IN THE CORONERS COURT
OF VICTORIA
AT MELBOURNE

Court Reference: COR 2009 1784

FINDING INTO DEATH WITH INQUEST

Form 37 Rule 60(1)
Section 67 of the ***Coroners Act 2008***

Inquest into the Death of:	**Elsinore MITCHELL**
Delivered On:	2 August 2012
Delivered At:	Coroners Court of Victoria Level 11, 222 Exhibition Street Melbourne 3000
Hearing Dates:	21 June 2012
Findings of:	Coroner Paresa Antoniadis SPANOS
Representation:	Ms Jacqui HAWKINS, Principal In-House Solicitor, assisting the Coroner Mr Ron GIPP of Counsel, instructed by Mr Mark Comito from Ryan Carlisle Thomas, represented Ms Angela Halfpenny Ms Tammy QUINN, instructed by Mr Garry Needham from Melbourne Legal Partners, represented Ms Leanne Summers Mr John SNOWDON, Corporate Counsel for Southern Health, represented Casey Hospital/Southern Health

I, PARESA ANTONIADIS SPANOS, Coroner,

having investigated the death of ELSINORE MITCHELL

AND having held an inquest in relation to this death on 21 June 2012

at Melbourne

find that the identity of the deceased was ELSINORE LORRAINE MITCHELL

born on 22 January 1935, aged 74

and that the death occurred on 30 March 2009

at Monash Medical Centre, 246 Clayton Road, Clayton, Victoria 3168

from:

1 (a) RIGHT LOWER LOBE PNEUMONIA

in the following circumstances:

BACKGROUND & PERSONAL CIRCUMSTANCES

1. Mrs Mitchell was a 74 year old married lady who resided with her second husband Mr Ronald Mitchell in Narre Warren. Mrs Mitchell was survived by five adult children from her first marriage, including her youngest Mr Leonard Mitchell who provided a statement for the inquest brief and jointly with his uncle, Mr Alfred Hulland, held a joint medical power of attorney for Mrs Mitchell. Mrs Mitchell's past medical history included depression, hypertension, cholycystectomy, ischaemic heart disease and recurrent urosepsis.

2. In the context of syncopal episodes, Mrs Mitchell had undergone an aortic valve replacement in September 2008. Since undergoing this surgery, she had poor appetite/oral intake, experienced significant weight loss, reduced mobility and lethargy. In the months immediately preceding her admission to Casey Hospital in March 2009, Mrs Mitchell had been experiencing intermittent urinary and faecal incontinence, requiring assistance with showering and dressing, and increasingly, with mobility. She was assessed as requiring high level care but her family were keen to continue to care for her at home. Mrs Mitchell had regular assistance from the Royal District Nursing Service. However, her family expressed

concerns that she was not receiving adequate care at home and that a number of her problems related to depression, despite treatment with antidepressants.[1]

ADMISSION TO CASEY HOSPITAL – 11 MARCH 2009

3. On 11 March 2009, Mrs Mitchell was referred to the Emergency Department (ED) of Casey Hospital by the Royal District Nursing Service with concerns of dehydration and deteriorating health. Assessment in the ED confirmed her functional decline, noted a weight loss of 40-50 kgs over 6 months and a urinary tract infection. Mrs Mitchell was admitted to Ward A where she was seen by multi-disciplinary allied health services including physiotherapy, occupational therapy, speech therapy, dietetics and social work, to assess and address her functional decline and weight loss.

4. Throughout her admission to Ward A, Mrs Mitchell remained rousable, and orientated to person and place, but required encouragement and assistance with showering, dressing and meals. She transferred from bed to chair with the assistance of two nursing staff and used a four wheeled frame for walking. Her urinary tract infection was treated with antibiotics. However, Mrs Mitchell's poor appetite, minimal oral intake and refusal of nutritional supplements led the treating medical team to refer her for psychiatric review.[2]

5. The conclusion of the psychiatric assessment was that Mrs Mitchell was suffering from a major depressive disorder. They recommended a change in her antidepressant from Sertraline to Mirtazapine ("Avanza") and admission to a Psychogeriatric Unit for ongoing management. There were a number of family meetings where Mrs Mitchell's diagnosis and treatment options were discussed between treating clinicians and her family. Ultimately, the agreed plan was to admit Mrs Mitchell to the Biala Psychogeriatric Unit at the Kingston Centre (Biala) as an involuntary patient under the *Mental Health Act 1986*, in order to facilitate treatment of her major depression, with the hope that treatment of the depression would restore her appetite, level of functioning and interest in life.[3]

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1 Statement of Associate Professor Michael Farmer, Unit Head, General Medicine, Casey Hospital, at page 52 of the inquest brief (Exhibit H).

