



OFFICE OF THE STATE CORONER

FINDINGS OF INQUEST

CITATION: **Inquest into the death of John Clive Anderson**

TITLE OF COURT: Coroner's Court

JURISDICTION: Brisbane

FILE NO(s): 2009/335

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HEARING DATE(s): 11 April, 22-24 August 2011

FINDINGS OF: Christine Clements, Deputy State Coroner

CATCHWORDS: CORONERS: Inquest – death in custody, subacute infective endocarditis, specialist referral

REPRESENTATION:

Counsel assisting:	Ms Ainslie Kirkegaard
Dr Pham:	Mr G Diehm SC i/b Quinlan Miller & Treston
Department of Community Safety:	Mr M Nicolson
Arthur Gorrie Correctional Centre:	Mr A Horneman-Wren SC i/b Blake Dawson
Princess Alexandra Hospital:	Ms P Feeney i/b Minter Ellison

Introduction

John Clive Anderson was a prisoner at the time of his death. He was serving a sentence and was usually resident at the Arthur Gorrie Correctional Centre (AGCC) at Wacol in Queensland. He died in the intensive care unit at the Princess Alexandra Hospital (PAH) on 7 June 2009 at the age of 36. Irrespective of the circumstances or place of death, a death in custody is reportable to the coroner and an inquest must be held.¹

Background

John Anderson had an extensive criminal history in both Queensland and New South Wales including six separate periods of incarceration in Queensland correctional centres dating back to 1999. In October 2007 he was sentenced to 6 months imprisonment commencing in the Grafton Correctional Centre before transfer to the Glen Innes Prison Farm. He escaped from custody in November 2007.

After escaping custody it was alleged he committed further offences in Queensland. He commenced his final custodial period in Queensland on 6 February 2008. He was transferred from the AGCC to the PAH on 30 May 2009 where he remained until the time of his death.

His general medical history included being a heavy smoker. He was hepatitis C positive and acknowledged he was an intravenous drug user over many years. On his admission to the AGCC a medical assessment was undertaken by Dr Sean Pham on 6 February 2008.² It was recorded he had a history of bronchial asthma and had been diagnosed as Hepatitis C positive in 2000. He acknowledged recent use of tobacco, alcohol, cannabis, stimulants and opiates, all of which he stated he used daily, excepting alcohol, which he consumed weekly. There was no disclosed history of mental health problems. His physical examination was normal but it was noted he suffered dental caries (decayed teeth.)

He was next seen by the doctor on 25 February 2008. There were a series of appointments and reviews of his medical condition totalling 33 consultations between February 2008 and 30 May 2009 when he was transferred to hospital.

Issues

The issues identified for examination at the inquest were:

- (1) whether the medical treatment provided to Mr Anderson by the AGCC medical centre from March 2009 onwards was adequate and appropriate, including whether there was a delay in referring Mr Anderson for medical specialist review;
- (2) the adequacy and appropriateness of the prison's policies and procedures for visiting medical officers and/or other medical centre staff to seek and obtain advice and review from external medical sources; and

¹ Section 8 (3) (g) and section 27 (1) (a) (i) Coroners Act 2003

² Exhibit B1

- (3) the adequacy and appropriateness of the PAH's triage and assessment of Dr Pham's referral, and more generally the appropriateness of the hospital's policies and procedures for the triage of referrals from prison medical centres.

Medical care at Arthur Gorrie Correctional Centre

Mr Anderson was seen by visiting medical officer Dr Sean Pham and also by the second doctor caring for prisoners at the centre, Dr Hussain.

From early February 2009 onwards Mr Anderson presented regularly with symptoms including fever, sore throat, and cough. He was assessed as having a recurrent upper-respiratory tract infection and treated with oral antibiotics.

He was medically reviewed by Dr Pham on most of these occasions. Mr Anderson was reviewed about 25 times between then and his admission to hospital when a diagnosis of infective endocarditis was confirmed.

Dr Pham documented a diagnosis of possible infective endocarditis during this period of time. The first occasion was when he reviewed Mr Anderson on the 25 March 2009. Mr Anderson presented on that occasion with symptoms of on-going fevers and rigors, night sweats, fatigue, and malaise. Dr Pham noted the appearance of erythematous macules on Mr Anderson's palms. Dr Pham's notes queried a diagnosis of possible infective endocarditis at this time, and a plan to await blood test results. Dr Pham reviewed Mr Anderson again 12 days later on the 6 April 2009 and noted him to be clinically well.

