felt he had a serious problem. But in general the evidence tends to suggest that the accused may have been relatively stoic and undemonstrative in matters of his health. That also comes through in the terms of the discharge letter at Crown Production 6, page 27, in which it is reported that although the deceased had experienced pain which "lasted two hours… he had not told anyone." This makes it at least conceivable that he might have downplayed his symptoms when

speaking to Officers Cochrane and Craven, and may not have given them a full account of the nature and extent of his symptoms, nor insisted that they call an ambulance.

[28] There is also the perspective of the prison officers themselves. Officer Cochrane, in particular, came across as a straightforward and decent man, upset at what happened to the deceased and that he had not recognised that he was indeed having a heart attack. This was particularly so given that he was aware from his first aid training of the classic symptoms of heart attack and was looking for them when observing and speaking to the deceased. He said, and I accept, that if he had thought that the deceased was having a heart attack he would have called an ambulance. He mentioned that he had called ambulances on previous occasions for other prisoners at night, including a prisoner who had had a heart attack. If the deceased had told Officer Cochrane that his chest pain was severe and that he had pains in his arm, then on this officer's own evidence of his knowledge of heart attack symptoms there could be no explanation for his failure to call an ambulance other than reckless indifference or malice. Having seen and heard Officer Cochrane give evidence, I do not accept that either is likely.

[29] Weighing all this as best as I can, I conclude that the more likely account of the symptoms described by the deceased is that given by Officer Cochrane, and have made findings in fact accordingly. I think that there was probably a failure of communication between the deceased and the prison officers, such that the true severity of the deceased's condition was not expressed nor recognised. They spoke for a short time only, maybe two or three minutes, in the middle of the night. Given his undemonstrative nature I think it likely that the deceased either downplayed and/or did

not give a full account of his symptoms. For their part, the officers were not doctors or nurses, and did not have the time, medical skills or training to enable them to elicit such an account, let alone to medically examine the deceased.

[30] I am supported in this view by the evidence of Dr Craig Sayers. He had previously worked as an on call prison GP. He said that he would prefer it if on call nursing or medical staff could speak directly to the prisoner, for example by mobile phone, rather than having to rely on the prison officer to relay questions and answers. He thought that this would improve the triage. The account of symptoms which he, the clinician, had to assess was that which the prison officer had managed to obtain from the prisoner. He might however want to ask further, specific questions of the prisoner in order to properly diagnose his condition. Such direct contact by mobile phone is not permitted by SPS on security grounds. Be that as it may, Dr Sayer's evidence is just another way of underlining the concern that prison officers are not trained to triage patients as a medical professional might do, and so may fail to elicit a full account of all relevant symptoms – particularly in borderline cases. Or put another way, a prisoner may be able to say things to a medical professional that they feel unable to say to a prison officer. I consider that the present case likely illustrates this problem.

[31] The next question is, accepting the prison officers' account of what the deceased said to them – and thus that they were presented with a prisoner, in the middle of the night, complaining of chest pains, sweating and a sore throat – what should they have done? What they in fact did was to give the deceased paracetamol, check whether he made any further calls for assistance during the rest of the night shift, and arrange for

him to be seen by a Nurse after she came on duty four hours later. With hindsight, the resulting delay in securing medical treatment likely resulted in the deceased's death. Were there reasonable precautions which the officers could have taken by which the death might have been avoided?

[32] The symptoms reported to the prison officers (as I have found) did not include the classic symptoms described in the SPS first aid training materials. And it is clear on the evidence of the cardiologists that patients having heart attacks may have very different symptoms, or indeed no symptoms at all. It was for this reason, as noted, that SPS submitted that there were no reasonable precautions which could have been taken beyond those which the officers in fact took. It was submitted, in effect, that it was not apparent to the officers that the deceased was having a heart attack given their training (this being, for example, the view of Traycie Elder in her affidavit), and that some cardiac events cannot be guarded against given the range of presentations.

[33] But Dr Douglas Elder stated that chest pain, sore throat and sweating are all consistent with a heart attack. He would have expected that had the deceased presented to an out of hours medical service such as NHS 24 and reported such symptoms he would have received urgent medical care. Dr Elder would have expected NHS 24 to dispatch an emergency ambulance and for the patient to have been given an ECG. Dr Sayers caveated this by pointing out that not all chest pain is cardiac, and that he would want to ask more specific questions of a patient in relation to the nature and location of the pain. But he accepted that in a prison out of hours situation he would not be able to do that, and accordingly caution would dictate calling an ambulance. Prof

Brady gave evidence that, as a matter of national policy and standards, a patient presenting to a GP with symptoms such as those presented by the deceased to the prison officers should be sent to A&E. This was a precautionary approach, as such patients would not always have cardiac symptoms. But the safest approach was to have such symptoms checked. Specific tests could rule a heart attack in or out in a very few minutes, in particular by an ECG test.

[34] I accept this evidence. It indicates that a prisoner presenting with chest pain such as the deceased did, and if only as precaution, requires urgent medical attention in a form which enables an ECG test to be carried out. This is in order to rule out a heart attack or, if a heart attack is found to be present, to seek to ensure that it is treated in time so as to prevent irreversible damage and/or death. The very serious nature of the condition, and the short timeframes for effective treatment involved, necessitate such an approach. As SPS submits, and the medical evidence shows, there will no doubt be cases where a heart attack is undetectable and thus where there are no reasonable precautions which could have been taken to prevent it. But that is not the present case. The deceased did report symptoms which at least raised a real question of whether he was having a heart attack. An ECG test, if carried out, would have confirmed that he was.

[35] So how can a prisoner presenting with symptoms such as those reported to Officer Cochrane be ECG tested as a matter of urgency? During the day, the prison officers can and should simply summon one of the nurses on duty in the prison. That Nurse can then assess the patient and carry out an ECG, even if – as in the present case –

this is done only as a precaution, and where the Nurse doubts that the prisoner's complaint is cardiac in nature.

[36] It should be emphasised that there is no downside to carrying out an ECG in these circumstances. The machine is available and the procedure is quick, straightforward and non-invasive. An ECG should therefore be done as soon as possible, because it should conclusively determine in cases of doubt whether the prisoner's condition is cardiac in nature. If it is, properly interpreted and acted on by a qualified medical professional, the findings of an ECG examination will dictate the need for the patient's immediate transfer to hospital by emergency ambulance.

[37] Although strictly beyond the remit of this inquiry – because it relates to day time nursing – it should be obvious that at least one of the nurses on duty within the prison at any given time should be trained to operate the ECG machine. That may already be SPS/FVHB policy – so I am making no formal recommendation to this effect – but if it is not then it should be. I raise the matter only because neither Nurse Kidd nor Nurse Murphy were aware of whether there was any formal requirement that at least one member of the day shift nursing staff be able to operate the ECG machine.

[38] There were no nursing or medical staff on duty at Glenochil overnight on 12 February 2017, let alone nurses capable of carrying out an ECG. But Officer Cochrane did decide that the deceased should see a Nurse when one came on duty. Accordingly it is reasonable to infer that had a Nurse been on duty at night she would have been summoned to attend on the deceased at 04.00am. If so, I consider that there is at least real possibility that she would have obtained a fuller picture than that got by Officer

Cochrane. She could also have examined the deceased, including taking his blood pressure, which may be an important indicator in considering whether there is a cardiac problem. In other words she may well have got most or all of the details later described by Nurse Kidd in her entry in the medical records timed at 10.25am on 12 February 2017. In the light of this the Nurse would likely have carried out an ECG, as in fact happened in the light of Nurse Kidd's examination later that morning. This would have shown that the deceased was having a heart attack. The Nurse should then have spoken to the on call GP and provided him with a copy of the ECG results. That GP should then have instructed that an emergency ambulance be called. Had all this been done, there would have been a real possibility that the deceased would have been in hospital and treated within a timeframe by which irreparable damage to his heart might have been avoided.

