CORONERS ACT, 2003

SOUTH *AUSTRALIA*

FINDING OF INQUEST

An Inquest taken on behalf of our Sovereign Lady the Queen at Adelaide in the State of South Australia, on the 10th, 11th and 12th days of August and the 16th day of November 2021, by the Coroner's Court of the said State, constituted of Ian Lansell White, Deputy State Coroner, into the death of Ivanka Kresevic.

The said Court finds that Ivanka Kresevic aged 74 years, late of 1A Jervois Avenue, West Hindmarsh, South Australia died at West Hindmarsh, South Australia on the 9th day of January 2017 as a result of acute myocardial infarction due to coronary artery thrombosis. The said Court finds that the circumstances of her death were as follows:

1. Introduction and cause of death

1.1. Ivanka Kresevic died in her own home between 11pm, 8 January 2017 and 11am, 9 January 2017. She was 74 years old. She was found deceased by her husband of 55 years, Danilo Kresevic, who had gotten up early on the morning of 9 January 2017 and left home to do some work at his local church. He believed his wife was asleep and did not wake her. It was on his return home at about 11am that he discovered her still in bed and obviously deceased.

1.2. The following morning a post-mortem examination of Mrs Kresevic was performed by Dr Karen Heath[1], a forensic pathologist at Forensic Science South Australia. Dr Heath found Mrs Kresevic's cause of death to be acute myocardial infarction[2] due to coronary artery thrombosis.[3] I accept her opinion as to the cause of death and make a finding accordingly.

[1] Exhibit C7a
[2] AMI
[3] Blood clot

1.3. The anatomical findings were summarised by her as '*focally severe artery atherosclerosis*[4] *with acute thrombosis of the proximal left circumflex coronary artery and acute myocardial infarction posterior wall of the left ventricle*'. Dr Heath commented that Mrs Kresevic's death '*was due to acute myocardial infarction due to acute thrombosis of the left circumflex coronary artery*'. Dr Heath confirmed the AMI was within one to three days of her examination. This fits in with the evidence of Mr Kresevic, regarding going to bed on the night of 8 January 2017 and finding his wife deceased at about 11am on 9 January 2017.

1.4. These anatomical findings have significance regarding the treatment at the Queen Elizabeth Hospital[5] on Friday 6 January 2017, where Mrs Kresevic presented at about 3pm complaining of chest pain. A detailed chronology of her presentation will follow but it is first important to reflect on Mrs Kresevic's life and achievements.

2. Mrs Kresevic's personal circumstances

2.1. Mrs Kresevic was born in Slovenia on 6 May 1942. I heard evidence from her daughter Olivia Kay, who explained how significant her mother and father are to the four children of their family. She was also able to tell the Inquest about Mrs Kresevic's personal history.

2.2. As is evident from her date of birth, Mrs Kresevic was born during World War II. She and her parents were political refugees within Europe who moved from Yugoslavia into Italy before migrating to Australia in or about 1954. She was 12 years of age at that time. Her family settled in Adelaide.

2.3. Mrs Kresevic had to learn English as a new language and according to her daughter she '*…really struggled with that*'.[6] Mrs Kresevic completed Year 10 at Woodville High. She struggled at school due to the language difficulties that I have described. She was a shy young woman and met her husband within the Slovenian community in Adelaide. They were both devout Catholics.

2.4. As already acknowledged, Mr and Mrs Kresevic were married for nearly 55 years and had four children together. They had known each other for seven years prior to their marriage. Mr Kresevic came to South Australia in his late teenage years and was a

[4] Disease of the arteries characterised by deposits of fatty material on arterial inner walls
[5] QEH
[6] Transcript, page 176

carpenter and production manager for a furniture company in Adelaide as well as working as a bar tender. He is now suffering dementia and is in supported care accommodation. Mrs Kresevic did bookkeeping and administrative work before having their first child. She soon resumed work on a part-time basis in retail, working until her mid 50s.