The second occasion was when Dr Pham reviewed Mr Anderson on the 12 May 2009. His notes of this presentation refer to a diagnostic dilemma, again noting possible subacute infective endocarditis. He documented a plan to refer Mr Anderson to the PAH general medicine clinic, and noted a phone conversation with Nurse Margaret Cullen from the PAH Security Unit, the outcome of which he noted as: "Dr Stuart McDonald will look at the referral and blood test results". The hospital medical records do not document this conversation or any action taken by nursing or medical staff following it.

However, although Dr Pham was unsuccessful in his initial phone call to discuss the patient with Dr McDonald, (the head of the Security Unit at the hospital) I accept there was some action as a result of that call. The evidence is that Dr McDonald does not recall being advised of Dr Pham's call requesting to speak with him, and the nurse cannot recall it either, however she did agree it was likely her action that attached a purple sticker to the referral request which stated "? within 1-2 weeks." I infer it was likely this was as a result of her conversation with Dr Pham indicating a degree of urgency for the referral.

An unidentified reviewing specialist from the General Medicine Unit considered the referral as a category B, which in this particular unit meant an appointment was to be scheduled within 30 days. The referral was faxed to the PAH on 12 May 2009 and the appointment was made for 10 June 2009,

i.e. within the prescribed period. Dr Scott, who is the head of the General Medicine Unit, gave this evidence after reviewing the material on behalf of the unit. Despite the identification of “a diagnostic dilemma” and the inclusion of infective endocarditis in the possible differential diagnoses, there was nothing to indicate the specialist unit sought clarification or direct communication with the referring doctor.

Similarly, the prison medical records do not document the outcomes of any subsequent communication with Dr McDonald or any other clinic staff of the PAH Security Unit about the proposed referral. Neither the prison medical records nor the hospital records contain a copy of the referral from Dr Pham at this time.

The prison medical records show that from the 22 May onwards Mr Anderson remained unwell with increasing shortness of breath and swollen lower limbs. On the 25 May, Dr Pham diagnosed a possible lower respiratory tract infection and prescribed oral antibiotics, oxygen therapy, and corticosteroids. Mr Anderson spent a day and a night under observation in the medical centre, but returned to his cell the next day. His condition worsened over the next two days. He was diagnosed with pneumonia on the 28 May, and continued on his course of antibiotics. More blood tests were ordered. Mr Anderson is noted to have refused to stay in the medical centre at this time, preferring to return to his cell.

On the 30 May Mr Anderson was reviewed by a nurse in his cell as he was experiencing difficulty breathing. His lower legs were swollen, and he had difficulty walking. Dr Pham diagnosed pneumonia and arranged for Mr Anderson to be transferred by ambulance to the PAH emergency department.

On examination in emergency Mr Anderson was found to have pulmonary oedema and signs of cardiac failure. A provisional diagnosis of infective endocarditis was confirmed following blood cultures, ECG, and review by the cardiology team. The ECG showed an incompetent aortic valve with severe regurgitation as a result of the infection. Mr Anderson was admitted under the cardiology team and treated for heart failure and pulmonary oedema. His endocarditis was treated with Amoxicillin and Gentamicin.

Medical care after admission to Princess Alexandra Hospital

The period following his hospitalisation was summarised in a report prepared by Dr David Cook who is a staff intensive care specialist.³ His review of the hospital record noted Mr Anderson presented to the emergency department with fevers and shortness of breath. He had a history of 8 weeks of cough and fevers with rigours and had been treated with antibiotics. He was confirmed to be suffering from pulmonary oedema and aortic valve regurgitation. A provisional diagnosis of infective endocarditis was made. A blood culture taken on 30 May subsequently grew *Enterococcus Faecalis* as the likely organism responsible for causing endocarditis.

³ Exhibit D4

His condition stabilised over the next five days enabling him to proceed to surgery on 4 June for aortic valve replacement performed by Dr Paul Peters. In the course of surgery a previously unidentified ventricular septal defect was observed and repaired.

In the days following surgery Mr Anderson required medication to support his cardiac function (inotropes) but despite all supports and interventions he went into complete heart block. Problems with other organs developed and the intensivist, Dr Cook saw Mr Anderson for the first time on 6 June, the day before he died.

