



OFFICE OF THE STATE CORONER

NON-INQUEST FINDINGS

CITATION: Investigation into the death of Terrance
MULHALL

TITLE OF COURT: Coroners Court

JURISDICTION: SOUTHPORT

FILE NO(s): 2011/4258

FINDINGS OF: James McDougall, Coroner

CATCHWORDS: Communication hospital, GP, Anaesthesia,
Urology, Cardiology, Emergency
Departments; electronic Medical Records
(iEMR)

REPRESENTATION:

Counsel Assisting: Ms Rhiannon Helsen

Background

Mr Terrence Mulhall was 48 years of age at the time of his death.

On 10 November 2011, Mr Mulhall was referred to the Gold Coast Hospital (GCH) by his GP, Dr Simon Hong. He had been experiencing left flank pain for 4 days. An abdominal CT scan revealed a number of renal calculi, one of which was obstructing the outflow of urine from the kidney. On 11 November 2011, Mr Mulhall underwent surgery to have a stent inserted to relieve the blockage. Surgery was successful and he was discharged that day. He was hypertensive pre and post operatively.

On 29 November 2011, Mr Mulhall was again referred to the GCH due to complaints of dizziness since 28 November, as well as experiencing left flank and abdominal pain since the insertion of the stent. He mentioned to the Emergency Department (ED) doctor that he had experienced central chest tightness, nausea and tingling in his left arm and hand the previous week, which had resolved without treatment. His ECG was normal and blood tests unremarkable. The GCH Discharge Summary requested that his GP organise an exercise stress test to assess the extent of his presume ischemic heart disease.

On 1 December 2011, Mr Mulhall was again referred to the GCH by his GP after having a CT scan, which revealed that the stent was no longer functioning. By this time, he was taking *Micardis* for hypertension. He was admitted to GCH whilst his CT scans were reviewed. He was discharged on 2 December and booked for surgery on 14 December 2011.

On 14 December 2011, he was assessed from an anaesthetic point of view. The record states that he had no cardiovascular conditions, including no history of hypertension and wasn't taking any medications. Surgery was successfully performed, however, shortly after in the recovery unit he suffered a heart attack. He was transferred almost immediately to the cardiac catheter laboratory where significant blockages were found in his coronary arteries (left middle coronary artery was found to be 100% occluded). Resuscitation attempts failed and he died a short time afterwards.

The cause of death was found to be myocardial infarction, due to or as a consequence of Ischaemic heart disease, due to or as a consequence of hypertension. It was noted that Mr Mulhall was a cigarette smoker.

Records from Dr Hong suggest that he did not receive a referral from the GCH Emergency Department (allegedly sent on 29 November 2011) to undergo a stress test. However, Dr Hong does note that prior to his death, Mr Mulhall had experienced symptoms strongly suggestive of Ischaemic Heart disease and was treated accordingly.

Initial review by the Clinical Forensic Medicine Unit (CFMU), Forensic Medical Officer (FMO)

The FMO from the CFMU was requested to conduct a preliminary review of Mr Mulhall's matter for the purpose of providing advice in relation to the care and treatment he had received at the GCH.

Having considered the relevant material, the FMO identified the following questions, arising from Mr Mulhall's death:

Why was the exercise stress test not performed prior to surgery?

The FMO notes that this may have been because the GP did not receive a copy of the Discharge Summary from the hospital following his admission on 29 November 2011 and was also unaware that he had recently experienced symptoms strongly suggestive of significant Ischaemic heart disease.

Why was the Anaesthetist unaware Mr Mulhall had a history of hypertension, was on anti-hypersensitive medication and had recently developed symptoms consistent with Ischaemic heart disease, all of which were documented in his medical record?

With respect to issues of public interest, the FMO noted that there seemed to be a lack of adequate communication between the GCH and Mr Mulhall's GP, as well as between the ED and the Anaesthetist.

In FMO's view, an autopsy would not be necessary given the cause of death was well documented. As such, an autopsy was not carried out.