[39] This caused me to consider whether I should recommend that a reasonable precaution would have been that a Nurse trained in use of an ECG machine should have been on duty at Glenochil at night. However no party to the inquiry advocated this, and FVHB in particular made detailed submissions that it was neither appropriate nor justified on the evidence. It was submitted, in the light of the evidence of Dr Craig Sayers, that from 2006 a policy decision had been made by SPS to withdraw inpatient care facilities and overnight nursing from all Scottish prisons. This was said to be an evidence based decision following an audit of how rarely nurses were actually required overnight, and concerns that provision of overnight nursing was impacting adversely on healthcare delivery during the day. There were implications for costs and resources which this court was not in a position to properly determine. Acutely unwell prisoners

were better served by timely transfer to hospital rather than being cared for by a Nurse with limited support and equipment. Overnight medical advice and care was available, via an on call GP (and now via police custody nurses), and this was no less a service for prisoners than was available to patients in the community via NHS 24.

[40] I have reservations about this policy decision, which seems to me to be based on some questionable assumptions about the equivalence of the position of prisoners with persons in the community as regards access to health care at night. Most obviously, a person in the community can call an ambulance themselves, or (in principle) can otherwise take themselves to A&E. A prisoner cannot. He is entirely dependent on prison officers to assess his complaint and to decide whether to arrange medical assistance and if so in what form. Given such differences, all being the necessary concomitants of deprivation of liberty, it seems to me that formal equivalence of service provision does not necessarily lead to actual equivalence of outcome. But the unchallenged evidence from Dr Sayers was to the effect that provision of overnight nursing was neither practicable nor reasonable, and there was no evidence to the contrary. I accept that a recommendation in relation to provision of night time nursing may have widespread consequences, including financial consequences bearing on the quality of daytime prison nursing services, the effects of which I am not in a position to fully assess. Accordingly, and with reservations, I accept the submission made by FVHB in relation to this matter.

[41] The question is then what could reasonably have been done by prison officers, in the absence of night time nursing staff, to ensure that the deceased was, if only as a

precaution, medically assessed and ECG tested as a matter of urgency, so to either eliminate the possibility of a heart attack or to enable timeous treatment of it.

[42] The first issue is that of training. Officer Cochrane, on his account, followed and applied the SPS first aid training which he had received relating to identifying a heart attack. As noted, that was also Traycie Elder's view. Put shortly, this involved looking for the classic symptoms of crushing chest pain often spreading to the jaw and left arm, etc. But given the evidence of the cardiologists in this case it is apparent that this is insufficient. Symptoms are variable and the absence of one or more of the classic symptoms does not, as Officer Cochrane thought, mean that the prisoner is not having a heart attack. The SPS training materials were revised in 2019, but even the revised guidance does not fully reflect the evidence of the cardiologists in this case nor does it underline the need for the precautionary approach to seeking urgent medical attention mentioned above. Prison officers' first aid training as regards potential heart attack symptoms should accordingly be reviewed and revised in the light of the expert evidence led in this inquiry and this determination. In particular it should be made clear that a prisoner presenting with the symptoms described to Officer Cochrane may be having a heart attack.

[43] The second issue is that, had Officer Cochrane been aware that the symptoms described to him by the deceased were consistent with a possible heart attack, he could and should have called an emergency ambulance. This would have been the quickest and most practical way of ensuring that the deceased was examined by medically trained (ambulance) staff, given an ECG to confirm or eliminate the possibility of a heart

attack, and transferred to hospital immediately if treatment was necessary. The ambulance staff who gave evidence clearly saw use of an ECG as a primary diagnostic tool in cases such as the present. It was also clear that they had the equipment, training and skills to carry out ECGs, and direct access to specialist clinicians at RIE who could rapidly interpret the results. They were also obviously experienced in dealing with cardiac events, and correctly and quickly recognised that the deceased was having such an event.

[44] Officer Cochrane could of course have sought advice from the on call GP (and now from a police custody nurse) but calling an ambulance was the quicker and surer route to confirming the presence or absence of a heart attack in a case (such as the present) where the reported symptoms were not clear cut. Ambulance staff on site can carry out an ECG test, but a GP cannot do this over the phone. There was also a suggestion from Officer Cochrane that the on call GPs had sometimes been reluctant to physically attend to examine prisoners, but in any event the police custody nurses now available are not able to attend at the prison – they may be located in a police custody suite on the other side of the country. Only calling an emergency ambulance can therefore secure an urgent examination of the prisoner by medically trained staff equipped (via an ECG machine) to conclusively determine whether the complaint is cardiac in nature. Dr Sayers agreed that in the case where an ECG was appropriate – if only to be on the safe side – this was the course which should be followed. In my view this was such a case. In the absence of an ECG trained Nurse on duty at night calling an

emergency ambulance would have been a reasonable precaution for Officer Cochrane to take, and by which the deceased's death might have been avoided.

[45] Nurse Kidd suggested in evidence that in her experience prisoners often complained of chest pain which was not cardiac in nature. I detected a degree of cynicism in this. Of course in some cases the attendance of an emergency ambulance at night may simply confirm that the prisoner is not having a heart attack. But that does not mean that calling the ambulance was not justified, nor reasonable, as a precaution. Indeed calling an ambulance in circumstances such as those arising in the present case seems to me to be the necessary concomitant of not having an ECG trained Nurse on duty overnight. It seems to me to be a consequence of the position taken by FVHB in the present inquiry. Accordingly if this determination means that in the future emergency ambulances are more often called to prisons at night on account of prisoners complaining of chest pain, so be it. And I say this conscious that the removal of a prisoner from a prison out of hours is a significant step for SPS, given the administrative, security and staffing issues involved. Whether ultimately the saving to health boards as regards the cost of providing overnight nursing in the prison is offset by possible additional costs to SAS and SPS of more ambulances being called to attend on prisoners with chest pain at night, is not something I am able to assess, but I heard no contrary submissions from SPS or SAS in this inquiry.

[46] Finally on this chapter then, and to summarise, I accept that had Officer Cochrane called for an emergency ambulance at around 04.00am, being a reasonable precaution which he could have taken, that it is likely that the deceased's prospects of

survival would have been significantly improved. He would likely have been given an ECG by an ambulance paramedic within a few minutes of the 999 call, which would have made clear that he was having a heart attack. He would likely have been taken straight to RIE and his artery unblocked within a short timeframe thereafter, and in any event within six hours of onset of his heart attack. That being so there is at least a real possibility that he would not have suffered the irreparable heart damage which in fact occurred, and that he would not have died when he did.

The nurses, Dr Frenschock, and the one hour ambulance request

[47] Nurse Kidd came on duty around 08.00am on 12 February 2017, read Officer Cochrane's handover note, and attended on and examined the deceased in his cell at some point between around 08.20am and 10.25am. From her own note in the records (Crown Production 6, page 60) it is apparent that she ascertained that the deceased reported persistent chest pain which did not ease on resting, pain in both arms, a sore throat, and that he had been sweating. She also found that his blood pressure was abnormally low.