2 Statement of Ms Andrea Fisher, Nurse Unit Manager, Ward A Casey Hospital, at page 47 of the inquest brief (Exhibit H).

3 Statement of Associate Professor Farmer, at page 53 of the inquest brief (Exhibit H).

6. Mrs Mitchell was commenced on Mirtazapine on 18 March 2009 at a dose of 7.5mg at night, increased to 15mg per day on 25 March 2009. Her transfer to Biala was planned for the early evening of 27 March 2012. Immediately prior to her discharge and transfer, Mrs Mitchell had no fever or other acute medical problems and her vital signs were all stable and within normal parameters – *"She was functioning at high-level care with a diagnosis of a major depressive disorder."* [4]

DISCHARGE & TRANSFER TO BIALA – 27 MARCH 2009

7. At around 5.30pm on 27 March 2009, in the course of preparing her for discharge and transfer to Biala, Associate Nurse Unit Manager (ANUM) Halfpenny instructed Registered Nurse Division 2 (RN) Summers to administer Mrs Mitchell's 6.00pm medications. The intention was to ensure that the medications were administered before she left the ward, and minimise the risk that this was overlooked during the transfer and re-admission process. As will be discussed in some detail below, instead of administering her new antidepressant Mirtazapine 15mg, they administered Nitrazepam 15mg, a hypnotic/sedative drug of the benzodiazepine class. Mrs Mitchell was alert but quiet in the ensuing period until her care was handed over to the ambulance officers who were to transport her to Biala.

8. En-route to Biala, ambulance officers became concerned about Mrs Mitchell's blood pressure which was recorded as "low", initially responded to postural changes but then dropped again. They were also concerned about her conscious state and apparent lethargy. Upon arrival at Biala, Mrs Mitchell was unresponsive, prompting enquiries of nursing staff from Ward A Casey Hospital as to her condition upon discharge. This in turn led to a realisation on the part of ANUM Halfpenny and RN Summers that they had administered 15mg Nitrazepam in error, instead of Mirtazapine as charted. They reported the error to the on duty Nursing Coordinator and documented the incident on the hospital's "Riskman" system as was appropriate.[5]

9. Mrs Mitchell was then transferred to the Emergency Department of Monash Medical Centre. Upon arrival at about 9.10pm, she was hypotensive (blood pressure 75/50mmHg) with an altered conscious state (Glasgow Coma Score of 11/15). Mrs Mitchell was observed in the

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[4] Ibid and Statement of Ms Fisher, at page 47 of the inquest brief (Exhibit H).

[5] Statements of MICA Paramedic Peter Norbury, at page 50 and Dr Baker's autopsy report, at page 2 of the inquest brief (Exhibit H), ANUN Halfpenny's statement dated 04/02/2011 at page 44 (Exhibit A) and RN Summers' statement dated 19/10/2011 at page 39 (Exhibit B).

ED overnight and given Flumazenil to reverse the effects of Nitrazepam, with some response, before commencement of a Flumazenil infusion.

10. Mrs Mitchell's conscious state fluctuated with a sudden drop in the early hours of 28 March 2009 when she was admitted to the Intensive Care Unit (ICU). She continued to be hypotensive, which was thought to be due to septic shock and possible aspiration pneumonia. As Mrs Mitchell appeared unable to protect her airway, a Guedel airway was inserted. The family did not want her intubated or ventilated, however, intravenous antibiotic and inotropic therapy were commenced. On 29 March 2009, Mrs Mitchell suffered a sudden respiratory decline, treatment was withdrawn with the family's acquiescence, and she died the following day.[6]

