Coroners Act, 1996
[Section 26(1)]

Western *Australia*

RECORD OF INVESTIGATION INTO DEATH

Ref No: 42/13

I, Evelyn Felicia Vicker, Acting State Coroner, having investigated the death of ***Melissa Ann NIELSON*** *with an Inquest held at Perth Coroners Court, Court 51, 501 Hay Street, Perth, on 4-8 November 2013 find the identity of the deceased was* ***Melissa Ann NIELSON*** *and that death occurred on 15 September 2009 at Royal Perth Hospital as a result of hypoxic brain injury following unexplained cardiorespiratory arrest in the following circumstances -*

Counsel Appearing :

Ms K Ellson assisting the State Coroner
Ms R Hartley and with her Ms K Dodd (State Solicitors Office) appearing on behalf of the Department of Health
Ms B Burke (Australian Nursing Federation) appearing for Nurse M Whitson
Ms C Elphick (DLA Piper) appearing on behalf of Dr Chan
Mr J Ley appearing on behalf of Dr Greg McGrath and Dr Judith Futtermenger
Mr G Bourhill (Tottle Partners) appearing on behalf of Dr Paul Kruger and Dr Hannah Seymour

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INTRODUCTION

On 3 September 2009 Melissa Ann Nielson (the deceased) presented at Joondalup Health Campus (JHC) Emergency Department (ED) complaining of a painful, blistering rash that was spreading over both legs from her thighs to her ankles. Her observations were unremarkable and she was triaged as category 3 (to be seen in 30 minutes).

The deceased was assessed and it was decided she should be transferred to Royal Perth Hospital (RPH) where they had a dermatology service. She was transferred following extensive consultation with RPH and arrived there shortly after midnight on 4 September 2009, again with a triage category 3. She was moved into a minor theatre room in the emergency department pending the availability of an assessment cubicle. She was located before 1am unresponsive and not breathing.

The deceased was resuscitated and transferred to ICU where she remained on life support until it was withdrawn and she died on 15 September 2009. She was 24 years of age.

BACKGROUND

The deceased was born on 18 February 1985 as the youngest of three children to her parents. She had an older brother and sister. Her parents had separated before her death and her father had a new partner. Both biological parents

stayed in close contact with one another due to the care of their children and when the deceased's illnesses required extra care all members of her family contributed to that care in the home environment to enable her to lead as independent a life as possible.

The deceased wished to train as a nurse and attended TAFE in difficult circumstances to enable this to occur. Due to her developing disabilities she had to refine her ambitions to fit with her physical capabilities. Around the time of her death she was hoping to complete exams which would enable her to live independently and contribute to her community.

MEDICAL

The deceased's father stated in evidence he believed his daughter had been diagnosed with Type I diabetes when she was six years of age. Her GP, Dr Peter Hernaman reported she was officially diagnosed with Type I diabetes in 1994[1] and Dr Hernaman had been her general practitioner since she was approximately one year of age through until March 2008.

The deceased's diabetes was exacerbated by an eating disorder, diagnosed in 2003, and treated at PMH, and later by the Joondalup Community Mental Service. She was later diagnosed with depression and commenced on anti

[1] Exhibit 1 Vol 1 Tab 8

depressant medication. Her eating disorder resulted in malnutrition and poor control of her diabetes and she frequently required prolonged inpatient care.

The deceased's treatment meant she attended hospital on numerous occasions. Many of her attendances and admissions were due to infections, diabetic ketoacidosis (dangerously raised sugar levels that can lead to coma and death) or hypoglycaemic episodes (low sugar levels that can also lead to coma).

The deceased's diabetes control was extremely brittle. Brittle diabetes occurs in about 1-2% of diabetics and is characterised by dramatic and recurring swings in glucose levels, often occurring for no apparent reason. This can result in irregular and unpredictable hyperglycaemia and serious hypoglycaemia.

Her GP considered she neglected her diabetes and as a result developed major complications including: recurrent infection, kidney disease, damage to the retina of the eye and cataracts, autonomic and peripheral neuropathy and osteoporosis. As a result of osteoporosis the deceased suffered a fractured left tibia in 2007 and whilst under rehabilitation from that fracture, she fell and sustained a fracture to her left femur which necessitated an extended inpatient stay. She also developed a depressive illness which

probably contributed to her self neglect. Her poor health had left her mostly wheelchair bound but she could mobilise with a Zimmer frame for short distances.

Dr Hannah Seymour, one of the deceased's treating practitioners from RPH[2] stated she first met the deceased in 2008 when she was working as an Orthopaedic-Geriatric Physician at Shenton Park Rehabilitation Hospital (Shenton Park). She had heard about the deceased beforehand due to multi-disciplinary meetings where medical staff would discuss the deceased's situation although she was not a geriatric patient.

The deceased was staying at Shenton Park due to her complex medical history which warranted the input of multi-disciplinary teams dealing with the sorts of things usually experienced in geriatric medicine where patients frequently have multiple complex co-morbidities.