2.5. Mr and Mrs Kresevic worked very hard with the primary aim of sending their four children to private schools in Adelaide. This was achieved and all the children have become successful in the community as a doctor, teacher, nurse and consultant.

2.6. Ms Kay described that they have all had '*…really successful careers as a result of their (her parents) hard work, really, and sacrifice*'.[7]

2.7. Mrs Kresevic was a grandmother and provided love and care to her grandchildren which also assisted in allowing her children to develop their careers.

2.8. Together and separately, Mr and Mrs Kresevic were great success stories of migration. They raised a successful family and both contributed to the community of South Australia through their hard work.

3. Mrs Kresevic's health

3.1. Mrs Kresevic had some past medical history. Her medical records were tendered at the Inquest.[8] A perusal of her health records showed that she suffered at various times, from irritable bowel syndrome, coeliac disease, colonic polyps, gastro-oesophageal reflux disease[9], hypertension and an episode of food bolus obstruction of the oesophagus in December 2015.

3.2. Significantly, on 30 August 2013 an electrocardiogram[10] was conducted on Mrs Kresevic. An ECG is a medical test that records the electrical signal from a heart that is generated as it contracts. The signals are shown as waves on an attached computer monitor or printer and are vital tests for monitoring or dealing with a heart condition. The ECG revealed she suffered from sinus rhythm with Left Bundle Branch Block[11], both cardiac related conditions. LBBB is a condition that delays or blocks the

[7] Transcript, page 177
[8] Exhibit C5
[9] GORD
[10] ECG
[11] LBBB

movement of electrical impulses down the pathway of the left ventricle that controls the heart beating.[12] Sinus rhythm refers to the rhythm of the heartbeats. Her medications were Astrix 100, Micardis and pantoprazole.[13]

4. Friday, 6 January 2017

4.1. As previously indicated, Mrs Kresevic presented to the QEH at about 3pm complaining of chest pain. She was accompanied by her husband. I shall now deal with that day briefly in chronological order and then expand upon important aspects of what happened that afternoon before she was discharged home.

4.2. 3:01pm

Mrs Kresevic presented to the triage desk.[14]

4.3. 3:01pm – 3:04pm

The triage nurse obtained a brief history and personal details from Mrs Kresevic and entered them into the EPAS[15], an electronic patient file system.

4.4. 3:08pm

An ECG was performed by nursing staff.[16]

4.5. 3:15pm

Dr Foo viewed and noted the QEH ECG and made the following handwritten note:

> ' - Chest burning
> - Sinus rhythm
> - LBBB (Old)
> - Phx HT '.[17]

Dr Foo was one of the two consultants on duty at that time at the QEH. The other was Dr Edmonds.

4.6. 3:30pm

Registered Nurse Michelle Nguyen conducted an assessment of Mrs Kresevic including her vital signs, blood pressure, temperature, pulse and a rating of pain. This is recorded

[12] See also detailed explanation of LBBB by Dr Heddle at transcript pages 153-154
[13] Exhibit C5
[14] Exhibit C6, page 5, EPAS records of Mrs Kresevic
[15] Enterprise Patient Administration system
[16] Exhibit C6, page 13, QEH ECG
[17] Exhibit C6, Patient History Hypertension

in the EPAS records.[18] The important aspects of this assessment emerged that on the '*pain scale*' a score of $^{7}/_{10}$ was recorded. It has been assumed by all relevant witnesses, and therefore the Court, that this assessment was made by Mrs Kresevic herself. The pain was recorded as happening in the chest.