[48] On that information alone, I am surprised, to put it mildly, that Nurse Kidd did not recognise that the deceased might well be having (or have had) a heart attack, and thus require emergency hospital treatment. This combination of symptoms were clearly indicative of this possibility, as is apparent from the SPS first aid training materials. The tenor of Officer Cochrane's evidence was that he would likely have called an ambulance at 04.00am had the deceased reported all these symptoms to him then. There is

therefore a case to say that Nurse Kidd should simply have called for an emergency ambulance after she had first examined the deceased. But this was not put to her, and there was insufficient evidence as regards what a Nurse of ordinary reasonable competence should have done in the circumstances. For that reason only I feel that I can only register my concern at Nurse Kidd's response to the deceased's presentation on examination at this point, rather than more directly criticise her for it.

[49] As the record shows, Nurse Kidd thought that the deceased's symptoms more likely indicated reflux than a cardiac problem. She was obviously wrong in this assessment. However she did at least take the time to discuss the situation with Nurse Murphy, albeit not until she got back to the health centre after 10.25am having completed her rounds in the Hall. Nurse Murphy, by chance, happened to have a background in cardiology. It is therefore further surprising, given the symptoms and findings which Nurse Kidd must have told her about, that Nurse Murphy did not recognise that the deceased was presenting with some of the classic indicators of a heart attack, and did not act accordingly by summoning an emergency ambulance. Again, it was not put to Nurse Murphy that given her particular cardiology experience she ought to have done so. However it appears that Nurse Murphy did at least suggest that an ECG be done, and unlike Nurse Kidd, she had the ability to do so. Allowing for the sake of argument that they were entitled to be in doubt as to whether the deceased's complaint was cardiac in nature, this was clearly the right thing to do.

[50] Nurse Murphy carried out an ECG on the deceased, but she said that she was not qualified to interpret it. I accept that, at least to the extent of understanding the meaning

and significance of the various peaks and troughs on the linear graphic read out. But the words "Consider infarct of acute occurrence. Abnormal ECG" are generated by the machine itself, and even to the intelligent lay reader suggest something may be wrong. The words "ST Elevation" are also present, and the unchallenged evidence of Dr Frenschock was that even a newly qualified doctor should be expected to recognise that this expression indicated the presence of a heart attack. So again, I can only express my surprise that Nurse Murphy, with her cardiology background, did not also recognise this. She did, after all, see fit to record the finding of ST elevation on the SBAR report (Crown Production 6, page 74), which suggests that she must have been aware that it had some significance. Again, however, none of this was put to her.

[51] Nurse Chapman was not involved in the events of 12 February 2017. But she and Nurse Murphy carried out an ECG on the deceased prior to his second admission on 17 March 2017, and she was asked general questions about nursing competencies in relation to ECGs. She too was trained to carry out ECGs, but not to interpret them. At one point, however, she accepted that had she seen "ST Elevation" on an ECG she would have called for an emergency ambulance to take the prisoner to hospital. She then backtracked on this in cross examination by saying that she would base such a decision on a patient's clinical presentation, and would defer to a doctor as regards interpretation of an ECG.

[52] Again, I accept that the general proposition that nurses carry out ECGs and doctors interpret them. But common sense suggests that nurses regularly carrying out ECGs will likely come to understand enough about them to know that the print out

generated in the deceased's case suggested that he may have had a heart attack and so required an emergency ambulance. That is particularly so where the deceased's clinical presentation, as recorded in the entry of 10.25am on 12 February 2017, was also consistent with this. And I note that the ambulance staff who later attended carried out further ECGs and appeared to have no difficulty in recognising that the deceased had had a heart attack. My impression was that this was a result of experience in carrying out ECG tests in cases of suspected heart attack, rather than any formal training in interpreting the results.

[53] But be that as it may, it appears that Nurses Kidd and Murphy did then seek advice and direction from the GP who was on call that weekend, Dr Frenschock. Accepting for the sake of argument that they were entitled to doubt that the deceased's symptoms and the ECG clearly indicated the possibility of a heart attack justifying their calling an ambulance themselves, they were then correct to do so. I say "appears", however, because there was a lack of clarity in the evidence as to whether a call was actually made, whether it was made to Dr Frenschock or to another doctor, and if it was made, what information was imparted regarding the deceased's condition – and in particular the results of the ECG. That there could be such dubiety about these matters in an inquiry such as this, particularly given the potentially critical, life or death, importance of the decision which the on call GP was being asked to make, is lamentable.

[54] The lack of clarity about whether a call to Dr Frenschock was actually made arises in the first place because both nurses said that they could not remember calling him, and because Dr Frenschock said that he could not remember receiving a call. In the

second place, it arises because Dr Frenschock did not keep – and I presume was not required to keep – any written record of the calls which he received as an on call GP, nor of any advice or directions which he gave as a result. In the third place the lack of clarity arises because the nurses' record keeping was inaccurate and misleading. Although Dr Frenschock's name is on the SBAR as bring the doctor spoken to, that form bears to be written by Nurse Kidd when in fact it is in Nurse Murphy's handwriting. Also the entry in the computerised records relative to the call mentions not Dr Frenschock, but a Dr Blackmore, who also worked at the time both in the prison and as an on call GP. In her signed statement to the police, given in March 2018, Nurse Kidd had also said that it was Dr Blackmore who she phoned, although to the inquiry she claimed that she had no recollection of giving this statement and did not adopt it.

[55] In the light of this unsatisfactory state of affairs, and on balance, I have concluded that it is likely that a call was indeed made to an on call GP. This is at least supported by the content of the SBAR and the entry in the computerised medical records relative to it. Had no call been made at all, then these entries would be blatantly false insofar as they say otherwise. This is of course a possibility. However it was not put to the nurses that they had done so, and ultimately I think that it is unlikely. Taking advice and instruction from the on call GP was a way for the nurses to protect themselves from any later criticism, and it is hard to understand why they would instead have exposed themselves to criticism by not making such a call and then falsifying the record to say that they had.

[56] As to the doctor to whom the call was made, it seems likely that it was Dr Frenschock simply because, as he accepted, he was the on call doctor on the weekend in question. The reference to Dr Blackmore in the computerised notes may be explained, as Nurse Kidd said, by this name tending to automatically populate the relevant box on the computer screen. That this was not noticed before posting the entry is of course poor record keeping on the part of the person completing the entry. However even who this was is not clear, as both Nurse Kidd and Nurse Murphy's names appear in this entry and neither could remember making it. Dr Frenschock's name is however on the SBAR, as being the doctor who was spoken to that morning, and that is consistent with his being on call.

[57] As to the Nurse who made the call, I think it more likely that it was Nurse Kidd than Nurse Murphy. On this matter – as with nearly all others – Nurse Kidd claimed to have no recollection. I did not find this to be credible. In this respect, as with her evidence more generally, I thought it more likely that Nurse Kidd had decided not to be candid with the inquiry for fear of criticism by it. However had it been Nurse Murphy who made the call she would simply have completed the SBAR in her own name, and thereby certified that she had made the call to Dr Frenschock as the form requires. There would have been no need for her to misrepresent the position by completing the form in Nurse Kidd's name.

[58] Accepting that a call was made, that it was made to Dr Frenschock, and that it was made by Nurse Kidd, the next issue is what instruction was given by him to her. On the face of the records this was that she should call a one hour ambulance. This is

reflected both in the typed computerised entry relative to the call and on the SBAR. Again, the only other possible explanation would be that Nurse Kidd, having phoned Dr Frenschock, decided to call for a one hour ambulance even though he had given her a different instruction. That seems improbable. The likelihood is therefore that a one hour ambulance was called for because that is what Dr Frenschock told Nurse Kidd to do.