PURPOSE OF A CORONIAL INVESTIGAITON

11. The purpose of a coronial investigation of a *reportable death*[7] is to ascertain, if possible, the identity of the deceased person, the cause of death, and the circumstances in which death occurred.[8] The *cause* of death refers to the *medical* cause of death, incorporating where possible the *mode* or *mechanism* of death. For coronial purposes, the *circumstances* in which death occurred refers to the context or background and surrounding circumstances, but is confined to those circumstances sufficiently proximate and causally relevant to the death, and not merely all circumstances which might form part of a narrative culminating in death.[9]

12. The broader purpose of coronial investigations is to contribute to the reduction of the number of preventable deaths through the findings of the investigation and the making of recommendations by coroners, generally referred to as the *prevention* role.[10] Coroners are

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[6] Dr Baker's autopsy report, at pages 2-3 of the inquest brief (Exhibit H) effectively reproducing the medical deposition from Monash Medical Centre.

[7] The *Coroners Act 2008,* like its predecessor the *Coroners Act 1985*, requires certain deaths to be reported to the coroner for investigation. Apart from a jurisdictional nexus with the State of Victoria the definition of a reportable death in section 4 includes deaths that appear *"to have been unexpected, unnatural or violent or to have resulted, directly or indirectly, from accident or injury"* and the *death of a person who immediately before death was a patient within the meaning of the Mental Health Act 1986".*

[8] Section 67(1) of the *Coroners Act 2008.* All references which follow are to the provisions of this Act, unless otherwise stipulated.

[9] This is the effect of the authorities – see for example *Harmsworth v The State Coroner* [1989] VR 989; *Clancy* v *West* (Unreported 17/08/1994, Supreme Court of Victoria, Harper J.)

[10] The "prevention" role is now explicitly articulated in the Preamble and purposes of the Act of the *Coroners Act 1985* where this role was generally accepted as "implicit".

also empowered to report to the Attorney-General on a death; to comment on any matter connected with the death they have investigated, including matters of public health or safety and the administration of justice and to make recommendations to any Minister or public statutory authority on any matter connected with the death, including public health or safety or the administration of justice.[11] These are effectively the vehicles by which the prevention role may be advanced.[12]

FINDINGS AS TO SECTION 67(1) MATTERS

13. In relation to Mrs Mitchell's death, most of the matters required to be ascertained, if possible, were uncontentious from the outset, others were clearly uncontentious by the conclusion of the inquest. Mrs Mitchell's identity, the date, place and medical cause of death were never at issue. I find, as a matter of formality, that Elsinore Lorraine Mitchell born on 22 January 1935, aged 74, late of 3 Serendip Court, Narre Warren, died at Monash Medical Centre, 246 Clayton Road, Clayton, on 30 March 2009.

MEDICAL CAUSE OF DEATH

14. A full post-mortem examination or autopsy was performed by Forensic Pathologist Dr Melissa Baker from the Victorian Institute of Forensic Medicine (VIFM) who also reviewed the medical records, the circumstances as reported by the police to the coroner and post-mortem CT scanning of the whole body. Having done so, Dr Baker provided a report with her findings at autopsy and comments. Dr Baker attributed Mrs Mitchell's death to *right lower lobe pneumonia,* which she stated was diagnosed clinically and confirmed at autopsy. Dr Baker advised that *Staphylococcus aureus* was isolated on a right bronchial swab and was likely to be the truly causative organism of the pneumonia. She described this bacterium as a common cause of hospital acquired pneumonia which is commonly seen in cases of aspiration pneumonia and has a high mortality rate in the elderly. Dr Baker found evidence of a number of natural disease processes at autopsy, but none of a type to have contributed significantly to her death.

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[11] See sections 72(1), 67(3) and 72(2) of the Act regarding reports, comments and recommendations respectively.

[12] See also sections 73(1) and 72(5) of the Act which requires publication of coronial findings, comments and recommendations and responses respectively; section 72(3) and (4) which oblige the recipient of a coronial recommendation to respond within three months, specifying a statement of action which has or will be taken in relation to the recommendation.