4.7. 3:30pm – 3:49pm

Dr Andrew Vanlint took a history from and physically examined Mrs Kresevic. This is also recorded in the EPAS notes. Her history was recorded as follows:

> 'Burning chest pain intermittently this morning after not sleeping well overnight. Mild in morning but had a moderate episode of burning chest pain after walking 100m in the middle of the day. Resolved after 10min, feels otherwise well. Some diaphoresis[19] but no dyspnoea[20] or nausea. No FHx[21] of IHD[22], never smoked. Otherwise healthy recently.' [23]

4.8. Dr Vanlint provided evidence of his memory of the examination.[24]

4.9. He outlined that her appearance was normal. Her chest was clear with good air entry bilaterally.[25] He was of the opinion that the examination produced normal cardiovascular findings which supported the view that there were no '*overt features of active disease or clinical deterioration*'.[26] Her high blood pressure and age were the only identifiable cardiac risk factors at the time. The QEH ECG was consistent with LBBB which he defined as '…*a conduction abnormality that signifies there may be some scarring within the heart, probably within the septum of the heart*'.[27]

4.10. He stated that if the LBBB on the QEH ECG had not previously existed this could indicate an acute heart attack or myocardial infarction. Conversely, if it was pre-existing, which is increasingly '…*likely with age*' [28] then it is not a sign of AMI.

4.11. He stated he reviewed her QEH ECG and then presented '…*my findings to the consultant*'. He took into account Mrs Kresevic's past medical history, including her medications, before making a differential diagnosis of GORD. He did not record the consultation notes. This was an admitted oversight of his duty to do so as the junior

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[18] Exhibit P6, page 16 as part of 'Whole of Record Report'
[19] Perspiration, sweating
[20] Heavy or laboured breathing
[21] Family history
[22] Ischaemic heart disease
[23] Exhibit C6, pages 8 and 10. EPAS records
[24] Exhibit C8, paragraphs 22-49
[25] Exhibit C8, paragraph 26
[26] Exhibit C8, paragraph 27
[27] Exhibit C8, paragraph 30
[28] Exhibit C8, paragraph 32

medical practitioner.[29] It should be noted now that neither of the consultants have a memory of any consultation with Dr Vanlint concerning Mrs Kresevic.

4.12. Under the heading '*Summary of appointment*' the notes continued:

> 'ECG showed LBBB, called GP and confirmed previous LBBB on ECG in 2013 which has been faxed through
>
> Exam: HS dual,[30] nil murmurs, no reproducible chest pain, no JVP rise,[31] no peripheral oedema. Vitals normal'.[32]

5. Pain score/EPAS

5.1. Dr Vanlint did not have a record of the pain score of $^{7}/_{10}$ which is a significant issue concerning whether or not a patient should be discharged. In short, the uncontested evidence from Dr Vanlint and all the doctors, was that a patient should not be discharged with a pain score of $^{7}/_{10}$ concerning a chest complaint. Dr Vanlint has no specific recall of reviewing the pain score as set out in page 16 of the EPAS records.[33] He was also unable to recall whether Mrs Kresevic's pain score was conveyed to the consultant.[34]

5.2. Whether or not pain score is to be considered a vital sign or not, it is an essential factor for deciding how to treat patients for possible cardiac issues.

5.3. Within this 19-minute timeframe, the recorded notes show that Dr Vanlint called the clinic of Mrs Kresevic's general practitioner and received the ECG record from 2013 via fax at 3:44pm.[35] He drafted a discharge letter for Mrs Kresevic's general practitioner and talked with Mrs Kresevic about his diagnosis of her condition and the discharge plan.[36] He treated her with Mylanta and pantoprazole for GORD. He did not make a differential diagnosis of acute cardiac syndrome.[37]

5.4. Dr Vanlint noted and advised Mrs Kresevic to '*Return if pain is strong and persists >30min. Return if pain is heavy and accompanied with dyspnoea*'.[38] The only evidence of her condition after discharge is from Mr Kresevic, that on Sunday, 8 January 2017