[59] This then begs the question of what was said between Nurse Kidd and Dr Frenschock, and on which he based his decision to instruct a one hour ambulance. This is of importance because, on Dr Frenschock's own evidence, the reading of ST elevation on the ECG report in itself should have made clear to even a newly qualified junior doctor that the deceased had had a heart attack, was gravely ill, and required an emergency ambulance to take him to hospital. Therefore if Nurse Kidd told Dr Frenschock about the ST elevation reading on the ECG report, he was by his own admission grossly at fault in failing to direct her to call an emergency ambulance. And arguably, even if Nurse Kidd had not mentioned this reading to Dr Frenschock, he should have asked her about it, or asked her to fax or email him a copy of the ECG report. In this circumstance there would have been fault on Nurse Kidd's part for failing to provide critical information, patent on the face of the ECG report, but perhaps even greater fault on the part of Dr Frenschock in failing to ensure that he had this information.

[60] But as if the picture were not confused enough, there is a further possibility. In their joint (untimed) entry in the computerised records (Crown Production 6, page 60)

Nurses Kidd and Murphy state that they "spoke to on call gp advised to send out 1 hour ambulance to A & E *after ECG done*…" (my emphasis) The most natural reading of this suggests that the ECG had not in fact been done by the time that the on call GP was spoken to. If that is the position, then plainly Dr Frenschock would have directed a one hour ambulance without knowing that the deceased had ST elevation. And it would beg the question of whether Nurse Kidd told him that an ECG was to be carried out and if so whether he asked to be contacted again once the results were known. However the entry also states that the SBAR had already been completed, and this could not have been done without the ECG having first been carried out. So this suggests that the ECG results were available prior to the call having been made to Dr Frenschock. But the records are inconsistent, and the matter is not free from doubt.

[61] There was no evidence to suggest that Nurse Kidd faxed or emailed a copy of the ECG report to Dr Frenshock. I consider that I am entitled to make a finding that no copy was provided, even if the content of their conversation cannot be determined. Had such a copy been sent I would have expected one or other of these witnesses to have remembered it. But this raises the question of the value of Nurse Murphy giving an ECG test, assuming she was not qualified to interpret it, where she was not then required to provide a copy of it to someone who was qualified. As Dr Elder said in his evidence, there must be a chain of responsibility from a Nurse who carries out the ECG test to the clinician responsible for interpreting it. In his hospital practice – and he said that he might look at a hundred ECGs in a day – this always required transmission of a physical copy of the printout. And I note also that the ambulance staff were required to

transmit to RIE a copy of the ECG taken by them in order that a clinician could consider it and give instructions as to which hospital the deceased should be taken. In the present case, therefore, the failure to provide Dr Frenschock with a copy of the ECG broke a crucial link in the chain of responsibility.

[62] It is clear, with hindsight, that an emergency ambulance should have been called for the deceased on the morning of 12 February 2017. There are grounds to say that this should have been called for by Nurse Kidd after she saw the deceased between around 08.20am and 10.25am that morning, given his presentation at that time. There are grounds to say that it should have been called for by Nurse Murphy, with her cardiology experience, when appraised of the situation by Nurse Kidd at around 10.30am. It certainly should have been instructed by Dr Frenschock at around 11.20am in the light of the ECG report, assuming that he was made aware of the reference to ST elevation.

[63] That an emergency ambulance was not called, but instead a one hour ambulance, was therefore the result of failures by Nurses Kidd and Murphy and Dr Frenschock, individually and collectively, to recognise the seriousness of the deceased's condition in the light of the information which was available to them. But for this, and had an emergency ambulance been called rather than a one hour ambulance, it seems feasible that the deceased would have been admitted to hospital and treated by around midday – or around three hours earlier than in fact happened – and perhaps even earlier.

[64] To seek to more precisely apportion the blame for failing to call an emergency ambulance seems to me to be beyond the scope of this inquiry, at least once it is accepted

that the failures were on the part of individuals to do something which, even without the wisdom of hindsight, ought to have been done. My diffidence in this regard is increased in the light of the various omissions and errors in the written records, and the collective amnesia of the witnesses, which make it impossible to say with certainty who exactly did or failed to do what. If there is a system error, it is in the failure to require the on call GP to maintain a log of all attendances, calls, advice and instructions, given during the on call period. Without this, as with Dr Frenschock in the present case, the GP cannot be held properly accountable for potentially life and death decisions made whilst on call – nor properly protected from later criticism in this regard. However the evidence was that the system of on call GPs has now been discontinued in favour of use of nurses based in police stations, so a recommendation from me in this regard is not appropriate.

[65] The Crown and FVHB submitted that a formal finding should be made under section 26(2)(g) of the 2016 Act to the effect that an emergency (rather than a one hour) ambulance should have been called given the deceased's presentation and the abnormal ECG result. A finding under this subsection of course carries the acceptance that there was unlikely to have been any causal connection between the failure to call an emergency ambulance and the deceased's death. That is because even by the time that Nurses Kidd and Murphy came on duty at around 08.00am on 12 February 2017 it is likely, given my findings as to the onset of the deceased's heart attack, that he had already suffered the irreversible heart damage which later led to his death. But the failure to call an emergency ambulance is clearly related to the deceased's death. And I

accept that I should make the proposed formal finding under section 26(2)(g), if only to mark the level of my concern regarding the collective failure to call for an emergency ambulance, rather than merely to leave this as a matter which is discussed and commented on in this Note. Even if calling an emergency ambulance would not have saved the deceased's life, it would likely have at least saved him the several hours of considerable pain which he appears to have endured in the period prior to his being administered morphine at around 14.30pm by the paramedic Colin Kemp.

The SAS control system response

[66] The SAS system for responding to calls from HCPs appears considered and appropriate and was not subject to criticism by any party in this inquiry. If a patient has been triaged by a HCP then that person, rather than a non-medically trained SAS call handler, is likely to be better placed to assess the degree of urgency with which an ambulance requires to be summoned for the individual patient concerned. Plainly SAS have to prioritise the allocation of ambulances. Resources are not limitless. Not every case is or should be treated as an emergency justifying immediate dispatch of an ambulance to convey the patient to hospital.

[67] If, as here, a one hour ambulance is asked for by the HCP, but it is not then possible to dispatch an ambulance within that period, SAS procedure is to call back and ascertain whether the patient's condition has changed or deteriorated. If so, SAS will escalate the request for an urgent ambulance to a request for an emergency ambulance. Again this all seems appropriate. Given limited resources, ambulances may not always

be available within the time period sought by the HCP. But the expiry of that period will not necessarily mean that conveying the patient to hospital has become an emergency when previously it was not. The matter has to be reassessed.

[68] However this system does require effective communication between the HCP and the SAS call handler. And as Stephanie Jones explained, not every call to the HCP ambulance request number comes directly from the HCP themselves. Calls will frequently be made on the HCP's behalf, for example, by a receptionist in a GP surgery. Where, as in the present case, the patient is a prisoner, it is apparent that communication with the SAS call handler will be done by prison officers in the prison control room, and not the Nurse or GP who has decided that an ambulance be called. In the present case, for example, a GP told a Nurse to call a one hour ambulance, she told a prison officer to arrange this, he relayed this to another prison officer in the prison control room, and that officer then phoned SAS and spoke to the call handler. This gives rise to a potential risk of miscommunication somewhere along this lengthy chain.

[69] As regards the initial request for an ambulance in the present case, it is apparent that the instruction for a one hour ambulance was promptly and accurately relayed to SAS. The call handler should, according to SAS procedures, have asked the prison officer making the call for the name of the HCP directing the request. They failed to do so. But I have found that it was Dr Frenschock who directed this request so ultimately this failure is of no consequence. And all other relevant information was sought and provided. Overall I accept Stephanie Jones' evidence that the initial call to SAS was handled to an acceptable standard.