In March 2009 Dr Seymour had various discussions with the deceased's practitioners about her weight bearing status. The concern was the deceased was at high risk of having her leg amputated if she fractured her leg again and it was recommended she remain in a wheelchair.

[2] Exhibit 1 Vol 1 Tab 16

The deceased was very determined and wanted to walk and lead as normal a life as possible despite the risk this would present of future falls and the possibility of amputation. Dr Seymour was concerned the deceased did not understand the consequences of her decision to walk and her ability to make complex decisions around her multiple illnesses and wished her family be involved in discussions with respect to her best forward treatment.

On 24 March 2009 there was a family meeting with the deceased and her family and it was explained where her multiple co-morbidities placed her with respect to decisions about her future.

Dr Seymour says the meeting was attended by the entire multi-disciplinary team from Ward 10 including a social worker, physiotherapist, occupational therapist, nursing staff and the orthopaedic medical staff. The deceased and her father attended that meeting and the deceased chose to walk. The meeting was to discuss how she would be best able to do this post her hospitalisation. There was discussion about the deceased's applying to the Disability Services Commission for funding to live in group care because of her difficulty with weight-bearing and her many hypoglycaemic episodes.[3]

[3] t 4.11.13 p 23-24

The deceased made it very clear she wished to be at home at all costs and refused to consider alternative supported accommodation. The deceased's father was very supportive of all the decisions the deceased wanted to make and a plan was put in place aimed towards her rehabilitation so she could be as independent as possible prior to discharge, to allow her to continue to live in the family home with support from her extended family.

The deceased was discharged on 9 May 2009 with Rehabilitation in the Home (RITH) which is a service provided out of RPH. It involves rehabilitation and medical assistance at home.

The deceased was visited at home three times a week and the challenges she faced in that environment discussed with the team back at RPH. Following a period at home there was some concern about her ability to manage some aspects of her life and she was persuaded to accept some additional help especially with respect to eating meals.

On 30 May 2009 the deceased was readmitted to RPH. On 5 June 2009 the deceased suffered an in hospital arrest without warning and had to be resuscitated. She was on monitors at the time, CPR would have been prompt yet she still needed over 2 minutes of resuscitation.[4] Dr Seymour

[4] t 5.11.13 p186

again became involved with direct care of the deceased and visited her on the 29 June 2009.

Dr Seymour noted the deceased had recovered very well from her acute illness and was managing to independently transfer herself to her wheelchair and for showering. She had physiotherapy aimed at assisting with her walking and still wished to return home to her independent life. On discharge the deceased refused services but did make good progress on the ward prior to her discharge on 4 July 2009.

Following that discharge the deceased was returned to RITH. She was located on the floor on 14 July 2009 without injury, but the following day was very cold and unable to mobilise well.

The physiotherapist suggested a care package and the deceased agreed to help at home with cleaning, lighting the stove and preparing meals. The deceased was still adamant that she did not wish to have any type of residential care arranged for her.

On the 17 July 2009 the deceased had a further fall at home and was taken to Swan District Hospital. She was transferred to RPH and diagnosed with Swine Flu (H1N1). It was during this admission to RPH she suffered an episode of pulseless

electrical activity without a definite cause. The deceased required ventilation and transfer to ICU from which she was transferred, after four days, back to the general ward.

The deceased remained on the general ward until 24 August 2009 when she discharged herself against medical advice (DAMA).

Following the deceased's DAMA she was still provided with visits from Hospital in the Home (HITH) and RITH due to her young age and Dr Seymour's acknowledgement the deceased was very concerned the restrictions imposed by her health be treated as normally as possible. The deceased was seen by members of RITH on 26 and 28 August 2009 but declined a visit for the 31 August 2009.

The deceased was also, in conjunction with RITH, under the care of Silver Chain. On her DAMA she had a known difficulty with wounds and blisters on her legs. Dr Seymour advised she was very worried about the deceased's blisters because she was so sick, and had deteriorated so quickly.

RITH persuaded the deceased she should attend at hospital for a review on 4 September 2009, but she had seen Silver Chain's GP on the 2nd due to Silver Chain's concern with the state of her legs. It was following review by that GP, and her commencement on antibiotics, she attended JHC ED on

3 September 2009 following review by the Silver Chain Nurse that morning. The deceased chose to attend JHC ED rather than RPH which was where her treating team was based.

JOONDALUP HEALTH CAMPUS (JHC)

The deceased is recorded as presenting to the ED of JHC at 1.34pm on 3 September 2009 complaining of a rash that had been rapidly progressing. She was assessed at triage where her temperature was recorded as 35.4°C, pulse 107 and oxygen saturations of 99%. She was given a triage score of 3 which indicated she should be medically assessed within 30 minutes. The ED triage assessment history states:

> "Multiple areas, regional problems rash/lesion multiple areas. Sent by Silver Chain. Developing blisters, turning into shallow lesions on all limbs. Started on legs, now developing on both hands."[5]

Dr Kevin Chan was an ED RMO and saw the deceased almost immediately. He was concerned about the origin of the deceased's rash and her general condition. The deceased described her rash as spreading over both her legs from her thighs towards her ankles and the blisters were very painful and associated with surrounding erythema. She denied any systemic features such as feeling feverish, shortness of breath, chest pain, palpitations, nausea or vomiting. She stated she had no recent change in her regular medications other than the antibiotics prescribed on 2 September. She informed Dr Chan she had been

[5] Exhibit 1 Vol 2 Tab 2D

discharged from RPH only two weeks earlier after a prolonged admission due to N1H1 pneumonia with an associated myocardial infarction.