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[29] Exhibit C8, paragraph 39
[30] Heart Sounds
[31] Jugular Venous Pressure
[32] Exhibit C6, page 10
[33] Exhibit C6
[34] Transcript, pages 42-43
[35] Exhibit C8A
[36] Exhibit C3
[37] ACS
[38] Exhibit C6

she complained of further chest pain which she described as different to the past pain on Friday, 6 January 2017. They both decided it must have been reflux. Mr Kresevic described the '*apart from that she was quite happy and content in herself for the rest of the evening*'.[39]

5.5. Discharge

Mrs Kresevic was discharged from hospital at 3:54pm.[40] Therefore, her attendance at QEH was for 53 minutes. Her treating time was basically the 19-minute period from 3:30pm to 3:49pm.

6. Dr Vanlint

6.1. As the brief history showed, Dr Vanlint took primary control of Mrs Kresevic's care in the QEH on 6 January 2017. In his evidence, both oral and by affidavit, he confirmed that he graduated from the University of Adelaide with a Bachelor of Medicine and a Bachelor of Surgery in 2013 and completed his internship at the QEH in 2014.[41] At the time of giving evidence he has '*completed most of my training to become a specialist in general medicine and clinical haematology through the Royal Australasian College of Physicians*'.[42] On that day he was '*…doing locum shift work as a Resident Medical Officer at the QEH Emergency Department*'.[43]

6.2. Up until early August 2021, Dr Vanlint was employed as a Perioperative Registrar within a Division of Medicine in the Northern Adelaide Local Health Network, in particular at the Lyell McEwin Hospital. As at 10 August 2021 he had moved to the Southern Adelaide Local Health Network, primarily working at the Flinders Medical Centre.[44]

6.3. In his role at the QEH as a resident medical officer[45], he described his duties as '*…conducting patient reviews and performing clinical duties effectively on behalf or under supervision of a consultant for the department that you're assigned to*'.[46]

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[39] Exhibit C2, statement of Mr Kresevic
[40] As evidenced in EPAS records
[41] Exhibit C8, affidavit of Dr Vanlint
[42] Exhibit C8, paragraph 2
[43] Exhibit C8, paragraph 4 - Resident Medical Officer 'RMO', Emergency Department 'ED'
[44] Transcript, page 17, FMC
[45] RMO
[46] Transcript, page 19

6.4. Dr Vanlint worked as a RMO in 2015 and 2016 before becoming a '*locum RMO*' in 2017 as well as an educator at Adelaide University and Flinders University in Medicine.

7. QEH ECG, 6 January 2017

7.1. This was ordered by Nurse Nguyen which is common and correct practice. Dr Vanlint believed it was available to him when he first consulted with Mrs Kresevic. The QEH ECG showed a consistent unchanged condition with LBBB from 2013. He then presented his findings of LBBB to a consultant whose identity, at the time of giving evidence, he was unable to recall.

7.2. The two consultants working at that time were Dr Foo and Dr Edmonds.

7.3. The evidence reveals that Dr Foo, Dr Edmonds and Dr Vanlint have no independent memory of who was involved in the consultation of Mrs Kresevic.[47]

7.4. Both Dr Foo and Dr Edmonds gave evidence of what they would have expected to advise Dr Vanlint, had the information as set out in paragraph 4.7, and her pain score at 3:30pm, been conveyed or presented to them. Both men state they would not have allowed her to be discharged and would have ordered or recommended a blood test be taken for troponin testing.

8. Troponin testing

8.1. Troponin is a protein that is released from myocardial[48] cells when they are damaged. It is an important test to see if someone is undergoing a cardiac event or suffering ACS. Its importance for administering the correct treatment of a patient with a cardiac related complaint is explained in the evidence of expert cardiologist, Dr William Heddle.

9. Dr Heddle

9.1. It is now convenient to refer to the expert evidence obtained from Dr William Heddle, a cardiologist and electrophysiologist who was accepted by all interested parties concerning his competence and reliability.