15. Dr Baker noted that Nitrazepam is a benzodiazepine with sedative/hypnotic effects, as well as anxiolytic, amnesic, anticonvulsant and skeletal muscle relaxant properties. She expressed some doubt that the administration of 15mg Nitrazepam caused Mrs Mitchell's deteriorating conscious state. Firstly, she did not expect a dose of 15mg would generally cause significant side effects. In the second place, once the error was realised, Mrs Mitchell was administered Flumazenil in an attempt to reverse the effects of Nitrazepam, with little effect, according to her reading of the medical records. Dr Baker concluded –

> *"Given the temporal relationship between administration of the drug and the deceased's deterioration however, it is possible that aspiration of gastric contents occurred as a result of sedation caused by the drug."*

16. Based on the totality of the evidence before me, that is the relative stability of Mrs Mitchell's clinical condition immediately before the medication error, the close temporal relationship between the medication error and her altered conscious state, her clinical course at Monash Medical Centre and the absence of other natural disease or complications at autopsy, I find that Mrs Mitchell's death was caused by *right lower lobe pneumonia*, and that the inadvertent administration of Nitrazepam instead of Mirtazapine, indirectly caused or contributed to her death, due to the effects of sedation.

FOCUS OF THE CORONIAL INVESTIGATION/INQUEST

17. As was apparent from the outset, ANUM Halfpenny and RN Summers, readily disclosed the medication error as soon as they realised it had occurred. In doing so, they acted honourably and are to be commended. Not only for ensuring the treating team were aware and providing early clarity of the circumstances for the family, but also for facilitating the coronial investigation of Mrs Mitchell's death by allowing the focus to shift to considerations of how or why the error occurred, appraisal of the remedial action taken by Southern Health in response, and other "prevention" ramifications.

18. Ms Angela Halfpenny was the Associate Nurse Unit Manager (ANUM) of Ward A Casey Hospital working the afternoon shift on 27 March 2009. According to her statement, ANUM Halfpenny was familiar with Mrs Mitchell, had assisted in caring for her, but had not been her primary care nurse during the admission. ANUM Halfpenny attended the family meeting on 27 March 2009 where it was decided to transfer Mrs Mitchell to Biala as an involuntary

patient. Following the meeting, she began preparations for the transfer which included arranging transportation, liaising with the family, ensuring all relevant documentation was completed and handing over to Biala staff who requested, inter alia, a copy of the current medication chart.[13]

19. At some time between 5.30pm and 5.45pm, ANUM Halfpenny suggested to RN Summers that they give Mrs Mitchell her 6.00pm medications so that she did not miss out due to her imminent discharge and transfer, and so that the fact of administration could be included on the medication chart before it was copied for Biala staff's reference.[14]

20. ANUM Halfpenny looked at the drug chart and read that 15mg Nitrazepam was due at 1800hrs so they decided to obtain and administer that drug together, leaving RN Summers to administer the other drugs due at 1800hrs. The rationale for this was that unlike other medications kept locked in a patient's bedside table, Nitrazepam is a Schedule 11 drug, kept under lock and key in the dangerous drugs cupboard, and protocols require two nurses to obtain the drug and to check all relevant details before its administration – the "Five Rights" as referred to at inquest – the right patient, the right dose, the right drug, the right time and the right administration route.[15]

21. It appears that ANUM Halfpenny mis-read and/or mis-interpreted the medication chart's notation "25/3 Mitrazapine[16] [sic] Route Oral 15mg nocte" as "Nitrazepam", and RN Summers noticed the discrepancy but did not disabuse her of her error, in the belief that it was another name for the same drug.[17]

22. As a consequence of Mrs Mitchell's death, some time later in 2009, Southern Health conducted an internal review of the incident. The findings of the internal review were that –

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[13] Statement of ANUM Angela Halfpenny at pages 41-42, Exhibit B.

[14] IBID

[15] See Footnote 22.

[16] While possibly not an exhaustive list, my perusal of the medical records show a number of entries where the drug Mirtazapine is mis-spelt - eg "Mirtazapine", Mitrazapine", "Mitrazepine", "Mirtazipine", Mitrazapine" – see copy medical records (Exhibit G).

[17] Statement of RN Leanne Summers at page 39, Exhibit D. Statement of ANUM Halfpenny at page 43, Exhibit B. Transcript pages 9-11.

"The lack of familiarity with the medication, a similarity in the names of the drugs and time pressure to transfer the patient to another campus contributed to the incorrect drug being administered" [18]

During her evidence at inquest, ANUM Halfpenny explicitly agreed with these findings.[19] An acceptance of the internal review findings is also implicit in RN Summers statement and evidence.