ACTIONS UNDERTAKEN BY THE GCH

Review by the Anaesthetic Department Mortality and Morbidity Meetings, GCH

Mr Mulhall's case was subsequently reviewed by the GCH Anaesthetic Mortality and Morbidity Meeting (AM&MM) on 13 January 2012.

A record prepared by the Deputy Director, Quality and Safety Coordinator of the Department of Anaesthesia, relevantly provides the following information:

An overview of Mr Mulhall's medical history & deterioration on date of operation.

Under "Learning points discussed" it is stated that even retrospectively this could not have been picked up postoperatively.

The meeting discussed staffing issues and the challenges of meeting all in and out of theatre sessions on an afternoon when teaching sessions are taking place and there are no trainees. There are sometimes, as there was in this case, no designated person to attend to urgent reviews, trauma calls and allowing consultants to assist in critical situations.

The aim in the future is to have a designated "duty" anaesthetist.

On 2 March, a further AM&MM was held. By this time, the FMO, CFMU report had been provided to the AM&MM for consideration.

Outcomes for recommendations and actions following the meeting were stated in the record as follows:

Increased availability/access to patient records prior to anaesthesia:

This was discussed and is noted as a major issue at present with the Electronic Management Records (EMR) - new medical record system. It was noted that the EMR went live on 12 December 2011 and this death occurred on 14 December 2011.

It was requested that access to EMR be provided in every area where anaesthesia is undertaken. Although this request was communicated to relevant parties in January 2012, it was yet to happen. Further improvement in accessibility, user interface and reliability of summaries in EMR were also raised and are apparently being looked into by the EMR team. Responsibility for reviewing patient EMR prior to anaesthesia was also raised.

Communication between GCH and Local Medical Officer (LMO)

This was noted as an area of concern as the LMO was not even aware Mr Mulhall had died when contacted in February 2012. They claimed they had not received a letter from the GCH dated 28 November 2011, suggesting a stress test be conducted. This was to be followed up by the ED.

Further CFMU review by the FMO

The AM&MM record was subsequently provided to the FMO for review. The FMO noted that the record contains no input from the Urology Department (UD) or the ED, who were both involved in Mr Mulhall's care.

In the FMO's opinion, the record failed to address the following pertinent issues:

The fact that the Anaesthetist (AD) seemed to be unaware of Mr Mulhall's previous history of symptoms highly suggestive of angina.

Although the history of angina, along with the need for this to be investigated, is documented in the ED notes on 29 November 2011, this information does not appear to have reached the GP, the UD or AD.

It appears the ED was unaware of the history of Angina when Mr Mulhall reported on 1 December 2011.

The anaesthetist, who assessed Mr Mulhall on the day of surgery, appears to have been unaware that: he had a history of hypertension, had a history of Gastro-Oesophageal reflux disease (GORD) and was currently prescribed telmisarten and pantaprazole.

The history of hypertension and GORD is clearly documented in the notes made by the RN and the doctor in the pre-admission clinic. He was hypertensive at the pre-admission clinic.

It is clearly documented by the RN on 14 December 2011 that Mr Mulhall was currently prescribed telmisarten.

The FMO highlights two documents created on 14 December 2011: the *Preoperative Patient Record* and *Anaesthetic Record*. These documents are handwritten as opposed to being a computer generated copy of information entered directly into the EMR.

The *Preoperative Patient Record* appears to have been authored by two RN's and notes clearly that Mr Mulhall was taking telmisarten.

The *Anaesthetic Record* seems to be authored by an Anaesthetist. It clearly states that Mr Mulhall did not have a history of cardiac, respiratory, gastrointestinal, endocrine or haematological disorders.

The FMO also draws attention to two documents created on 08 December 2011 at the Pre-admission Clinic: the *Pre-Operative Assessment Questionnaire* and *Medical Pre-admission Assessment*.