9.2. As he explained, a cardiologist:

> '…cares for patients… with heart disease and an electrophysiologist is a subspeciality of cardiology that deals with heart rhythm disturbances, so abnormal rhythms, heart blocks,

[47] Transcript, pages 25-26 and 104-105. Also see Exhibit C11, affidavit of Dr Foo and Exhibit C13, affidavit of Dr Edmonds
[48] Relating to muscular tissue of the heart

> pacemakers, defibrillators and catheter ablation of tachycardias. As cardiologists have training in terms of general cardiology and then most cardiologists these days have a subspeciality as well, my subspeciality is heart rhythm disturbances.' [49]

9.3. The Court received his written report concerning Mrs Kresevic and her treatment on 6 January 2017. His curriculum vitae was also tendered.[50] In his impressive career, Dr Heddle has worked at the Flinders Medical Centre since 1976. He is currently Head of the Arrythmia Service at Southern Adelaide Local Health Network and is a consultant cardiologist in private practice at SA Heart.

9.4. In order to prepare his report Dr Heddle was provided with the post-mortem report from Dr Heath, the statement of Mr Kresevic, the QEH casenotes[51] and Southern Clinic Practice casenotes concerning Mrs Kresevic.

9.5. No one at the Inquest challenged Dr Heddle on the basis of having insufficient or inappropriate information or assumed facts upon which to form his opinion and give evidence. No one challenged his expertise.

9.6. In his report he directly answered the important topic posed to him, namely '*Should further investigation have taken place before Mrs Kresevic was released? e.g bloods*' as follows:

> 'In my opinion the correct management here would have been serial ECGs and Troponins and if these had been negative then the patient ideally would have been kept in for non-invasive assessment for myocardial ischaemia and if abnormal she would have had coronary angiography. In view of the autopsy findings it is probable if serial Troponins had been taken, these would have been abnormal.' [52]

9.7. Dr Heddle later commented that:

> 'If the initial Troponin had been positive she should have been admitted and managed as an acute coronary syndrome.' [53]

9.8. Dr Heddle was taken through some of the aspects of the history and conditions reported by Mrs Kresevic on 6 January 2017, including presenting with a history of central chest pain at 3pm. He believed that she would be classified as an '*intermediate risk*' of myocardial infarction '*…on the basis of the age and the history of treated heart*

[49] Transcript, page 147
[50] Exhibit C10, Dr Heddle's report dated 6 January 2018 and curriculum vitae
[51] Exhibit C6
[52] Exhibit C10
[53] Exhibit C10

condition'. The report of '*burning chest pain intermittently this morning, mild in morning but had a moderate episode of burning chest after walking 100 m in the middle of the day*', together with diaphoresis, made her condition very suspicious of cardiac coronary disease.[54]

9.9. The information from her general practitioner's clinic, not available at the time of triage, increased the need for admission and cardiac treatment.

9.10. He noted that it was his hope '*…with the evolving electronic medical - My Government Health Record*' that crucial information such as past history relating to cholesterol would be quickly attainable on presentation to hospital compared with 6 January 2017 where it was '*an ongoing challenge… to obtain the information of results which have been done elsewhere. It takes a lot of telephone calls, a lot of faxes to obtain - to be able to obtain that information*'.[55]

9.11. His conclusion was that if his recommendations had been followed, Mrs Kresevic's death could have been prevented.[56]

10. Significance of LBBB

10.1. Dr Heddle stated that LBBB, although described as an abnormal finding, does not necessarily indicate a myocardial infarction.[57] He continued by stating that:

> 'Most patients who have myocardial infarction in the presence of left bundle branch block you do not see ECG changes, you just see the persistent left bundle branch block which is masking the changes you would otherwise see.' [58]

11. The desirability of troponin testing for Mrs Kresevic

11.1. Dr Heddle confirmed that in Mrs Kresevic's circumstances of presenting with symptoms of ACS, it was crucial for serial ECGs and troponins to be conducted as well as the taking of vital signs.[59] The sensitivity of troponin tests have increased significantly since 2017. Currently there is a period of one to two hours between tests compared with six to eight hours needed in 2017.[60]