[70] SAS were however then unable to allocate an ambulance within the one hour period requested. Again, I do not criticise that failure as such, which was simply down to available resources and the need to prioritise emergency calls over one hour calls. But when SAS called back to ascertain whether the deceased's condition had changed there was then an onus on it, having failed to provide an ambulance within the time frame deemed necessary by the HCP, to determine whether the medical condition of the patient had changed – in particular whether it had deteriorated – such that his case was now an emergency when previously it was not. Just as the initial request assumes and relies on an HCP assessment, so must this further inquiry.

[71] Accordingly when such a call back is made it is necessary that the SAS call handler ascertain from the person answering the call that an HCP has in fact reassessed the patient's up to the minute condition – given that an hour will have passed since the request for an ambulance was made – and is content that it does not then require an emergency ambulance. And if, as in the present case, the person answering the call is not the HCP – and indeed is several persons removed from the HCP down the chain of communication noted above – it is implicit that they should cause a further check to be made with an HCP. Just as the system relies on the HCP to assess the degree of urgency initially, so it requires them to reassess this if an ambulance does not arrive in the timescale first thought necessary.

[72] Now here I have some concerns. The SAS call handler making the one hour call back at 12.41pm did ask the prison officer answering the call whether the deceased's condition had changed or altered. He replied "Not that I am aware of – no its still chest

pains". In the first place this response suggests that the officer had not then gone back to the HCP who instructed the ambulance for an update on the deceased's condition. He appears simply to have assumed that as he had not been told of any change by an HCP there had been none. In the second place he seems to have interpreted the call handler's question as being whether the deceased had any new symptoms (for example, pains other than chest pains), not whether there had been any deterioration in the symptoms initially reported (for example, that the chest pains had got worse since the initial call was made).

[73] So I do not consider the response by the prison officer in the 12.41pm call back was adequate, and I do not consider that the call handler should have accepted it without further inquiry. The officer should have spoken to Nurse Kidd or Murphy and ascertained whether the deceased's symptoms had changed or worsened. The call handler should have satisfied herself that he had done so. That much is necessary for proper operation of the SAS allocation system, dependent as it is not only on there being an HCP to assess the patient's condition, but also on their keeping the condition under assessment pending arrival of the ambulance.

[74] That is of some consequence in this case given the absence of evidence about the deceased's condition between 11.33am, when the ambulance was called, and 13.04pm, when it arrived. It appears that he remained in the prison health centre throughout this period, but neither Nurse Kidd nor Nurse Murphy had any recollection of how he then was, and in particular whether he had got better, or worse, or remained the same. There is no evidence to suggest that the prison officer who took the SAS call handler's call at

12.41pm did in fact make any check with the nurses on the deceased's condition at this point. Yet his condition appears to have deteriorated from a position where Nurse Kidd felt initially able to suggest that his chest pain was due to reflux, at 10.25am, to one where his reported pain level was so great that he could not be transported to hospital without first being given morphine, at 14.30pm. So the deceased's condition appears to have deteriorated substantially over the course of the morning and early afternoon without this being either being noticed by the nurses, or in any event relayed by them to SAS.

[75] Ultimately, and for reasons which I have already discussed, none of this makes any difference to the deceased's chances of survival. Had a check by the nurses concluded that the deceased's condition had deteriorated by the time of the SAS call back at 12.41pm, and this information been relayed to SAS, then it is possible that an emergency ambulance would have been dispatched at this time. Had that happened, it is possible if not probable that the deceased would have been transferred to hospital and treated earlier than in fact happened, perhaps by as much as two hours. But the fatal and irreversible damage to the deceased's heart was very likely already done before the ambulance was even called at 11.33am. Beyond my findings in fact and these comments, therefore, I do not consider that any formal finding or recommendation is justified in relation to this chapter.

The response of the SAS ambulance technicians and paramedic

[76] Once mobilised to attend at Glenochil, the ambulance crewed by technicians Jordan Tuff and James Martin was able to reach the prison gates within 11 minutes, arriving there at 13.04pm. On examining the deceased, noting his pain levels and carrying out an ECG, both technicians were surprised that an emergency ambulance had not been requested. It seems to have been clear to them that the deceased had had a heart attack. As already noted, this underlines the concern about why this had not also been apparent to Nurses Kidd and Murphy prior to their arrival. But the present question is why, if it was quickly recognised by the technicians to be an emergency, it still took until around 14.37pm – that is, more than one and a half hours – for the ambulance to leave Glenochil and take the deceased to hospital. It became apparent that there were a number of reasons for this.

[77] In the first place there was a delay in the technicians getting into the prison and attending on the deceased. Necessarily, they had to go through certain security procedures, including surrendering any personal mobile phones, drive their vehicle to a holding area, and walk to that part of the prison where the deceased was located. All this appears to have taken perhaps 10 to 15 minutes. I heard that these procedures would have been the same even if the ambulance had been called as an emergency ambulance.

[78] If this amount of delay is typical and unavoidable – consistent with proper security procedures – adjustment in the time periods stated in the SAS guide to calling an ambulance needs to be factored in when the patient is a prisoner in Glenochil. That is

because these time periods are calculated from receipt of the call to the ambulance stopping outside the building where the patient is located. Where that building is Glenochil, it appears that getting from the ambulance to the patient is likely to take the technicians perhaps 10 or 15 minutes longer than if they were, for example, entering the patient's home or a GP's surgery in the community. Therefore a request for a "one hour ambulance" to attend on a prisoner in Glenochil may sometimes become, in effect, a request for a "one hour and 10 to 15 minutes ambulance."

[79] Exactly when and where the technicians first examined the deceased is not entirely clear from the written records, and the evidence of Mr Tuff and Mr Martin was not consistent in this regard. Mr Martin said that having been taken to the deceased in the prison they wheeled him out to their ambulance before any examination took place. Vital signs were taken, and this was recorded by Mr Martin on the ambulance record at 13.25pm. He said that only then did they carry out an ECG examination of the deceased. Mr Tuff, on the other hand, said that they had examined the deceased in the prison health centre, and used a portable ECG device which they had taken there for this purpose. I do not doubt that both of the technicians were trying their best to tell the truth, and these differences were likely due to memory failures given the passage of time. But they do not greatly matter. The important point is that by around 13.30pm, or within around 10 to 15 minutes of their first attending on the deceased, the technicians had examined him, carried out an ECG, and had put him in the ambulance. That does not suggest any significant delay. They then needed to know whether to take him to the

local hospital, FVRH, or to RIE, where the specialist cardiology unit is located. It was agreed by joint minute that this was a matter for the clinicians at the RIE to decide.

[80] However there was then a delay of what must have been around 45 minutes in getting instructions from RIE. In the first place this was because the technicians were unable to transmit the results of the ECG to RIE. As I understood the evidence, the ECG machine is able to transmit results direct to RIE via a Bluetooth connection to a phone on the ambulance. However the technicians were unable to get a signal, for reasons which are unknown. They were also unable to use their SAS issue mobile phones to communicate with RIE, again, it appears, because they were unable to get a signal. Mr Kemp, an experienced paramedic, later said that not being able to get a signal was a regular problem for ambulance crews when inside Glenochil, although not if in the car park directly outside the gate. Having carried out a second ECG, however, the technicians were later able to transmit, or in any event communicate, the results to RIE, using their SAS radios. It is not clear exactly when this was, but my impression is that it must have been around 13.45pm.