The *Pre-Operative Assessment Questionnaire* seems to have been filled in by Mr Mulhall and the RN at the pre-admission clinic. The following relevant issues are noted:

Mr Mulhall's medications of telmisarten and pantaprazole are listed on page one in black pen. Micardis is written in blue pen. The rest of the document is written in black pen which suggests the RN added Micardis to the front page. The FMO notes that this suggests Mr Mulhall did not volunteer this information, which was only provided after specific questioning by the RN.

Next to the question "*Have you ever had high blood pressure, a stroke or blood clots in your legs?*" it is written: *Blood pressure has become high since kidney stones. Not given medication to date.*" This suggests that Mr Mulhall was unaware that the telmisarten was an anti-hypersensitive agent.

Next to question "*do you have heart problems?*" the No box is ticked. This suggests that Mr Mulhall was unaware that the symptoms he had experienced in the past were thought to be angina.

Mr Mulhall noted that he had been prescribed Pantoprazole for reflux, which suggests he was aware it had been prescribed for GORD.

On page 2, under "risk factors" hypertension and GORD are listed. His medication is also listed as telmisarten and pantaprazole.

Mr Mulhall's blood pressure is written in black pen as 148/89, meaning he was hypertensive at the time of the assessment.

The *Medical Pre-Admission Assessment* was authored by a doctor. It clearly notes that Mr Mulhall had hypertension, GORD and was taking telmisarten (no mention of Pantoprazole). It was noted that he was previously a smoker.

In relation to the AM&MM record, the FMO makes the following observations:

The bulk of the document addressed Mr Mulhall's treatment following surgery. However, there are no concerns regarding Mr Mulhall's post-operative care.

The record notes that Mr Mulhall was a "fit, young man". In the FMO's opinion it should have noted that he had a number of risk factors for Ischaemic heart disease.

The record notes that he was "not a current smoker". However, a 20 pack/year history is significant risk factor for coronary heart disease.

The record states that "no PMH reported". However, this should be clarified with "by the anaesthetists who reviewed him on the day of surgery" as he clearly had a significant past medical history.

The FMO disagrees with the comment made in the record that "even retrospectively this could not have been picked up preoperatively" for the following reasons:

It appears that the Anaesthetist who assessed Mr Mulhall on the day of surgery did not have access to the information contained in the *Preoperative Patient Record*. Otherwise they would have been aware that he had hypertension and was prescribed telmisarten. This should have prompted a more detailed, repetitive and specific history taking as discrepancies indicated that Mr Mulhall was a poor historian and had a poor understanding of his medical history/condition.

The FMO indicates that normally, when a patient is admitted to any unit a "temporary file" is created, until such time as the rest of the medical record can be obtained from the medical records department (MRD). This "temporary file" usually contains all the documents regarding that particular admission. Hand written notes are kept on the ward and then sent to MRD for scanning for the electronic file. If there was a "temporary file" in Mr Mulhall's case, which the anaesthetist had access to then there is no excuse for not reading the *Preoperative Patient Record*.

It appears that the anaesthetist did not have access to the information contained in the *preadmission clinic notes*. If they had access to this information they would have been aware that Mr Mulhall had hypertension and GORD and was prescribed medication accordingly. Discrepancies in the history provided by Mr Mulhall should then have prompted a more detailed and repetitive history taking.

It appears that the anaesthetist did not have access to all of the information on the chart. If they did they would have been aware that Mr Mulhall had history of

angina whilst walking. The FMO notes, however, that it is often unnecessary and impractical for the anaesthetist to read a patients entire medical file prior to surgery.

If the anaesthetist had been made aware that Mr Mulhall had suffered angina whilst walking, the surgery may have been postponed until after the angina had been fully investigated. This may have meant that he would not have had a heart attack post-operatively and died.

It appears that the UD was unaware that Mr Mulhall had a history of angina. If they had been aware Mr Mulhall should have been referred to the Cardiology Department for review prior to surgery.

Ultimately, the FMO provides the following opinion:

If Mr Mulhall had not had the surgery it would have been unlikely for him to have died at the time that he did. Surgery is known to place stress on the cardiovascular system and can precipitate cardiac arrest.