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[54] Transcript, page 151
[55] Transcript, page 153
[56] Exhibit C10
[57] Transcript, page 155
[58] Transcript, page 156
[59] Transcript, page 158
[60] Transcript, pages 158-159

11.2. He was of the opinion that it was '*extremely likely*' Mrs Kresevic would have had elevated troponins at the time of presentation to the QEH.[61] This was based on the post-mortem findings of Dr Heath of myocardial infarction. He went on to say you do not see myocardial infarction '*without an elevation of troponin*'.[62]

11.3. Assuming a second troponin test produced a result of elevation and the presence of LBBB, Dr Heddle believes she:

> '…would have been down to cardiology and the interventional cardiologist who is on call would need to make a decision whether he took her to the catheter laboratory immediately and did an immediate angiogram, or whether he waited till the next morning to do an angiogram, but she would have had an angiogram within 24 hours'.[63]

11.4. Dr Heddle explained that:

> 'An angiogram is a dye injection into the coronary arteries done by peripheral arterial access either through the radial artery in the wrist or the femoral artery in the groin where dye is selectively injected by catheter into the left main coronary artery and the right main coronary artery with X-ray visualisation of the flow of the dye down the arteries to assess where there's narrowings or occlusions[64] of coronary arteries. The procedure to actually get the diagnostic angiogram once the patent is in the catheter laboratory takes about 10-15 minutes, and then if you, in the presence of an acute coronary syndrome, if you see a newly acutely occluded coronary artery, the standard procedure would be to pass a wire through this pint of occlusion, put in a balloon… and then open up the artery, and then put in a stent in that artery. In conjunction with this the patient would be having blood thinners.' [65]

11.5. He continued that if a patient has suffered a myocardial infarction there is:

> '…very good evidence that doing coronary angiography within 90 minutes of presentation of somebody with an acute coronary syndrome has dramatic improvement in both morbidity and mortality. And it's been a revolution since it developed some 30 years ago in cardiology management of heart attack.' [66]

11.6. Dr Heddle stated that Mrs Kresevic's death could have been prevented and explained that:

> '…extensive experience of managing patients with heart attacks, if you have a diagnosis of an acute coronary syndrome because of chest pain and elevation of troponin, early coronary angiography leads to very much better outcomes, and her major problem was an occlusion of the circumflex coronary artery. If that had have been reopened she had a very

[61] Transcript, page 159
[62] Transcript, page 159
[63] Transcript, pages 159-160
[64] Blockages
[65] Transcript, page 161
[66] Transcript, page 161

> good prognosis for life for many years, albeit she would had to have been on medication to prevent further heart attacks but the outcome is very good for many years. In general, as against where you do not to the angiogram, the mortality is high.' [67]

11.7. I accept Dr Heddle's evidence as set out above. It leads to the topic of why a troponin test was not ordered. This topic logically returns to Dr Vanlint's evidence.

11.8. The failure of Dr Vanlint to note his consultation with one of the consultants left the Inquest in a position of not being able to resolve with absolute certainty, who was consulted and importantly, what information the consultant was given to base his advise on that day. Both consultants, Dr Foo and Dr Edmonds, made clear in evidence that if they were aware of the history and presentation by Mrs Kresevic, they would not have approved of Dr Vanlint's management and ultimate discharge of Mrs Kresevic.

12. Summary of Dr Vanlint's evidence

12.1. As stated earlier, Dr Vanlint made appropriate concessions and accepted his errors. His regret regarding Mrs Kresevic is genuine and I am convinced that it is extremely unlikely that he would conduct an investigation in similar circumstances in the same way.