Her observations were taken again at 3.05pm and her temperature found to be 35.8°C, pulse rate 105, blood pressure 115/85, her blood sugar level was 16.5 with a respiratory rate of 24. Her oxygen saturations were now recorded at 93%.

Dr Chan discussed the case with his supervising registrar, Dr Anthony Tzannes who also reviewed the deceased. Both doctors were concerned as to her potential diagnoses and were concerned the rash could be either a Staphylococcal Scalded Skin Syndrome or Stevens Johnson Syndrome (both rare but serious, potentially life threatening conditions.) The concern was JHC did not have an expert dermalogical unit but there was one available at RPH where the deceased was also very well known.

Due to a concern her rash may be drug related there was some reluctance to institute any form of antibiotics for the deceased without expert dermalogical input. Drs Chan and Tzannes wished to transfer the deceased to RPH where they felt she was both well known and her condition more readily reviewable.

Due to her past experiences with RPH the deceased was extremely reluctant to be transferred and Dr Chan was involved in attempting to persuade the deceased she would be better placed at RPH as well as attempting to transfer her to RPH.

Dr Chan contacted RPH and was put through to Dr Futtermenger (a medical registrar) at the RPH Acute Assessment Unit (AAU). He summarised the deceased's medical history including her Type 1 Diabetes Mellitus which was difficult to control, with multiple hypoglycaemic and diabetic ketoacidosis episodes along with multiple co-morbidities including acute on chronic renal failure with atonic (weak) bladder requiring urinary catheterization, and a recent long ICU admission to RPH with Swine Flu, with multiple complications including acute myocardial infarction and pressure sores.

Dr Chan explained to Dr Futtermenger the deceased's current complaint of an accelerating desquamating skin disorder (started off as blisters, which enlarged and then deroofed, leaving a red and necrotic base). The deceased had told him the blistering had commenced a few days earlier but she had attended JHC ED due to the rash worsening and starting to spread to her face and arms. Dr Chan explained they were uncertain of the aetiology of the skin condition, but had considered Staphylococcal

Scalded Skin, or a drug related rash, as well as Stevens Johnson Syndrome and Toxic Epidermal Necrolysis, although the deceased's presentation was not typical of the latter conditions. Dr Chan requested urgent transfer to RPH because of the lack of dermatology expertise at JHC. He advised Dr Futtermenger that because of her accelerating condition, without diagnosis, he felt she would be better cared for at a tertiary hospital, particularly one with dermatology review, to rule out clinical emergencies.

Dr Futtermenger requested some further information from Dr Chan about the deceased, including vital signs and blood test results. In evidence Dr Chan thought blood had already been collected but he was not yet in receipt of the results. Aside from the results Dr Chan informed Dr Futtermenger the deceased was mildly tachycardic with a pulse of 110, but that the rest of her vital signs were all within normal limits. The Joondalup medical file[6] biochemistry reports indicate the deceased's bloods were collected at 5.48pm on 3 September 2009 for analysis.

Dr Futtermenger considered the deceased to be haemodynamically stable and did not accept the urgency of transfer until she was provided with some blood results for the deceased.

[6] Exhibit 1 Vol 2 Tab 2 Tab A

Dr Chan believed this phone call had been at approximately 5pm and there is an entry in the RPH ED computer information system (EDIS) timed at 5.27pm, entered under the name of Dr Niall Henry, the consultant in charge of the ED for the evening shift of 3 September 2009.

EDIS is not accessible to any department in RPH other than the ED. Where doctors from other units in RPH are accepting, or contemplating accepting patients from other hospitals, contact needs to be made with the ED, particularly if the transfer is expected to be out of hours, to advise them of the background for any expected patient arrival through ED.

The EDIS entry under the name of Dr Henry at 5.27pm is as follows:

> "Information taken by Med Reg - recent inpatient ICU H1N1 – AMI presents to Joondalup with blisters on arms and legs? SAO2 93%, HR 105 – will call back Med Reg and contact ED if being transferred".[7]

Dr Futtermenger stated she has no recall of either attending ED to advise them of the contact from Dr Chan or of telephoning down to the ED for the purposes of informing them of the situation, however, had no doubt that entry reflected a call to her from Dr Chan which she had communicated to the ED.[8]

[7] Exhibit 3
[8] t 6.11.13 p295-6

Dr Chan waited for the results of the blood tests and spent the time trying to persuade the deceased she was more appropriately placed at RPH. She was extremely reluctant to go and Dr Chan recalled it took him a considerable amount of time to persuade her that was necessary. The deceased was accompanied by her sister and during the course of the review the deceased spoke with her father on the telephone.