23. On behalf of RN Summers, Ms Quinn submitted that her relative inexperience in medication administration should also be accepted as a likely contributing factor. I note in this regard that RN Summers was a Registered Nurse Division 2 who first qualified in 1981 but needed to complete a nursing re-entry course in 2007, after leaving nursing for some years to start her family and working in non-nursing positions. In March 2008, RN Summers commenced working in a half-time position as a Division 2 Nurse at Casey Hospital and, in November of that year, she completed a medication administration course for Division 2 Nurses. However, it was not until 12 December 2008 that the Nurses Board of Victoria (as it then was) added a medical administration endorsement to her nursing registration and, having taken holidays in January 2009, RN Summers had relatively little experience in medication administration, prior to this medication error occurring in March 2009.[20]

24. Based on the totality of the evidence available to me, I find that the factors which contributed to this medication error occurring are, on the part of both nurse, a lack of familiarity with the medication, a similarity in the names of the two drugs, time pressure to transfer the patient to another campus, with all that that involved, and, on the part of RN Summers, her relative inexperience in medication administration.

25. It is difficult to escape the conclusion that this medication error was simply an instance of human error, albeit with a tragic outcome. An error of a type which we may strive to minimise, but are unlikely to eradicate from any field of human endeavour. I note in this regard, that the family of Mrs Mitchell have generously accepted this characterisation of the

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[18] Statement of Ms Cheyne Chalmers, Executive Director of Nursing & Midwifery Southern Health, at page 54 of the inquest brief (Exhibit H).

[19] Transcript page 12.

[20] RN Summers statement page 37-38 Exhibit D, transcript page 27, submissions transcript page 52 and following.

medication error which contributed indirectly to her death and were at pains to ensure this was understood at inquest.[21]

26. It is similarly difficult to envisage a foolproof prevention strategy for errors of this kind. It was common ground at inquest that resources were available at Casey Hospital as at 27 March 2009, to assist nurses with medication administration, where they perceived a need. These were resources such as online pharmacy and MIMS which could be accessed via computers available on the ward (although there was competition for access to the computers which were also used by medical and allied health staff), the hospital pharmacists who provided informative material from time to time, and advice on an 'as needs' basis, and of course, senior more experienced staff.[22] However, such resources are only likely to be consulted when someone perceives a need, and this was not the situation which pertained.

27. It was also common ground at inquest that changes had been implemented by Southern Health at Casey Hospital in response to this incident, and that these changes gave some additional assistance to nurses with the administration of medication. An additional computer has been placed in the ward medication room to facilitate access by nurses who may wish to consult online pharmacy and MIMS; all nurses are required to take annual medication administration assessments; 'medication management' is a standing agenda item at each fortnightly ward meeting; medication errors identified on the hospital reporting system "Riskman" are discussed and reminders are regularly given about the "Five Rights" of safe medication administration – checking that you have the right patient, the right dose, the right drug, the right time and the right administration route.[23]

28. As a direct consequence of the findings of the internal review mentioned above,[24] the Southern Health Medication Safety Committee developed a Medication Safety Strategy to address all aspects of medication safety, including administration. Of particular relevance to the medication error the subject of this inquest is the "Drug Safety Alert Number 19: Look

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[21] Exhibit A is a letter dated 11 June 2012 written by Mr Alfred Hulland on behalf of himself and his nephew, the deceased's son Mr Leonard Fletcher, both of whom held a medical power of attorney for Mrs Mitchell.

[22] The suite of resources and practices around safe administration of medication are conveniently summarised in the statement of Ms Andrea Nicole Fisher, Nurse Unit Manager Ward A Casey Hospital at pages 47-48 of the inquest brief (Exhibit H). Transcript page 25, 28.

[23] NUM Fisher's statement at pages 48-49 of the inquest brief (Exhibit H),

[24] Ms Chalmers' statement at page 54 of the inquest brief (Exhibit H) and Mr Snowdon's submissions at transcript page 56.

Alike – Sound Alike (LASA) Medications" which specifically refers to "mirtazapine (antidepressant) and nitrazepam (benzodiazepine)" as one of the pairs of drugs which have caused significant incidents at Southern Health or have a high potential to cause harm, if one is mistaken for the other.[25]

29. Both ANUM Halfpenny and RN Summers testified that these changes had been made and that they felt they were beneficial changes.[26] Both also testified about their own professional reflection and suggestions for further enhancements around medication administration. ANUM Halfpenny made three suggestions –

- that non-imprest drugs such as Nitrazepam not be kept on the ward unless actually required for a patient currently in the ward,
- development of an electronic prescribing system, and
- a requirement that whenever two nurses are checking drugs out of the dangerous drug cupboard they say the name of the medication out loud so as to minimise the risk of a mistake with a like-sounding drug.