Whilst it is ultimately the anaesthetists responsibility to ensure the patients clinical condition is optimised prior to surgery, there were a number of communication breakdowns in the lead up to Mr Mulhall's death, which appear to have made a significant contribution to his history of angina going unnoticed by the AD, namely:

The diagnosis of angina was made in ED on 29 November 2011. The case was discussed with Urology registrar. It is unclear, however, whether his history of angina was communicated to the Urologist at this time.

The GP did not receive the referral letter sent by the ED on 29 November 2011, recommending that a stress test be conducted.

When the ED reviewed Mr Mulhall on 1 December 2012, they appear to be unaware of his history of angina. The FMO notes that it would have been best practice to read the notes from the previous admission, especially given the presenting complaint was similar.

The FMO is of the view that given the notes from the pre-admission clinic, and all the notes made after 29 November 2011, Mr Mulhall was probably a poor historian, which would have significantly contributed to his angina being unrecognised by the AD, the UD and ED. Mr Mulhall did not seem to understand his medical conditions.

At page 6 of her report, the FMO notes that, *"the retrospectscope is a marvellous thing, particularly in the hands of those not present at the time of or those not personally involved in the incident. It is, in the majority of cases, unwise and unfair to be emphatically critical of the actions of others when one is not cognoscente of the totality of the circumstances at the time of the incident/s. The coronial system has many purposes, in my opinion, one of the most*

important purposes is to assess whether similar deaths can be prevented from occurring in the future.”

In order to prevent similar deaths from occurring, the FMO recommended that Mr Mulhall's case be reconsidered by the GCH at a more general Mortality and Morbidity meeting, which should involve the Anaesthetic, Urology, Cardiology and Emergency Departments.

The FMO also recommended that further consideration be given to creating a means of identifying patients who have angina, which has not yet been fully investigated, whenever they present to the hospital, without the need for the entire medical record to be reviewed. The EMR has a section named “Alerts” where a patient's allergies are recorded. This may be a suitable section of the EMR in which to record that a patient has angina which has not been fully investigated.

Statement from the Anaesthetist, GCH

On 28 January 2013, the Anaesthetist at the GCH, who was involved in Mr Mulhall's management on 14 December 2011, provided a statement for the purpose of the coronial investigation.

According to his statement, the Anaesthetist first met Mr Mulhall in the anaesthetic bay of the GCH on the morning of 14 December. The Anaesthetist was scheduled to provide anaesthetic support to Urologist that day. The paper hospital records were not initially available in the anaesthetic bay. The Anaesthetist recalls that an EMR for Mr Mulhall had not been created. As the EMR had only been in operation for approximately 1-2 weeks prior, there was some confusion as to whether or not paper notes needed to be sent to theatre.

The Anaesthetist subsequently took a history from Mr Mulhall, and then conducted a physical examination. Mr Mulhall indicated that he had occasionally experienced episodes of nausea with flank pain/discomfort. He informed the Anaesthetist that he was very fit, had a minimal alcohol intake and did not suffer from any allergic reactions. Mr Mulhall also denied having any previous respiratory, gastro-intestinal, endocrinological, cardiovascular or haematological problems. The Anaesthetist asked him if he had ever suffered from any shortness of breath, chest pain or discomfort. Mr Mulhall denied that he had. He also stated that he wasn't taking any medication at the time (which was untrue). Mr Mulhall did indicate that his blood pressure may be slightly elevated due to his kidney problems and that he had previously suffered from gastro-oesophageal reflux disease, however, no longer required medication for the condition.

Mr Mulhall's blood pressure (132/86) and heart rate (80 beats per minute) were slightly elevated. The Anaesthetist notes that it is normal for patients to feel nervous prior to undergoing a surgical procedure, and as such a small elevation in blood pressure wouldn't have been considered unusual.

The Anaesthetist considered Mr Mulhall to be an ASA 1 on the American Society Anaesthesiologists Physical Status Clarification Status, as he had a

good exercise tolerance, and no reported systemic disease. He also considered Mr Mulhall's dentition and airway. No risk factors were identified from the examination. The Anaesthetist subsequently discussed with Mr Mulhall the associated risks with general anaesthesia.