12.2. Dr Vanlint was adamant that he did confer with a consultant. The absence of a note of the consultation and the lack of confirmation that a consultation did occur, leaves open a conclusion that he was mistaken about whether a consultation occurred at all. He was certain of the diagnosis of GORD. This diagnosis was based on the history of reflux and the burning nature of Mrs Kresevic's chest pain. It followed that he was falsely reassured by the QEH ECG, and the 2013 ECG, which showed no difference in the readings.

12.3. It may be that the certainty of Dr Vanlint's diagnosis in his own mind, coupled with the dynamic nature of an ED, lead to a reasonable interpretation by this Court that if there was a consultation, then it would have probably not covered all the pertinent information consistent with ACS and/or there was an assumption by the consultant that Dr Vanlint had followed normal procedure for excluding ACS and agreed with the discharge plan.

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[67] Transcript, page 162

12.4. The other alternative is as stated that no consultation occurred. I believe that although it cannot be categorically excluded, it is the least likely situation.

12.5. It is impossible to resolve this issue at the Inquest. I do emphasise that no one suggested that Dr Vanlint was lying on this topic nor any other topic at the Inquest. Independent of his counsel's submissions, I found Dr Vanlint to be a good witness that made appropriate admissions against his own interest.

12.6. He further candidly admitted that if he;

> '…had many more years of experience and I had sat my specialist exams, I would consider her to have been at higher risk, particularly regarding her exertional symptoms – the history of burning chest pain that came on more strongly after walking approximately 100 metres during the day and then resolved. This does sound more like an exertional angina-type symptom.' [68]

12.7. In short he agreed he '*…would consider Mrs Kresevic's presentation differently today*'.[69] If Dr Vanlint had been aware of the cholesterol history of Mrs Kresevic, then he would have put her in a higher risk profile.[70]

12.8. Dr Vanlint also made appropriate concessions that, contrary to a statement in his affidavit, he believed troponin testing would not be a significant escalation of investigation in assessing a patient with ACS symptoms.[71]

13. Policy Guideline – ED pathway for patients with suspected ACS[72]

13.1. The Guideline is a core working document for the QEH that provides a pathway to follow for ACS treatment and is summarised in a chart included.

13.2. Dr Vanlint was aware of the existence of the Guideline at the time of treating Mrs Kresevic. However, as explained in his evidence he did not '*…specifically refer to it during Mrs Kresevic's ED presentation*'.[73] He did not recall '*…whether copies…were available in the ED at that time*'.[74]

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[68] Exhibit C8, paragraph 71
[69] Exhibit C8, paragraph 73
[70] Transcript, page 95
[71] Transcript, page 71
[72] The Guideline
[73] Exhibit C28 and Transcript, pages 58, 68-70. By affidavit and in oral evidence
[74] Exhibit C28 and Transcript, pages 58, 68-70. By affidavit and in oral evidence

13.3. The Guideline is a crucial document for any practitioner, however experienced, in assisting treatment within the difficult area of emergency medicine where investigations for ACS are prevalent. The Guideline at that time stipulated a normal ECG result in a patient who:

> '.. presents to ED with symptoms suggestive of ACS should be troponin tested. The symptoms referred to with the Guideline may include pain, pressure heaviness, tightness in chest, neck, jaw, arms, back, shoulders, nauseous, a cold sweat, dizzy short of breath.'.

13.4. The Guideline is continually subject to review.[75]

13.5. This Guideline needs to be in an easy and accessible position within hospitals both physically and electronically. The easy accessibility of the Guideline is most needed in EDs.

14. Findings

14.1. On 6 January 2017 Mrs Kresevic presented to the QEH with complaints and symptoms consistent with ACS. At that time she should have been subject to a differential diagnosis of GORD and ACS.

14.2. Dr Vanlint, who was primarily in charge of her care that day, failed to include ACS in his consideration of the diagnosis, which he ultimately found to be GORD.

14.3. The QEH ECG revealed no change from a previous ECG in 2013. This was a false reassurance for Dr Vanlint that his diagnosis was correct.