A cardiac surgeon, Dr Julie Mundy inserted a balloon pump after it was determined a new septal defect creating an opening between chambers of the heart had developed. Despite this intervention Mr Anderson continued to deteriorate. He suffered a cardiac arrest, and despite prolonged resuscitation he died shortly after midnight on 7 June 2009.

Dr Paul Peters was the cardiothoracic surgeon who operated on Mr Anderson. He provided reports to the coroner and gave evidence. He had noted that when Mr Anderson was admitted to hospital on 30 May suffering from shortness of breath and a productive cough it was also detected that he was now demonstrating a heart murmur and signs of cardiac failure. This prompted the cardiac review which raised the possibility of infective endocarditis, which was subsequently confirmed. On 31 May Dr Peters reviewed Mr Anderson and advised him of the necessity and risks of aortic valve repair. Mr Anderson consented to the procedure which occurred on 4 June after his condition had improved due to appropriate antibiotic treatment.

Dr Peters confirmed the valve replacement was achieved and an incidental septal defect was repaired. He confirmed the post operative period was initially stable before deteriorating. Initial echocardiography confirmed the success of the valve replacement and effective closure of the septal defect. Mr Anderson's condition subsequently declined and he developed uncontrolled sepsis affecting renal, liver and respiratory function as well as requiring additional medication to support cardiac function. The previous repair of the septal defect dehisced probably due to the uncontrollable sepsis.

Mr Anderson was identified after his death by his mother, Annie-Grace Anderson, who had been visiting her son throughout his hospital admission.

Autopsy

An external autopsy examination was performed and confirmed the medical and surgical intervention. The pathologist considered it appeared Mr Anderson could not recover from the initial heart failure secondary to infective endocarditis. He considered Mr Anderson's condition was exacerbated by the presence of the ventricular septal defect and complicated by heart block subsequent to the repair. The pathologist noted that despite surgery and antibiotic treatment Mr Anderson continued to be septic, which progressed to multiple organ failure and he eventually succumbed to the infective endocarditis.

Expert Opinion re effect of any delay in diagnosis

I accept the evidence of Dr Peters who provided expert advice regarding infective endocarditis.⁴ In these proceedings he is the most qualified of the various experts to provide an opinion regarding infective endocarditis. The symptoms, signs and pathology of infective endocarditis which develop over time can be extremely variable and are difficult to diagnose. The disease can be an indolent condition developing over months or even years ranging through to a fulminant condition where the patient rapidly succumbs despite all efforts. The difference in progression is attributable to the nature of the infecting organism and factors associated with the individual patient. Dr Peters explained the organism is usually, but not always identified, but the individual variants of a patient which impact on the severity of the disease are less readily understood.

In Mr Anderson's case he required surgical intervention due to heart failure as the cardiac valve had been damaged and uncontrollable sepsis developed. The infection was unable to be controlled despite the organism being identified and being sensitive to the prescribed range of antibiotics. Dr Peters noted the bacteria can form a biofilm and the vegetation of organism is harder for the antibiotic to penetrate. It is noted infective endocarditis always requires medical treatment as the condition will not resolve spontaneously.

Dr Peters stated the consequences of delay in the referral of a patient with a diagnosis of possible endocarditis for specialist review will depend on a number of factors including whether endocarditis is in fact present, and this can be difficult to define without microbiological and echocardiographic evidence. He said "If the patient fulfils the Duke criteria⁵ for possible endocarditis then the diagnosis must be investigated, as failure to treat existing endocarditis allows progression of the disease."⁶

Dr Peters could only say it is possible but not certain that earlier referral for investigation might have resulted in earlier diagnosis and treatment. An earlier investigation may, or may not have been able to confirm a diagnosis of infective endocarditis. In retrospect he could not identify an earlier time than his admission to hospital on 30 May when it could be said Mr Anderson was definitely suffering from endocarditis. Nor could it be assumed that had blood cultures been sought 8 or 9 weeks earlier they would have elicited the organism grown after samples taken on 30 May. It nevertheless remains true in Dr Peters' opinion that had the diagnosis been made earlier in Mr Anderson's case and a susceptible organism isolated, the earlier treatment with the correct antibiotics might have modified the course of the disease such that medical treatment would suffice and surgery not become necessary. Some patients who are treated early and aggressively will still succumb to infective endocarditis.

⁴ Exhibit D5, D5.1.!