Mr Nielson gave evidence he was a long distance truck driver and on the evening of 3 September 2009 he received a call from one of his daughters informing him the deceased was in Joondalup ED and they wished to transfer her to Royal Perth Hospital. Mr Nielson discussed the matter with the deceased and was adamant if that was her best placement she should go. Eventually, reluctantly the deceased agreed to be transferred to RPH.[9]

Dr Chan believes this was at approximately 8 o'clock by which time he had received the deceased's blood results and was in a position to call Dr Futtermenger again with the results and discuss the deceased's transfer.[10]

Dr Chan recalled talking to Dr Futtermenger and asking for a transfer to RPH for urgent dermatological review. He noted

[9] t 4.11.13 p44
[10] t 4.11.13 p90-1

he reiterated the accelerating nature of the skin condition and the blood results which revealed:

- Renal impairment (creatinine 288, urea 35.2); but JHC had no way of knowing what her baseline readings were, which would be known to RPH as a result of her admission there two weeks earlier.
- He believed she was possibly septic (CRP 338) persistent tachycardia was noted although there was no fever or hypotension.

Dr Chan explained they were reluctant to initiate any treatment beyond intravenous fluids due to the lack of a diagnosis and their concern her skin condition was caused by a drug reaction which would be contraindicated with certain treatments. He stressed they were unable to manage the deceased appropriately at JHC overnight and she needed an urgent transfer to RPH for dermatology review and management. At that stage Dr Futtermenger approved the patient's transfer to RPH and advised Dr Chan the deceased would need to be admitted via the ED and that she would notify the ED. In evidence Dr Futtermenger stated it was her practise to request the other doctor also notify ED as the transferring hospital.

Dr Chan took this as an acceptance by Dr Futtermenger of the transfer of the deceased and that Dr Futtermenger was to be paged on the deceased's arrival by way of inter-hospital transfer.[11]

Dr Chan then rang RPH ED, he believed at approximately 8.30, and was directed to the transfer coordinator. He advised Nurse Down he had Dr Futtermenger's permission to transfer the deceased to RPH ED for assessment. He recalled providing the deceased's details and suspected diagnoses and, although the deceased was haemodynamically stable, he repeated it was his belief the deceased was unwell and the agreed plan was to contact Dr Futtermenger immediately upon the deceased's arrival at RPH ED.

Nurse Louise Down was the transfer co-ordinator in the RPH ED on the 3 September 2009 and her EDIS entry which corresponds to the telephone call to the ED by Dr Chan appears to have entered the deceased under the incorrect surname, with the omission of the "s". The entry[12] indicates a patient Nielon is expected to arrive in RPH ED at approximately 9pm on 3 September 2009, referred by Dr Chan from JHC ED. The date of birth matches that of the deceased and the call is timed at 8.10pm. The diagnosis/problem area is as follows:

> "Desquamating skin condition arms and legs

[11] t 4.11.13 p 92
[12] Exhibit 4

IDDM
CRF
AMI
Recent ICU Adit for H1N1
Accepted Judith Futtermonger please page O/A"

It was agreed the O/A meant "on arrival". From the above Nurse Down recorded the deceased, albeit under a different surname, would be arriving in the ED at approximately 9pm allowing time for ambulance transfer.

Due to the error in the spelling of the deceased's surname the EDIS program did not automatically populate the patient problem area with the new information with respect to the deceased. The entry with respect to the deceased remained the same as that entered by Dr Henry at 5.27pm and appeared in EDIS as two separate patients, rather than populating the deceased's patient information in the one entry.

There is no entry in EDIS to reflect another contact by Dr Futtermenger to the ED following the second phone call with Dr Chan. Dr Futtermenger cannot recall whether she informed ED the deceased's transfer was now accepted, although in evidence Dr Futtermenger indicated she had no reason to believe she would not have rung the ED as she had stated she would to Dr Chan.[13] As far as she was concerned she realised the deceased was now expected in

[13] t 6.11.13 p 0297-8

the ED and when she arrived the AAU would be notified of her arrival, possibly after her medical assessment.

Dr Chan also provided a discharge letter to accompany the deceased and recalled writing it and giving it to the Joondalup transfer clerk to accompany the deceased on her ambulance transfer.

The JHC ED discharge summary is quite clear with the spelling of the deceased's name, her date of birth and gives the principal diagnosis as a desquamating skin condition - ? aetiology with additional diagnoses of Type I diabetes Mellitus, CRF, osteoporosis, anaemia, AMI, recent ICU admission for Swine Flu. He provided a full blood count of 98/262/17.0 (N0/20 15.8) electrolytes 129/5.7/15/35.2/288, a CRP of 338 with blood cultures pending. He filled out the section for procedures and management and indicated the deceased would need fluid resuscitation and dermatology opinion and management with the follow-up advice "*Please contact general medicine (Dr Futtermenger) on arrival*"[14].