[81] In the second place, there was a delay in RIE reviewing the ECG results and calling the technicians back to give them directions about which hospital to convey the deceased to. Mr Tuff and Mr Martin said that they would normally expect a call back within 2 to 5 minutes, but on this occasion it appears to have taken perhaps half an hour, prompting the technicians to make further attempts to call RIE, both directly and through the SAS control centre. The reasons for this delay were unexplained and so are

unclear, though it does not appear to have been as a result of technical difficulties in communication between RIE and the technicians.

[82] There was some dispute about who the instruction to take the deceased to RIE was given to. Mr Kemp was clear that no instruction had been given before he arrived on the scene and that it was given to him when he called RIE. I accept that evidence. Therefore the instruction could not have been given until after 14.12pm, which is when Mr Kemp arrived at Glenochil. It came as no surprise to Mr Kemp that RIE was not prepared to admit the deceased. It was clear to him from the ECG that the deceased had had a heart attack. He too was surprised that an emergency ambulance had not been called. He was aware that RIE was unlikely to admit a patient with a heart attack more than 4 hours after the onset of pain. In the deceased's case, he had told the technicians that his chest pain had started at 04.00am, therefore he was already well outside RIE's four hour time limit. However the decision whether to admit the deceased remained one for the clinicians at RIE to make.

[83] The next reason for the delay in the deceased leaving the prison was the need to administer morphine to him before transporting him to hospital. Given the deceased's pain levels, which the technicians could not alleviate using aspirin, GTN and Entonox, it would not have been safe to transport the deceased without first giving him morphine. To do so might have caused him further pain and possibly fatal stress to the heart. That was the substance of the evidence of Mr Kemp and the technicians, and I accept it. But while paramedics are qualified to administer morphine, ambulance technicians are not. Emergency ambulances will likely have a paramedic on board, but non-emergency

ambulances may, as in the present case, be staffed only by ambulance technicians. Accordingly the deceased could not be transported to hospital until a paramedic could be summoned and morphine administered.

[84] The delay in doing this, which was from around 14.00pm to 14.37pm, was therefore really a further aspect of the failure to call an emergency ambulance in the first place. Had this been done, there would likely have been a paramedic on board and thus no need to wait for one to be summoned in order to administer morphine. Indeed Mr Kemp said that in the circumstances morphine would have been his first drug of choice for the deceased had he been first on the scene.

[85] Accordingly it is apparent that overall there was a significant delay in getting the deceased from Glenochil to hospital once the ambulance arrived there at 13.04pm. This was the result of an accumulation of a number of smaller delays arising from discrete causes, not all of which were fully explained in the evidence. What is clear however is that none of these delays, either individually or collectively, made any difference to the deceased's chances of survival. The damage to his heart was very likely to have been irreversible before Mr Tuff and Mr Martin's ambulance arrived at Glenochil. And none of the delays can, in my view, be attributed to any failures by the ambulance technicians, the paramedic, or indeed to SAS, who acted professionally throughout.

[86] But in another case the delays occasioned by the technical difficulties in communication between the technicians and RIE might be of importance for the patient's chance of survival. As noted there was some evidence that this was a not uncommon problem and accordingly it should be investigated and if need be a solution

devised. Why there was a delay in staff at RIE giving instructions to the ambulance technicians after the ECG was sent is simply unclear, and was not explored in evidence. However such delays do not appear to be common, at least on the evidence of the ambulance technicians in the present case.

Treatment at RIE and convalescence at Glenochil

[87] As noted I heard evidence that RIE had instructed Mr Kemp that the deceased fell outwith their admission criteria (because of the time that had passed since the onset of chest pain), and so he was taken to FVRH. However, and for reasons that were again not explored, it became apparent that very shortly after arriving at FVRH the deceased was, after all, transferred to RIE. After assessment there it became clear that he had had a completed heart attack. The undisputed consequence was that irreparable damage had been done to his heart, and that there would be no benefit to emergency surgery on the evening of 12 February 2017. Accordingly it was not until the following day that the deceased was treated with an angioplasty (to open his blocked right coronary artery), and by insertion of stents (to keep the arteries open). This was all done without complication and the deceased was discharged back to Glenochil on 14 February 2017.

[88] Accordingly there was no suggestion by any party that there were any deficiencies in the care or treatment which the deceased received at RIE between 12 and 14 February 2017, and I can see none on the evidence available to me.

[89] Between 14 February 2017 and 21 March 2017 the deceased remained at Glenochil, convalescing from the effects of the heart attack and the operation carried out

at RIE. It is apparent from the evidence of Paul McKean, who saw him at visiting times during this period, that the deceased had been substantially weakened and debilitated. He had difficulty mobilising unaided, and made use of a wheelchair. He was significantly fatigued, sometimes short of breath and experienced chest pains on occasions. However it appears that, in keeping with his personality generally, he tried to stay positive in outlook.

[90] The deceased was given a prescription for medication on discharge from FVRH and this was administered by the nurses at Glenochil. This medication was appropriately prescribed and administered. The deceased was also appropriately monitored and regularly checked by nursing staff. He was given appropriate rehabilitation support by Fiona Szanyi. It was not ultimately suggested that there were any defects in his care or treatment in Glenochil during this period, let alone that there was anything which reasonably could have been done differently during this period by which his death might have been avoided. I accept all this.

The deceased's admission to FVRH, 17 – 21 March 2017

[91] The deceased was admitted to FVRH around 18.00pm on Friday 17 March 2017, and remained there until his death around 11.50am on Tuesday 21 March 2017. There was a dispute in the evidence as to whether there were deficiencies in the care and treatment which he received during this time, and as to whether but for the alleged deficiencies the deceased might not have died when he did. In that regard I heard from Dr Abouzaid, then a registrar, who assessed the deceased shortly after admission on

17 March 2017, Dr Stephen Glen, a consultant cardiologist, who was directly involved in treating the deceased on 20 and 21 March 2017, and from Prof Adrian Brady and Dr Douglas Elder, both consultant cardiologists, who were instructed to provide independent opinions by the Crown and FVHB respectively.

[92] In reports dated 24 January and 24 May 2019 (now production 9 for the Crown), and in his oral evidence, Prof Brady was critical of the care and treatment which the deceased had received in a number of respects. He noted that Dr Abouzaid had correctly diagnosed atrial flutter following the deceased's admission to FVRH on 17 March 2017. However he suggested that this had then been ignored by other clinical staff, until 20 March 2017, in favour of an incorrect diagnosis of sinus tachycardia. According to Prof Brady, an infusion of adenosine would have easily clarified the diagnosis. It had also been wrong to entertain a diagnosis of Dressler's syndrome. He further suggested that the deceased had clear features of heart failure throughout, and that bisoprolol (the beta blocker) was therefore the wrong drug to give to him. Prof Brady suggested that the deceased should have been given amiodarone. The correct diagnosis of atrial flutter and heart failure was not recognised until the deceased came under the care of Dr Glen on 20 March 2017. Had this been recognised and treated earlier, suggested Prof Brady, it was possible that the deceased's heart rate might have been brought under control and thus that he might have lived longer than he did. However Prof Brady accepted that the deceased's heart condition was so poor following his heart attack that ultimately it was more likely than not that he would have died as a result, perhaps within a few days of when he did.

[93] I am unable to accept Prof Brady's evidence. I prefer that of Dr Glen and Dr Elder. Prof Brady is a senior consultant cardiologist of many years' experience, but it became apparent that he had failed to properly read and understand all the available medical records prior to reaching his opinion on the adequacy of treatment. The deceased was first seen by Dr Pitt, not Dr Abouzaid. Dr Pitt had queried whether the deceased had atrial flutter, but Dr Abouzaid – who although a junior doctor in the UK was by chance an experienced cardiologist – made a firm diagnosis to this effect on admission of the deceased to the acute assessment unit. Treatment with bisoprolol had proceeded on this understanding between 18 and 20 March 2017, and with the approval of the specialist cardiology unit at RIE. There was no diagnosis of sinus tachycardia. The telemetry had recorded "sinus tachy" (Crown Production 7, page 90), but I accept Dr Glen's evidence that the clinicians were aware that the deceased's increased heart rate was due to atrial flutter and had proceeded on this basis. There was no misdiagnosis.