⁵ Exhibit D 5.3

Clinical diagnosis of infective endocarditis requires two major criteria, or one major and three minor criteria, or five minor criteria.

⁶ Exhibit D5, Paragraph 12

In summary, there is no evidence establishing a certain diagnosis of infective endocarditis at a time earlier than 30 May, but had he been referred for earlier specialist review there was the possibility of an earlier diagnosis which, if established, would have improved but not guaranteed Mr Anderson's likelihood of successful treatment.

Peer opinion

I then considered the evidence of the generally qualified peer reviewers of Dr Pham's medical care. Drs Carter and Dutton are experienced general practitioners and Dr Griffin is a medical officer who works in the Clinical Forensic Medicine Unit. He has particular experience in the context of medical assessment, referral and treatment of people retained in police custody at watch houses. This clientele can overlap with those prisoners cared for by Dr Pham.

There was common ground that once a possible diagnosis of infective endocarditis is being considered it is incumbent on the medical practitioner to refer the patient to an appropriate specialist to confirm or exclude the diagnosis. Interestingly, Dr Carter, with 30 years experience had not diagnosed a patient with the condition nor had any of the five other general practitioners with whom Dr Carter works. Dr Dutton had not diagnosed the condition in her practice, whereas Dr Griffin had been involved in four cases where infective endocarditis was diagnosed. All of these were in the context of an emergency department, coronary care or intensive care. He had not diagnosed a patient outside a hospital environment. All agreed it was a very rare condition. Dr Griffin noted the incidence is higher in the prisoner population because of the higher incidence of intravenous drug use, possible poorer hygiene, poorer dentition, and greater incidence of immuno compromise with disease such as hepatitis. He expressed the view in the general population the incidence of the disease could be 3 in 100,000 but in a group who identified as intravenous drug users the incidence could be 50-150 in 100,000.

All agreed Dr Pham was astute to have suspected infective endocarditis when he first documented the condition as a possible differential diagnosis on 25 March 2009.

They expected a general practitioner to be aware of the range of symptoms that can indicate the condition but to seek help of a specialist if they suspected the condition.

General symptoms which might alert suspicion included fevers, peripheral classic stigmata, splinter haemorrhages under the nails, possible cardiac palpitations, flat macular reddened lesions on the palms or feet (Janeway lesions). Dr Carter noted it was well known that dental treatment can be a precursor to infective endocarditis. Previous intravenous drug use also heightens the risk of development of the infection.

The consensus was a general practitioner who suspects the condition is responsible for seeking a specialist review, not to provide a definitive diagnosis or treat the condition.

But once the suspicion of the condition is raised the general practitioner must pursue a referral to exclude or confirm the diagnosis as a matter of urgency. Indeed Dr Carter considered if a delay was anticipated before specialist review was available, a prudent general practitioner should proceed with ordering tests to clarify the diagnosis. This would require blood cultures and echocardiography. However, this view was tempered by the other doctors who indicated the ordering of blood cultures is best undertaken as an in patient where follow up intravenous antibiotic treatment could be commenced if required.

It was noted the suspicion of the more serious condition occurred in the context of a series of repeat presentations by Mr Anderson. Dr Pham was treating respiratory tract infection with antibiotics during this period and this treatment resulted in a lessening of Mr Anderson's fever. He was seen again on three occasions after the suspicion of infective endocarditis was documented. These follow ups occurred on 6 April, 22 April and 5 May, before the referral was made on 12 May. His examination for heart murmur (not detected), fever and swelling of ankles were all considered appropriate but still not definitive in excluding or confirming his initial suspicion. There were though, signs in blood tests results of worsening infection.

The reviewing doctors considered Dr Pham's letter of referral was quite comprehensive, but, in retrospect, the inclusion of information regarding recent dental treatment, the lesions on his hands and recurrent swelling of ankles could have been vital information which might have prompted a more rapid specialist examination. The absence of reference to lesions was considered a critical point in Dr Carter's and Dr Griffin's opinion.

There was agreement the treatment of Mr Anderson's ongoing respiratory infection was appropriate.

I accept the independent expert opinions of Drs Griffin, Carter and Dutton all of whom agreed Mr Anderson received suitable and timely access to medical and nursing review during his period of incarceration.

Findings Section 45 Coroners Act 2003

The identity of the deceased person was John Clive Anderson who was born on 26 January 1973.