Dr Chan indicated once he had completed all the necessary paperwork related to the deceased's review and transfer to RPH he was no longer involved with her care and was surprised transfer had not occurred for another three hours.

[14] Exhibit 1 Vol 2 Tab 2 Tab E

JHC placed a call with the St John Ambulance at 8.06pm. The referring doctor was Dr Chan and the booking was completed at 8.07.32pm on 3 September 2009, however was not allocated to an ambulance until 11.10.28pm with the deceased not leaving JHC until 11.20.29pm.[15]

The priority, which is provided by the ambulance service after a description of the reason for transfer, is 5. Priority 5 is the usual priority given for haemodynamically stable patients being transferred from one hospital to another hospital.

While the deceased was waiting in the JHC ED for transfer her observations following those given earlier were that at 10.25pm she had a pulse of 100, BP of 120/80, blood sugar level of 24.2 (treated with short acting insulin), a respiratory rate of 22 and oxygen saturations of 95% on room air. The nursing notes record that at 10 o'clock the deceased was asleep on a bed while waiting for the ambulance transfer and the same nurse provided the deceased with a cup of ice on her request at 11.15pm prior to transfer.

At the time the deceased was transferred by the ambulance service to RPH, JHC considered the deceased was conscious, agreed she appeared haemodynamically stable, and was not overtly septic. She was orientated and

[15] Exhibit 11

responsive and in view of that no medical escort was provided for her transfer to RPH.[16]

AMBULANCE TRANSFER

On the evening of 3 September 2009 JHC ED was very busy and as a result they were on ambulance divert from 5.05 – 9.05pm,[17] Dr Wood, on behalf of JHC, indicated this did not mean ambulances were unable to transfer patients, merely ambulances were not to deliver patients to the JHC ED but divert them elsewhere.[18]

Information from Professor Ian Jacobs of the St John Ambulance Service informed the inquest that between 6 and 8pm on 3 September 2009 the ambulance service had a high level of emergency demand. Specifically, 27 priority 1 calls, while between 8pm and 10pm there were 26 priority 1 calls.

Professor Jacobs advised that due to the hospital diversion ambulances were not in the area and were diverted to other hospitals in the metropolitan region. "*This has the effect of reducing availability of ambulances and our ability to respond in the usual timely manner to lower urgency cases*".[19]

[16] Exhibit 1 Vol 2 Tab 2 Tab G
[17] Exhibit 13
[18] t 7.11.13 p375
[19] Exhibit 13

Similarly, it is not unreasonable to deduce that with the ambulance service becoming less pressed at about 11pm that night, the corresponding emergency departments of relevant hospitals would be extremely full due to the number of priority calls that evening. By the time the ambulances became available for a priority 5 transfer the emergency departments of all tertiary hospitals would have been busy from the earlier ambulance attendances.

The deceased's Patient Care Record[20] recorded transferring the deceased at 2334 (11.34pm) hours and arriving at RPH ED at 0001 (1 minute past midnight) on 4 September 2009.

The Patient Care Record for the deceased's transfer by St John Ambulance appears on the RPH file. It is the only document from the transfer which was located at RPH. On its face it refers to notes being transferred with the deceased and also refers to a list of medications transferred with the deceased. It is clear from the RPH triage form[21] information from that documentation was available in RPH ED at triage[22] and therefore the disappearance of the transfer documents is unexplained.

The St John Ambulance officers record they arrived at RPH at one minute past midnight and provide a correct address,

[20] Exhibit 1 Vol 2 Tab 1 Tab G
[21] Exhibit 1 Vol 2 Tab 1 Tab A
[22] t 6.11.13 p 330, 336

name and date of birth for the deceased. It confirms she was transferred as a priority 5 and gave her complaint as:

> "Multiple blisters – starting legs and now affecting hands and wrists.
>
> Extensive PMH history;-
>
> Brittle Type 1 DM
> ICU admission 2/12 with Swine Flu complicated by MI and pressure sores
> Atonic bladder requiring SPC
> Osteoporosis
> Anaemia
> Renal Impairment
> See notes with Pt".