Mr Mulhall was not immediately taken into surgery, as the Anaesthetist was waiting for his paper records to arrive. He was only able to briefly peruse the notes, but did not find anything concerning.

The operation was completed by midday and Mr Mulhall was transferred to recovery. The Anaesthetist was subsequently contacted by nursing staff, who advised that Mr Mulhall was in discomfort and feeling nauseous. During the Anaesthetist's initial assessment, Mr Mulhall did not seem to be acutely unwell. His condition then worsened dramatically. Despite extensive medical intervention, Mr Mulhall was unable to be resuscitated and was pronounced deceased at 5:30 pm.

The Anaesthetist notes that, in hindsight, Mr Mulhall clearly had a limited understanding of his overall medical condition. Whilst he was not aware that Mr Mulhall had any cardiac history at the time he saw him, it had not been specifically confirmed that he was suffering from angina. The Anaesthetist was not aware of Mr Mulhall's previous presentation for chest pain. Had he been, he would have conducted a further round of questioning to determine if there was a possible unresolved cardiac complaint, which would have prevented the procedure from going ahead.

At the time of Mr Mulhall's death, the EMR had just commenced and there was a limited number of computers, which were available to access. Since this time, additional laptop computers have been provided for exclusive use by anaesthetic staff. It is now possible to access the EMR and pathology databases using these computers from theatre, which is a big improvement.

Report by the District Mortality & Morbidity Review Committee, GCH by the Chair

The FMO's further CFMU report was provided to the District Committee for consideration. A review was subsequently co-ordinated with associated Departments from the GCH. This case was considered by the Anaesthetic Surgery, Cardiology and Emergency Departments in a specific meeting on 16 August 2012.

Following discussions with the aforementioned Department's about Mr Mulhall's case, the Chair noted the following:

The Director of Cardiology was asked for an opinion on the case, even though Mr Mulhall was not sent for a cardiology review. He considered that with a history of hypertension and being a previous smoker, his overall Ischaemic Heart Disease risk was 5% over 10 years. According to the Director of Cardiology, the management on the day of surgery after Mr Mulhall suffered his heart attack was appropriate. The 100% blockage found in Mr Mulhall's left middle coronary artery is associated with a 90% mortality rate. The plaque that

resulted in the infarction may not have caused Ischaemic symptoms and may not have been identified on investigations pre-surgery. As a “low risk” category patient further investigation provides no benefit to survival and this most likely could not have been prevented.

From the Emergency Department perspective, the presentation where chest pain is first raised was pre-electronic medical records and this documentation was filed within the paper chart. The letter addressed to the GP requesting follow-up investigations was never received by the GP. The subsequent presentations were recorded on the EMR. Extensive work has been done and continues to be done, to identify patients’ GP’s and to communicate information to them.

The ED paper notes were not available to the anaesthetist pre-operatively. Even for a formal review, the AM&MM had trouble locating a copy of the referral letter to the GP. Anaesthetists are not familiar with the ED paper filing process.

The Anaesthetics Department expressed concern regarding the limited number of computers available to access the EMR in the Operating Theatre.

The process of creating a “temporary file”, as mentioned by the FMO in her report, does not occur on the Gold Coast. Records are scanned progressively and there is no temporary file that accompanies the patient. Therefore any notes that are not directly entered may not be accessible. There is presently a working group assessing the use of a temporary chart with a scan on discharge model.

The Department of Surgery has committed to develop a process of pre-order old medical charts for patients pre-operatively for review by clinicians.

After the initial record prepared by the AM&MM, a Root Cause Analysis (RCA) was conducted as part of a process of review of poor and unexpected outcomes of health care.