Mr Anderson was a prisoner at the time of his death. He died due to natural causes after being transferred from the Arthur Gorrie Correctional Centre to the Princess Alexandra Hospital on 30 May 2009.

Mr Anderson died in the intensive care unit at the Princess Alexandra Hospital.

Mr Anderson died on 7 June 2009.

Mr Anderson died due to infective endocarditis.

Reporting offences or misconduct section 48 Coroner's Act 2003

Subsection (4) of section 48 states;

A coroner may give information about a person's conduct in a profession or trade, obtained while investigating a death, to a disciplinary body for the person's profession or trade if the coroner reasonably believes the information might cause the body to inquire into, or take steps in relation to, the conduct.

It was submitted I should refer Dr Pham to the Australian Health Practitioner Regulation Agency (AHPRA) with respect to his failure to refer Mr Anderson to a specialist on 25 March when he first documented the possibility of infective endocarditis and/or his failure to expedite the referral on 12 May 2009 of Mr Anderson to a specialist for confirmation of suspected diagnosis of infective endocarditis, especially from 22 May 2009 onwards.

There was expert opinion from general practitioner peers that the potential seriousness of the suspected condition required both referral and follow up to ensure timely consideration of the referral. However there was also acknowledgment that Dr Pham's inclusion of infective endocarditis in his range of differential diagnoses was perceptive and unlikely to have been considered by the majority of general practitioners. It was argued Dr Pham should not be judged at a higher standard than what would be expected of his peers. In the circumstances Dr Dutton, who has participated in the reviewing disciplinary panel of assessors did not consider it likely that AHPRA would inquire into Dr Pham's conduct in all of the circumstances.

I have regard to Dr Pham's evidence and overall presentation in the course of coronial investigations and this inquest. I note the generally positive comments from peer reviewers regarding his medical competency and record keeping. I also note Dr Pham's willingness in hindsight to acknowledge it would have been wiser to follow through with a referral for specialist review as soon as he suspected a serious cardiac infection, and to have followed up with the referral once made to ensure Mr Anderson's condition was brought to the attention of the relevant specialists. I accept the evidence of the general practitioner peers that once a suspicion of infective endocarditis is raised it requires prompt referral to a specialist to confirm the diagnosis and commence treatment.

I agree with Mr Anderson's counsel it would be incongruous if Dr Pham was referred for his conduct given the specialist unit came to the conclusion, without further inquiry of the referring doctor, that the probability of Mr Anderson's condition being infective endocarditis was "very low".

In all these circumstances I therefore decline to exercise my discretion to refer Dr Pham to AHPRA.

Coroner's Comments Section 46 Coroners Act

A coroner may, whenever appropriate, comment on anything connected with a death investigated at an inquest that relates to-

- (a) public health or safety; or
- (b) the administration of justice; or
- (c) ways to prevent deaths from happening in similar circumstances in the future.

I make the following comments specifically noting Mr Anderson was a prisoner and with the benefit of hindsight and a full investigation it was recognised he was demonstrating a number of symptoms indicative of possible infective endocarditis. Although a very rare disease the prisoner population appears to be at greater risk and the comments are made in the hope they may raise awareness of medical personnel to be alert to this risk and possibly prevent deaths in similar circumstances. This is important both for visiting medical officers caring for prisoners, but also for specialists receiving referrals of this particular patient group as there is evidence they can be a population at elevated risk of developing infective endocarditis.

I trust this experience will bolster rather than undermine Dr Pham in his-

- (a) continuing consideration of a range of differential diagnoses based on evidence;
- (b) documentation of possible differential diagnoses under consideration; and
- (c) encourage him to actively pursue referrals where his clinical judgment suggests he should do so.

I commend Dr Griffin's evidence to Dr Pham, specifically that his (Dr Griffin's) practice is to persist in establishing communication with specialists by ringing above and beneath the targeted specialist on the hierarchical ladder when first met with an impediment. This is especially important in the context of Dr Pham's work environment in the correctional services. I have accepted there are legitimate security issues which have led to the practice of not notifying a particular correctional facility of a prisoner's specialist appointment until the afternoon before the appointment is scheduled. However, this practice places greater responsibility on the referring doctor to actively monitor the referral process in the context of the potential detriment to a prisoner's health if there is delay in a referral.

I note it is also of particular significance in Dr Pham's practice of medicine within the correctional services field, where there is evidence, again from Dr Griffin, that the potential diagnosis of infective endocarditis is more likely in a prisoner population than in the wider population.