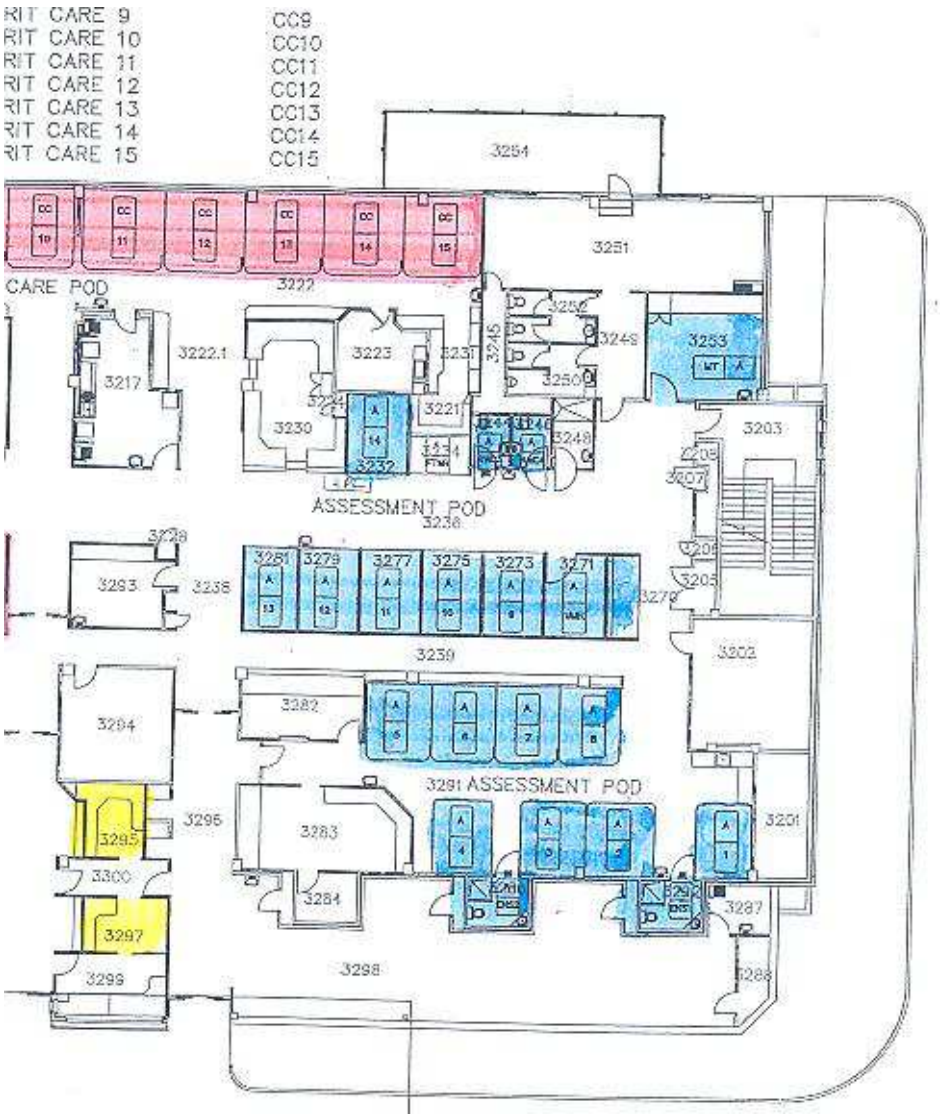
In addition:

> "SJA noted Pts resps were noisy, Pt stated this was normal following a drink and was unconcerned. Slept through T/F"

The medications box refers to the list accompanying the deceased, and notes her allergies as Maxolon and Aspirin. There is only one set of observations taken during the transfer at 11.30pm on 3 September 2009 which gives her Glasgow Como Scale (GCS) as 15, pulse as 88, BP as 120/80 and respirations as 18, there is no oxygen saturation. That appears to be the extent of the information on the Patient Care Record.[23]

[23] Exhibit 1 Vol 2 Tab 1 Tab G

TRIAGE



The above diagram depicts part of the floor plan of the ED at RPH, exhibit "2"
The yellow highlight indicates the triage area.

The triage RN on duty when the ambulance transferring the deceased arrived at RPH from JHC was Magdalene Gachokah. RN Gachokah is a fully qualified and competent RN. She has been trained on how to apply the Australasian Triage Score (ATS) and understands the clinical assessments required to efficiently triage patients attending in an

emergency department to prioritise their medical assessments.[24]

The protocol with a patient being transferred from another hospital is that the patient will be transferred when stable, unless provided with an escort. If the patient's status changes the ambulance staff upgrade the patient's priority and call through to the receiving hospital that the patient's priority transport has been upgraded.

RN Gachokah's shift started at 7pm on Thursday 3 September 2009. It is evident 3 September 2009 was an extremely busy period for hospitals and ambulances across the metropolitan area. During Dr Henry's evidence at the inquest it became apparent that at around midnight the ED had 53 patients located within the department, where its capacity is in the order of 39 patients.[25]

RN Gachokah stated ambulances presented to RPH ED by accessing corridor 3296[26] outside the desk area where the triage nurses have access to the EDIS computer. On the arrival of a patient the ambulance officers brought their trolley into the corridor with the accompanying documentation and their Patient Care Record. They provided the triage nurse with the basic information with

[24] t 6.11.13 p321
[25] t 7.11.13 p404
[26] t 6.11.13 p325

respect to the patient they were transferring. Alongside the triage area are chutes down which the accompanying documentation was projected, in 2009, and taken via a hydraulic system to the clerks who performed an administrative function in collating the admission/transfer documentation with a patient's relevant history, if applicable.

RN Gachokah has no specific memory of there being any urgency surrounding the deceased's admission. She has no memory of reading any transfer documentation or the ambulance form, however, it is clear from her triage documentation she was provided with information for the purposes of the admission. RN Gachokah believes this came from the ambulance officers verbally. When RN Gachokah accessed EDIS she was provided with the information relating to Dr Futtermenger's telephone call to the ED and entered on EDIS in Dr Henry's name.