14.4. During the afternoon at the QEH, Mrs Kresevic gave herself a pain score of $^{7}/_{10}$. Dr Vanlint was unable to recall whether he was aware of this assessment.[76] He is therefore unable to confirm whether this information was conveyed to the consultant he dealt with prior to Mrs Kresevic's discharge.[77] Dr Vanlint, the consultants and Dr Heddle would not release Mrs Kresevic had they been aware of the pain score she gave at 3:30pm.

14.5. Dr Vanlint failed to order troponin testing, that in the circumstances, I find was highly likely to reveal an abnormal result thus confirming she was suffering ACS.

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[75] Transcript, pages 156-157, evidence of Dr Heddle, also Exhibit C13, paragraph 20, Affidavit of Dr Edmonds
[76] Transcript, page 42
[77] Transcript, page 43

14.6. Consistent with the evidence of Dr Heddle, had troponin testing been undertaken, Mrs Kresevic would have produced an abnormal reading, causing her to have been admitted. Based on this she would have undergone further invasive treatment of an angiogram.

14.7. Dr Vanlint, upon reflection, would have treated her differently as her symptoms of burning chest pain, diaphoresis after very brief mild exercise were '*…more like exertional angina–type symptom*'.[78]

14.8. Dr Vanlint was an honest witness who made the key concession that if he had the opportunity he would have treated her differently and followed the recommended treatment discussed in Dr Heddle's evidence.

14.9. Dr Vanlint was regarded by Dr Foo and Dr Edmonds as a '*highly competent*' doctor[79] and was '*…thorough and thoughtful*'.[80]

14.10. Dr Vanlint is generally remorseful and upset concerning the circumstances of Mrs Kresevic's death. His conduct concerning Mrs Kresevic has been subject of a review by the QEH and he was admonished for his conduct, in particular concerning the lack of notes related to his meetings with the consultants.[81]

14.11. Although Dr Vanlint stated he obtained approval for Mrs Kresevic's discharge, it is not appropriate given the lack of notes and memory of the consultants, to make a finding of who approved the discharge. Even assuming that this did occur, it is likely the relevant consultants were not fully appraised of the complete details of Mrs Kresevic's presentation and history, particularly concerning her pain score at 3:30pm. In these circumstances, and the lack of evidence and memory of the consultants on this topic, I make no adverse finding concerning their conduct on that day.

14.12. Based on the evidence of Dr Heddle and the findings of Dr Heath in the post-mortem examination, Mrs Kresevic's death was preventable had she been admitted and managed for ACS at the QEH on 6 January 2017.

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[78] Exhibit C8, paragraph 71 and refer to paragraph 11.6 of this finding
[79] Transcript, page 140 Dr Edmonds and see Transcript, page 113 Dr Foo
[80] Transcript, page 140
[81] Exhibit C8, paragraphs 54-57

15. Conclusion and recommendations

15.1. I was not urged to make any recommendations based on the evidence at the Inquest. I have thought that a recommendation should be made concerning the fundamental need for the Guideline to be available to doctors and practitioners in Dr Vanlint's situation as a locum. I considered a recommendation around reviews concerning inductions to EDs for relatively inexperienced doctors. I was also asked to consider practical issues concerning EPAS records, but in light of the sparse evidence on the topic I decline to do so. However, I will highlight that the pain score for Mrs Kresevic at 3:30pm on the EPAS record was not prominent. When ED staff are under pressure the pain score should be easily attainable by all of them if necessary.

15.2. As said, no recommendation was urged by any party for any issue. I have decided not to pursue any independent recommendation.

15.3. I make no recommendations.

Key Words: Heart Disease; Troponin Testing; Incorrect Diagnosis

In witness whereof the said Coroner has hereunto set and subscribed his hand and Seal the 16th day of November 2021.

Deputy State Coroner