30. RN Summers was also attracted to the suggestion of an electronic prescribing system and agreed that saying the name of the drug out loud when checking with another nurse would be beneficial. She also testified about a number of changes in her own work practices such as increased vigilance around medication administration, and checking her patients' medication charts for the purposes of familiarisation immediately following handover, when there was likely to be more time to do so, well ahead of the next medication round.[27]

31. In order to inform the inquest about electronic prescribing systems, Mr Gipp, Counsel representing ANUM Halfpenny proffered Ms Patricia O'Hara as a witness. Ms O'Hara is a Registered Nurse and Professional Officer employed by the Australian Nursing Federation (Victorian Branch). In that capacity, she has been involved as clinical lead on the National E-Health Transition Authority which has been tasked by the Council of Australian Governments (COAG) to implement E-Health across Australia. The first stage will be the introduction of

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[25] Ms Chalmers' statement t page 54 and page 57 (Exhibit C).

[26] Transcript page 13, 26.

[27] Transcript page 25 and following.

the Personally Controlled Electronic Health Record and a number of other initiatives are underway that will ultimately link with this record. Relevantly, an IT firm has been contracted to design and test the electronic medication systems and electronic charts, and some Victorian public hospitals have been involved in the testing and staged implementation. According to Ms O'Hara, the project is of longstanding, but is at some risk due to recent government funding cuts.[28]

32. While Ms O'Hara emphasised that the system of electronic medication charts is still in a testing and design phase, she outlined to the inquest how it was envisaged that the charts would operate and gave convincing evidence about how the medication error, the subject of the inquest should have been prevented by an electronic prescribing system, with structured system of checks and balances built into the software.[29]

COMMENTS

Pursuant to section 67(3) of the **Coroners Act 2008**, I make the following comment(s) connected with the death:

1. Southern Health is commended for the remedial action taken following their internal review of this medication error. Each enhancement, but particularly the annual medication administration assessments and the "Look Alike Sound Alike" initiative, appear to carry the potential for improved patient safety by minimising the risk of a similar error in medication administration occurring in the future.[30]

2. While it is beyond the scope of this coronial investigation to comment on the merits of an electronic medical record or electronic patient prescribing system at large, the electronic prescribing system outlined at inquest carries the clear potential to prevent a similar error in medication administration in the future, that is the mistaken administration of one drug for another drug with a similar sounding name, but quite different therapeutic properties.

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[28] Statement of Ms Patricia O'Hara dated 21 June 2012, Exhibit F.

[29] Transcript page 39 and following.

[30] See paragraphs 26-27 above.

3. This is particularly important in the clinical management of the elderly or those with multiple medical co-morbidities whose reserves are such that a relatively short period of sedation or over-sedation may lead to the development of pneumonia and even death.

I direct that a copy of this finding be provided to the parties:

The family of Mrs Mitchell

Ms Angela Halfpenny

Ms Leanne Summers

Southern Health

I direct that a copy of this finding be provided to the following, for their information:

The Honourable David Davis, MP, Minister for Health (Vic)

Dr Pradeep Philip, Secretary, Department of Health (Vic)

Ms Alison McMillan, Director Quality Safety & Patient Experience, Department of Health (Vic)

The Honourable Tanya Plibersik, MP, Minister for Health, Department of Health & Ageing, Canberra

Ms Fionna Granger, First Assistant Secretary, Department of Health & Ageing, Canberra

Mr Peter Fleming, CEO, National E-Health Transition Authority, Sydney

Ms Lee Thomas, Federal Secretary, Australian Nursing Federation, Canberra

Ms Lisa Patrick, Victorian Branch Secretary, Australian Nursing Federation, Melbourne

The Society of Hospital Pharmacists of Australia, Collingwood, Victoria

Dr Steve Hambleton, President, Australian Medical Association

Signature:

PARESA ANTONIADIS SPANOS
CORONER
Date: **2 August 2012**