The additional information provided by Dr Chan to Nurse Down at approximately 8pm did not self-populate into the deceased's screen due to the error in the surname. There are no other entries in EDIS relating to later communication from the AAU to ED. Consequently RN Gachokah only understood the deceased to be an expected patient the ambulance personnel had brought her as a non-urgent

transfer. All other information was gleaned from the ambulance officers.

In evidence RN Gachokah did not believe she had viewed Dr Chan's discharge letter at the time of triage but accepted it would have been in the documentation brought by the ambulance officers for the deceased.[27]

The deceased's triage documentation reflects the information on the 5.10pm EDIS[28] screen without any update following the communication between JHC and RPH at about 8.10pm around the reasons for the transfer and the acceptance of the transfer.[29]

RN Gachokah indicated in her primary assessment the deceased's airway was patent, her breathing was unremarkable, her colour was unremarkable, as was her skin, her pulse was regular and she was alert.[30] RN Gachokah recorded the deceased's allergies as Maxolon and Aspirin and listed her medications, presumably from the accompanying documentation because the Patient Care Record refers the reader to the accompanying list. In addition, the previous medical/social history has been provided from the discharge information.

[27] t 6.11.13 p326
[28] Exhibit 3
[29] Exhibit 4
[30] t 6.11.13 p338

It is clear from the RPH triage nursing assessment the information provided from JHC was present at the time of triage, although I accept RN Gachokah's evidence she did not view it herself but relied on the input from the ambulance officers holding the documentation prior to it being placed into the hydraulic chute with the St John Ambulance Patient Care Record.

The St John Ambulance Patient Care Record is the only documentation which found its way onto the deceased's file.

In evidence RN Gachokah indicated had she seen Dr Chan's discharge letter in conjunction with the history she would have been concerned enough by the pathology results provided to consider providing the deceased with a triage score of 2.[31] It is clear the deceased's physical presentation indicated she was haemodynamically stable as per RN Gachokah's primary assessment, however, the accompanying pathology results would have raised a concern.

In reality the accompanying pathology results related to the deceased's bloods between 5 and 6pm that day. That is some 6 hours prior to her presentation at RPH ED. One of JHC's concerns was the fact the deceased's state was

[31] t 6.11.13 p344

accelerating and that was one of the reasons they were not prepared to maintain her at JHC overnight.

Without the relevant information from the discharge letter RN Gachokah triaged the deceased with a score of 3. A score of 3 aims to ensure a patient is medically assessed within 30 minutes from the time of admission, although it is accepted this target is only achieved in 75% of cases across Australia.

4. DESCRIPTION OF SCALE

ATS CATEGORY	TREATMENT ACUITY (Maximum waiting time)	PERFORMANCE INDICATOR THRESHOLD
ATS 1	Immediate	100%
ATS 2	10 minutes	80%
ATS 3	30 minutes	75%
ATS 4	60 minutes	70%
ATS 5	120 minutes	70%

The above graph is an extract from the Policy on The Australasian Triage Scale prepared by the Australasian College for Emergency Medicine
Exhibit "9"

RN Gachokah recalled the ambulance officers leaving once they had provided her with the deceased's history and sent the documents, she assumes, down the chute. There was nothing to suggest to RN Gachokah the deceased was in need of urgent medical attention from her primary assessment because she was rousable and appropriately