[94] Dr Glen and Dr Elder also disputed that clinical examination between 17 and 20 March 2017 had shown signs of heart failure, and – as Prof Brady had suggested – that it was only after he, Dr Glen, had assessed the deceased that this had been recognised. Rather, it was apparent that Dr Pitt had assessed the deceased at the outset for signs of heart failure and had found none. In particular she had listened to the deceased's chest and found it to be clear, with no crackles which would suggest fluid in the lungs. Dr Pitt had also found no calf or ankle swelling, suggesting no oedema, no abnormal heart sounds, and no undue prominence to the jugular venous pulse. As

Dr Elder said, Dr Pitt's findings showed no evidence of decompensation or heart failure. Stable blood pressure and oxygen levels, repeatedly monitored, also did not indicate heart failure. Chest x-rays, reviewed by Dr Abouzaid, showed no signs of fluid in the lungs. The CT scan, carried out on 18 March 2017, showed a very small amount of fluid at the bases of the lungs, but no other signs of heart failure. Prof. Brady was unaware that this scan had been carried out, and that its findings contradicted his view that the deceased was in heart failure on 18 March 2017. As Dr Glen said, it was only on the morning of 21 March 2017, when the deceased's heart rate increased to more than 240 bpm, that he displayed signs of heart failure. These signs included loss of blood pressure, breathlessness, and low blood oxygen levels. Accordingly the deceased was therefore neither misdiagnosed nor mistreated in this respect.

[95] As for administration of adenosine, Dr Glen explained that this drug is given intravenously, and is active for a matter of seconds. It is given to a patient if it is not possible to see atrial flutter. It works by temporarily stopping the ventricles – in effect, causing a cardiac arrest – thus stopping electrical signals getting from the top to the bottom of the heart, and enabling an accurate reading to be obtained on the heart trace. Dr Glen described this as a very unpleasant thing to do, and said that if it was not necessary to do it, then it should not be done. In the deceased's case it was not necessary for the purpose of diagnosing flutter, he said, because Dr Abouzaid had already done so and that diagnosis was accepted and acted upon by the other clinicians. I accept this evidence.

[96] Dr Glen accepted that beta blockers would have been the wrong drug to give, had the deceased been in severe heart failure, but he was not. Beta blockers were the recommended first line treatment for atrial flutter after a heart attack, in both national (SIGN 152, September 2018) and international guidelines (ESC, May 2016). Dr Elder agreed with this. As he explained, beta blockers act on a node in the heart which limits the rate at which the main chambers pump relative to the upper chambers. The aim was to reduce the deceased's heart rate from around 140 bpm to 100 bpm or less, and the use of beta blockers was appropriate for this purpose. The deceased's response to the administration of beta blockers was monitored and doses were altered accordingly, under advice from the tertiary centre at RIE. Again, Prof Brady had failed to notice this in the medical notes. As to Dressler's syndrome, Dr Elder gave evidence that there was some evidence to support this in the findings of the CT scan carried out on 18 March 2017. And Dr Glen pointed out that the post mortem showed that there were inflammatory changes in the deceased's pericardium. These were consistent with Dressler's syndrome, and it had not been wrong to at least entertain a diagnosis of this condition.

[97] As to the administration of amiodarone, as Dr Elder said, there are pros and cons to the use of this drug. It carries a risk of causing a stroke, so it is not a first choice drug. Dr Glen said that this medication was given to the deceased to try to reduce a dangerous very fast heart rhythm of 240 bpm on the morning of 21 March 2017. He said that it was simply incorrect to suggest, as Prof Brady had done in his report, that this drug had been "discontinued" "for an inexplicable and bizarre reason" "on surgical

recommendation". The drug was administered in a single syringe. An infusion beyond that was considered, but not proceeded with, because the deceased's heart rhythm returned to flutter. This was the correct decision, in particular because by this stage it was agreed that treatment should become palliative only. And this decision had not in fact been taken by the consultant surgeon, as Prof Brady had suggested.

[98] Accordingly, and overall, I consider that the deceased was appropriately diagnosed and treated throughout his admission to FVRH between 17 and 21 March 2017. That he died was not attributable to any deficiencies in care and treatment during this time. On the contrary, the clinicians responsible for the deceased made every reasonable effort to save his life. That they were unable to do so was because of the irreparable damage which had already been done to the deceased's heart by the heart attack which he sustained on or around 12 February 2017.

Conclusions, Findings and Recommendations

[99] Section 26(2)(a) of the 2016 Act (when and where the death occurred): There was no dispute as regards when and where the death occurred. It is agreed in paragraph 17 of the first joint minute that the deceased died at 11.50am on 21 March 2017 in the cardiology ward of Forth Valley Hospital, his life being pronounced extinct by a Dr Punid Bedi.

[100] Section 26(2)(b) of the 2016 Act (when and where any accident resulting in death occurred): There was no dispute that the deceased's death was not the result of an accident.

[101] Section 26(2)(c) of the 2016 Act (the cause or causes of death):

There was no dispute as to the cause of death. It is agreed at paragraphs 38 and 39 of the first joint minute that his cause of death was certified by Dr Kerryanne Shearer, consultant forensic pathologist, as "complications arising from a myocardial infarct" ('heart attack'). This was the conclusion of Dr Shearer's report, Crown Production 1, which was agreed to be true and accurate in its terms. The heart attack in question was that suffered by the deceased on or around 12 February 2017.

[102] Section 26(2)(d) of the 2016 Act (the cause or causes of any accident resulting in death): Again, there was no dispute that the deceased's death was not the result of an accident.

[103] Section 26(2)(e) of the 2016 Act (any precautions which (i) could reasonably have been taken, and (ii) had they been taken, might realistically have resulted in death, or any accident resulting in death, being avoided): I agree with the submissions for the Crown and FVHB that a formal finding should be made under this subsection. I consider that this finding should be in the following terms:

> "At around 03.40am on 12 February 2017 the deceased complained to prison officers on duty at HM Prison Glenochil that he was feeling unwell, and was experiencing chest pain, sweating and a sore throat. In these circumstances, and in the absence of a Nurse or other health care professional on duty in the prison who could attend and carry out an electrocardiogram on the deceased, it would have been a reasonable precaution for the officers to have sought medical attention for him by calling for an emergency ambulance to attend."

Had this precaution been taken, an ambulance would likely have attended at the prison within a few minutes (for example, the emergency ambulance which was called on 17 March 2017 took 19 minutes to arrive). An electro cardiogram examination would then

have been carried out on the deceased by ambulance staff. This would have established that the deceased was having a heart attack. He would then have been immediately conveyed to hospital by the ambulance. There he would have undergone surgical procedure by way of cardiac catheterisation. There is at least a real possibility that all this would have been done within a timeframe from the onset of the deceased's heart attack during which irreparable damage to his heart, and thus his later death, might have been avoided.

[104] This was a case where the deceased did not report classic symptoms clearly indicative of a heart attack, but rather symptoms which should have given rise to an awareness that there was a real possibility that he was having a heart attack. An ECG test was an obvious means to conclusively determine this matter, and in the absence of a Nurse on duty at night in the prison it would have been a reasonable precaution to call an emergency ambulance for this purpose. Merely speaking to the on call GP would not have enabled an ECG examination to be carried out.