The evidence in the inquest indicates Dr McDonald, who is the head of the Security Unit at the PAH is the conduit through which doctors such as Dr Pham can access a suitable specialist within the hospital. As has been demonstrated in Mr Anderson's death, a more proactive approach by the referring general practitioner may be called for in cases where a "diagnostic dilemma" includes the possibility of a condition such as infective endocarditis.

The responsibility remains with the referring doctor until they are sure their patient is actively under consideration of the appropriate specialist.

In deciding not to refer Dr Pham I considered the assessment of his referral by the General Medicine Unit at the PAH. I note at the outset the unit has already addressed the issue of the necessity of identifying the particular specialist who reviews each referral and decides how the referral will be dealt with. I trust that the decision will also now record the basis of the decision in the similar way a referring doctor is asked to provide the information on which the referral is based. . It is of course a matter for the specialists what level of information should be documented and how.

At first consideration one might wonder how the unidentified specialist in General Medicine could be so robust in reaching what Dr Scott presumed was the conclusion that infective endocarditis was a “very low likelihood” diagnosis. However I remind myself a coronial inquest is informed by hindsight and I am therefore persuaded by Dr Scott’s assessment that, at the relevant time, the absence of certain pertinent information was critical in the specialist’s consideration of the likelihood of infective endocarditis. In particular the absence in the referral information of the following information –

- (a) dental procedures in February/ March;
- (b) recurrent fevers, rigours and night sweats;
- (c) fatigueability and malaise;
- (d) Erythematous macules as at 25 March 2009.

I note the radiologist report did reference a clinical history of “cough and fever. ?Lower respiratory tract infection”. I also note the inclusion of information of elevated rheumatoid factor of 23, which is included on the five point Duke’s criterion used to confirm diagnosis of infective endocarditis.

In reaching this conclusion I have accepted the chest x ray and pathology results as at that date of referral were available to the specialist unit and had been forwarded both by Dr Pham and the Security Unit to the General Medicine Unit.

Especially within the context of a death in custody where the investigation after his death shows the potential development of a serious illness over some months which ultimately caused his death, I make the following comments:

(I) There is evidence the prisoner population is at elevated risk of a (still) very rare but potentially fatal disease of infective endocarditis. This has regard to the higher incidence of intravenous drug usage, possible poorer dentition exposing prisoners to risk of transmission of infection within the bloodstream via infection in the teeth or in the course of dental treatment, as well as the generally poorer overall health status of the prisoner population.

(II) Treating general practitioners of prisoners should be mindful of the possibility of this condition and seek prompt specialist review according to their clinical judgment upon identifying significant symptoms.

(III) It is interesting to note the impression from the general practitioners' perspective was they expected the appropriate response to a suspicion of infective endocarditis by a general practitioner was quite high. An urgent referral to a specialist was called for. But the evidence in this inquest from the General Medicine Unit ⁷ suggests a specialist performing a triage role on receipt of the referral, without examining the patient, might not accept a prima facie suspicion of a serious condition recorded by a general practitioner unless there was other significant information supporting the possible diagnosis. With the acknowledged benefit of hindsight perhaps specialists might also consider contacting the referring practitioner to discuss a referral where the risk to the patient of not acting is serious and the patient is a prisoner with elevated risks.

(IV) Where consideration of security delays the advice of specialist appointment back to the referring doctor and prisoner until (typically) the day before the specialist appointment, the referring doctor should be mindful to proactively ensure the patient's referral has been considered by the relevant specialty. The referring doctor should be mindful of the risk in any delay, particularly when a diagnosis has not been confirmed but has potential for serious detriment to the patient's health.

Conclusion

John Clive Anderson died in custody due to the rare condition of infective endocarditis. He died in hospital after transfer from prison for treatment when his condition suddenly deteriorated. At the time of transfer to hospital he was waiting on an appointment for review in the general medicine unit regarding ongoing illness. The referring general practitioner had queried a possible diagnosis of infective endocarditis. This diagnosis was confirmed and he was treated to stabilise his condition prior to surgical replacement of his aortic valve which had been damaged by infection. Unfortunately despite successful replacement of the valve and closure of an incidental septal defect his condition worsened and he died.

I close this inquest.

Christine Clements
15 September 2011

⁷ Dr Scott