Recommendations from the RCA noted that no root cause was identified for this incident, so recommendations were made based on Lessons Learnt:

The Executive Director of Emergency and Critical Care and Support Services (ECASS) should delegate staff to review the current system for disseminating information to primary care providers when patients are discharged from the ED. This should include:

A patient record audit to establish how frequently patients are being discharged without any recorded form of communication to their GP;

Collation of all current methods and analysis of the consistency and efficacy of each method;

A risk analysis that should include the level of acuity of disseminated information and the appropriateness of using the discharge summary as a mode of communication for that information; and

The development of a work instruction that should include clear lines of responsibility and contingencies for patients that are unable to identify their GP or do not have one.

The Executive Director of the Division of Surgery should delegate staff to review the current barriers to anaesthetists conducting thorough pre-anaesthetic patient assessments, including review of the clinical records, as per ANZCA guidelines. This should include:

Consideration of the pressure placed on the team to assess patients during and between cases particularly in relation to long operating lists; and

The accessibility of both hard copy and EMR patient records to the team before surgery.

The Chair notes that poor communication in this case is the major factor, from the patient as a poor historian and the inaccessibility of written and electronic medical records.

The Chair notes that it is interesting that the cardiologist's opinion is that this (which seems to refer to Mr Mulhall's condition) would not have been avoided by further investigation. However, he concedes that this in no way minimises the risk presented by current communication issues.

At present, there is a body of work exploring the use of electronic summary from the ED transferred electronically to the patients GP. This is presently done for outpatients at Robina Hospital and therefore could be done at GCH.

The EMR workgroup is reviewing the 'Order of Filing' of notes scanned into the Medical record in order to make the review charts faster, more simple and intuitive. Presently, the EMR has approval to provide a sufficient number of new computers to provide one in each operating theatre.

Work around the "Alerts" section in EMR is more complex and is being looked at by the EMR workgroup.

Attached to the Report by the Chair is a Gold Coast Hospital and Health Services memorandum (dated 9 December 2012) to the Executive and Clinical Directors from the Chief Operations Officer about the iEMR Project. The memo outlines the review being undertaken regarding the implementation of the EMR, associated issues and improvements that can be made. Relevantly, the memorandum states that:

There are three priority areas identified by EMR users as requiring immediate attention:

Order of filing: attempt to reduce complexity, consolidate the number of note types and align with iEMR Order of Filing.

Scanning model: at present the progressive and dispersed scanning model has quality and process issues. Forms are being scanned to the incorrect location making it difficult for staff. A scanning model review has been commenced in consultation with staff.

Access to devices: An additional 49 devices (20 computers on wheels and 29 laptops) have been sought through the eHealth program to support GCHHS using EMR. Additional devices to be received next month.

Likely to transition to the new integrated EMR in Release 2 in 2014 – has a number of differences to the current EMR in place.

In July 2014, an update was subsequently provided by the GCH detailing the progress made in addressing the outstanding concerns identified. The questions and subsequent answers provided, were as follows:

How has the new iEMR addressed issues associated with accessing previous paper records and whether the amendment to the 'Alert' section will be incorporated into the iEMR.

Currently, for Hospital admissions/presentations, patient documentation generated on forms is held in a temporary folder chart, and progress notes are directly typed into the EMR. The temporary folder always move with the patient when they are transferred within the hospital. The EMR allows timely access to historical notes from previous presentations, plus access to real-time progress notes in the same application. Historical paper records prior to the EMR implementation are routinely provided for all elective surgery admissions and for other inpatient admissions when requested. They are also provided for outpatient appointments where the doctor has specifically requested that the paper chart be provided.

Upon discharge from hospital, the temporary folder forms are sent for scanning to Clinical Record Service, where the scanning undergoes a 5 step quality process.

The new iEMR has a structured Alerts/Allergies module, which is designed to improve the visibility of alerts and adverse reactions to all users of the clinical record. The 'Problem List' has also been incorporated, which allows clinicians to document all co-morbidities associated with a patient in a structured manner. The Summary Page is the first page that presents when a clinician opens the iEMR, and will include active co-morbidities from the problem list, alerts and allergies, and results of recent standard blood tests. The combination of the problem list and the alerts and adverse reactions functions is intended to reduce the likelihood of adverse events due to missing or difficult to find information, and consequent lack of awareness of issues by clinicians.