[105] Section 26(2)(f) of the 2016 Act (any defects in any system of working which contributed to the death or the accident resulting in death): In deciding that the deceased was not suffering from a heart attack when he spoke to him at 04.00am on 12 February 2017 Officer Cochrane was applying the SPS first aid training which he had been given and which is detailed in the affidavit from Traycie Elder and its accompanying documents. Had Officer Cochrane been trained to recognise that the symptoms reported by the deceased indicated a real possibility that he was having a heart attack, and that this should be clarified by ECG examination as soon as possible, I

am satisfied that he would have called an emergency ambulance, with the probable consequence that the deceased's death would have been avoided. Accordingly the system of work under which the prison officers were operating was defective in this respect, and this defect is likely to have contributed to the death. I will therefore make a formal finding under this subparagraph in the following terms:

> "The first aid training of the prison officers who attended on the deceased at 03.40am on 12 February 2017 was defective insofar as it did not ensure that they were aware that given the symptoms with which the deceased presented to them (i) there was a real possibility that he might be suffering from a heart attack; (ii) that whether or not he was so suffering could be conclusively determined by an electrocardiogram test; and (iii) that medical attention should be sought urgently in such form as to enable such a test to be carried out."

I have phrased the finding in this way because SPS training will have to deal with a prisoner having potential cardiac symptoms both during the day, when a Nurse is present in the prison, and at night, when there is no nursing cover. During the day, an officer can require a Nurse to attend and it will be for her to decide whether to administer an ECG test. I would expect that she would do so in cases such as the present, if only as a precaution. At night, however, in the absence of a Nurse on duty, the only means to secure urgent medical attention from a health care professional with the ability to carry out an ECG test will be to call an ambulance. Telephoning the police custody Nurse for advice, given that the Nurse cannot physically attend on the prisoner and carry out an ECG test, will be insufficient for this purpose.

[106] Section 26(2)(g) of the 2016 Act (any other facts which are relevant to the circumstances of the death): Both the Crown and FVHB submitted that a finding should be made under this subparagraph and I will do so. It will be in the following terms:

> "Given that by 11.20am on 12 February 2017 the deceased had a presenting complaint of persistent chest pain which did not ease on rest, painful arms and sore throat, that his blood pressure was abnormally low, and that an abnormal electrocardiogram reading had been obtained showing in particular the presence of ST elevation, an emergency ambulance should have been requested to attend at HM Prison Glenochil in order that the deceased could be taken to hospital as soon as possible."

It is a matter of significant concern that a one hour rather than an emergency ambulance was called, indicative of a collective failure on the part of the health care professionals involved. It is clear that an emergency ambulance should have been called given the information available to them. A formal finding is therefore appropriate. However this was not likely to have been a causative factor in the death. Even by the time the ambulance was called the damage to the deceased's heart, and from which he later died, was likely to have been irreparable.

[107] Section 26(1)(b) of the 2016 Act (recommendations (if any) as to (a) the taking of reasonable precautions, (b) the making of improvements to any system of working, (c) the introduction of a system of working, (d) the taking of any other steps, which might realistically prevent other deaths in similar circumstances):

(i) Again, I accept the submission of the Crown and FVHB that a recommendation should be made under this subparagraph. However I do not accept that it is sufficient to recommend that in circumstances such as those faced

by Officer Cochrane at 04.00am on 12 February 2017 it is enough to simply contact the custody Nurse to seek medical advice, as was submitted.

The circumstances of this case clearly establish that a prisoner who is reporting the symptoms which were reported by the deceased may well be having a heart attack, and that it is appropriate that this be determined as a matter of urgency – if only as a precaution – by ECG examination. The only way to achieve this at a time when no medical staff are on duty in the prison is to call an emergency ambulance. As I have said, this cannot be achieved merely by calling the police custody Nurse and asking for advice. That Nurse may be located far from the prison and will not be able to attend to carry out an ECG. But in any event, on the scenario just posited, the nurse, if contacted, should advise the prison officer to call an emergency ambulance. Therefore there is no need for the prison officer to call the Nurse first in order that such an instruction be given. This is not to say that the prison officer cannot also contact the police custody Nurse – there may well be other useful advice that she can give. But – in a case where the symptoms are those in the present case – the prison officer should call an emergency ambulance.

I appreciate that every case will be slightly different. No doubt there will be cases in which the symptoms are even less clear than in the present case. I am not suggesting that prison officers should not be encouraged to make use of the police custody nurses for advice in such cases, or that they must always call for an emergency ambulance in every case. But a recommendation framed in terms

of the facts of the present case sets a benchmark for prison officers called on to make judgments in potentially life and death situations such as that which confronted Officer Cochrane. It will hopefully assist officers to know that, in similar cases of doubt, the expectation is that they will call an emergency ambulance, and that they need not fear criticism for doing so, even if only as a precaution, and even if on ECG examination it transpires that the prisoner's complaint is not cardiac in nature.

Accordingly I will make the following recommendation:

> "That the Scottish Prison Service should review and revise standing orders for prison officers so as to secure that, where a prisoner complains of feeling unwell, with chest pains, sweating, and a sore throat, at a time when no medical or nursing staff able to carry out an electrocardiogram are on duty within the prison, the prison officer in charge should – whether or not he also seeks advice from a police custody Nurse – direct that a call be made for an emergency ambulance to attend."

As noted above, the standing orders to which the officers were subject in the present case required them to "ascertain the seriousness of the [deceased's] illness". That is inadequate in a case such as the present. As it shows, ascertaining the seriousness of the illness requires an ECG test. In the circumstances, this can only be secured by requiring an ambulance to attend. The short timeframes involved mean that it should be an emergency ambulance which is called for.

(ii) I will also make a recommendation arising from my formal finding under section 26(2)(e) as follows:

> "(ii) That the Scottish Prison Service should review and revise prison officers' first aid training in the light of the evidence led at this inquiry, and this determination, so as to ensure that prison officers are made aware that where a

prisoner is complaining of symptoms such as those reported by the deceased at 03.40am on 12 February 2017 (i) there is a real possibility that he might be suffering from a heart attack; (ii) that whether or not he is so suffering can be conclusively determined by an electrocardiogram test; and (iii) that medical attention should be sought urgently in such form as to enable such a test to be carried out."

(iii) There is a further matter on which I will make a recommendation. This relates to the evidence of the ambulance staff as regards the difficulties in making mobile phone contact with RIE from within Glenochil on the afternoon of 12 February 2017. There was a suggestion that this may be a regular problem. It clearly contributed in part to the delay in securing the transfer of the deceased to hospital. In the present case, this delay did not contribute to the death, but in another case it may perhaps be crucial. I did wonder whether the difficulty might perhaps be because of technology used by SPS to block use of mobile phones by prisoners, but there was no evidence about this and the real reasons are unknown. Investigation should therefore be made into whether there is indeed a technical issue interfering with the ability of ambulance staff to communicate to RIE from Glenochil, and if so to find a solution to the problems described in this case. I will therefore make a formal recommendation in the following terms:

> "That inquiry should be made by SPS and SAS in relation to the connectivity of the mobile phones used by SAS staff when in and around the precincts of HMP Glenochil, to determine (i) whether there is problem of impaired connectivity, and if so (ii) the extent of this impairment; (iii) the cause of it; and (iv) the measures required to ensure that connectivity is improved, or alternatively (v) to put in place back up measures which can ensure effective communication between SAS staff and receiving hospitals in the event that mobile phone communication is unavailable."