Provide an update as to the progress/outcome of the workgroups consideration of the use of a 'temporary file' and scan on discharge.

Following consultation with clinical groups in 2012, the GCHHS Governance Board in January 2013 endorsed the implementation of the centralised, scan on discharge model for forms. The model was implemented in June 2013 across the three hospitals in the GCHHS. All paperwork generated from an admission/presentation is kept in a temporary folder either at the end of the bed or in the temporary folder on the ward during the patients stay. Upon receipt in Clinical Records Service, the scanning undergoes a 5 step process to ensure quality of the scanned image and its location in the EMR.

How the additional devices provided to the GCH are assisting to address difficulties associated with accessing patient's records preoperatively and in the operating theatre.

In January 2013, the rollout was completed of 49 additional laptops and Computers on Wheels within the GCHHS. The laptops were provided so as to increase clinician's access to the EMR at the point of care.

Whether the Lessons Learnt made following the RCA have been implemented?

At present, the policy with respect to communicating with GP's following a presentation to the ED, is to provide the patient with a letter following discharge and urging them to provide it to their GP. It was determined, after extensive consideration, that sending an automatic discharge summary through Enterprise Discharge Summary (EDS) system connected to GP connect in the ED, as is the case in other departments, was fraught with difficulty, particularly if the details for the GP have changed. The standardised discharge procedure is in accordance with Queensland Health Procedure Enterprise Discharge Summary. It was determined that the current system of handing the discharge summary to patients to provide to their GP was the most effective way of ensuring communication with the GP.

Further addendum CFMU Report by the FMO

After considering the Chair's report provided in relation to Mr Mulhall's death, the FMO confirmed that the concerns expressed in her two previous reports had, in her opinion, been adequately addressed by the GCH. The FMO's main concern was in relation to the suboptimal communication between the various departments involved in Mr Mulhall's care. From the report provided by the Chair, the FMO notes that the hospital seems to be doing everything possible to prevent a similar occurrence from happening in the future.

The FMO opines that adequate communication may have prevented Mr Mulhall's death. The fact that he was a poor historian, however, may have also been a contributing factor.

Conclusion

Mr Terrence Mulhall was 48 years of age at the time of his death. He died on 14 December 2011, as a result of a heart attack shortly after undergoing a surgical

procedure at the GCH, in the context of suffering from ischaemic heart disease and hypertension.

Having considered the material obtained during the course of the coronial investigation, there are clearly two central issues in this case, namely; the lack of communication between the GCH and GP, ED and Urologist, and the ED and Anaesthetist preoperatively; and the accessibility of the patient's medical records by the Anaesthetist preoperatively. Unfortunately, Mr Mulhall's operation occurred whilst the EMR was still in transition.

It is evident from the actions subsequently undertaken and the changes made, that the GCHHS is astutely aware of these issues and are taking appropriate steps to address them. The EMR system, and the manner in which it is updated, has been reviewed and amended to assist in addressing the communication issues between the internal hospital departments, as well as with GP's following a patient's discharge.

Associated with these central issues are a number of side matters relating to the availability of devices to access the EMR preoperatively and whilst in the operating theatres, as well as the order for filing notes onto the EMR. The GCHHS has recognised the impact that a shortage of devices available to clinicians, both preoperatively and in the operating theatre, has on the care and treatment provided to patients, and has rectified this by substantially increasing the number of available devices. The scanning system and the manner in which notes are prioritised for filing, has also been considered and appropriately amended to address the previous concerns identified.

Having considered all of the material obtained during the course of the coronial investigation and the advice provided by the FMO, I am of the view that the GCH has satisfactorily addressed the clinical issues arising in this case, in a genuine attempt to prevent a similar occurrence from happening in the future. As such, I am of the view that there are no further issues, which require investigation or consideration by way of an inquest.

James McDougall
Coroner
Southport
30 March 2015