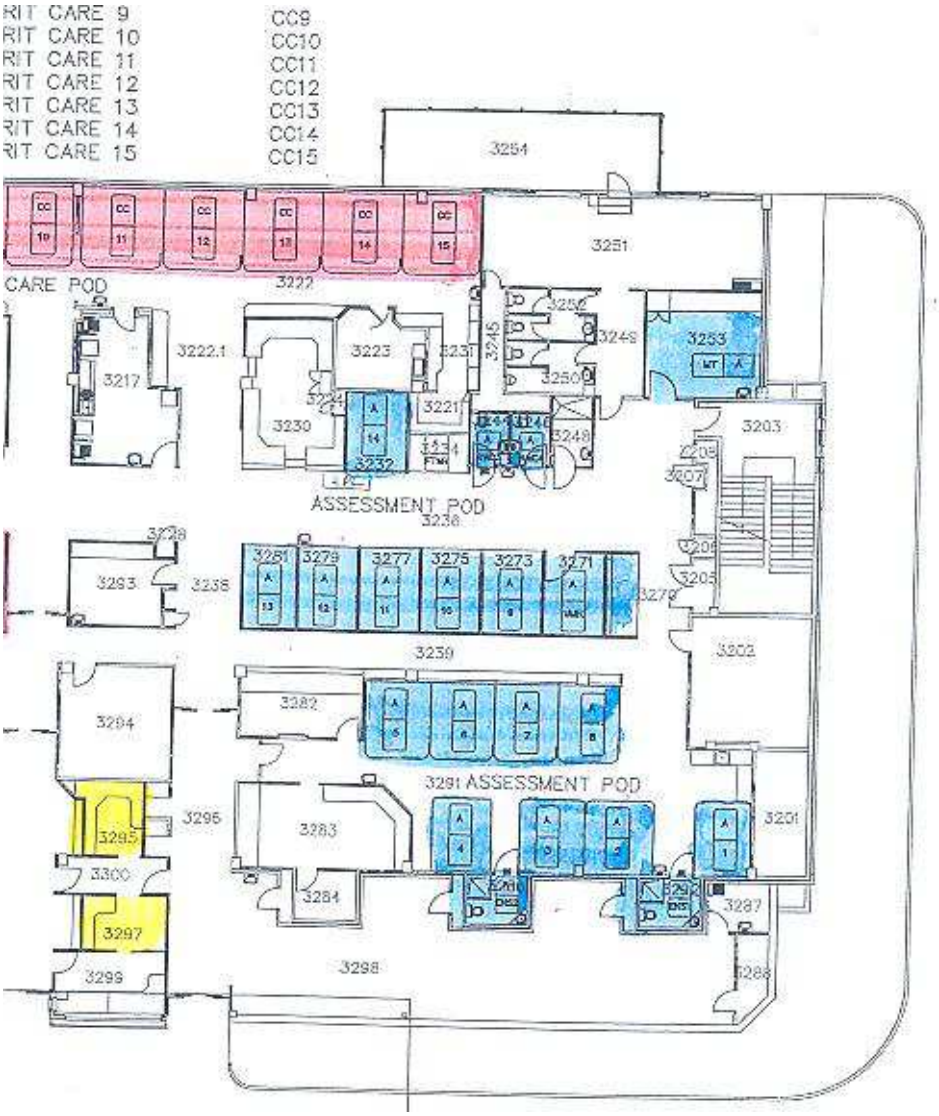
responsive and had been transferred as stable. She did not have the information from the 8.10pm EDIS screen so did not contact the AAU medical registrar.

RN Gachokah recommended the deceased be placed in ACOR (the Assessment Corridor) because she was not a direct admission. She understood from the EDIS screen the deceased was expected by the medical registrar in the AAU.

RN Gachokah indicated she last saw the deceased at 10 minutes past midnight on 4 September 2009 when she was taken from the triage area by a patient care assistant (PCA). The aim was for the deceased to be medically assessed by 0040 hours.

IN ED

Dr Henry advised that on a practical level RPH ED is divided into a number of teams responsible for the placement and secondary nursing assessments of patients waiting for their medical assessment in accordance with their triage scores. The team leader of the team (pod) responsible for the deceased that evening was Hollee Wilson. She is a well qualified and experienced clinical nurse at RPH. She was responsible for placements in ACOR which contained 14 cubicles.



The above diagram depicts part of the floor plan of the ED at RPH, exhibit "2" The blue highlighted areas indicate the assessment area.

CN Wilson considered ACOR as suitable for patients with ATS 2 to 5, depending upon their status and requirement for cardiac monitoring.

The roster for the 7pm to 7.30am shift nominated CN Wilson as A1, team leader, and allocated both RN Murray Whitson

and EN Sarah Connor to areas A1 to 6.[32] There was some uncertainty with the nurses when giving evidence as to what exactly A1 to 6 was in 2009, however, EN Connor believed it did not include the minor theatre[33] as did RN Whitson, however he also stated one worked where one was directed.[34] CN Wilson believed they had different allocations from that on the roster. She believed EN Connor was in A7-9, while RN Whitson was A10-12.

The evidence indicates that on allocation to an area in ED the PCAs wheeled the patients from triage to the appropriate area. In the case of the deceased this was ACOR. As the POD leader for ACOR, CN Wilson would have had the deceased's Triage Assessment Form only.

Due to the number of patients in ED that evening CN Wilson did not have a spare cubicle for the deceased for her medical assessment, or even her secondary nursing assessment. CN Wilson understood there would soon be a space available in the Emergency Step Down Area (ESA) and intended the deceased be placed there for her secondary nursing assessment in preparation for her medical assessment, once a cubicle became available.[35]

[32] Exhibit 8
[33] t 6.11.13 p357
[34] t 5.11.13 p265
[35] t 6.11.13 p288

The ESA was used as a holding bay for stable patients who had been placed in ED teams and were to be transferred to a ward bed once one became available. The area contains the same basic equipment as the usual assessment bays (oxygen/suction) and there is a resuscitation trolley located in the area as a crash cart.

CN Wilson had three patients in ACOR awaiting allocation of a cubicle for their secondary nursing assessment. They were in the corridor and so presented as an obstacle for fire escape access.

CN Wilson believed she observed the deceased for five to ten minutes before she had the opportunity to speak with her and she did so while reviewing the triage form and noting that she was transferred from JHC as an expected patient for general medicine. She was not aware of the additional information on EDIS for a patient bearing the surname NIELON because it had not been populated onto the computer entry for NIELSON.

From the triage form and the deceased's responses CN Wilson considered the deceased had an unusual medical history in the recent past which may affect her susceptibility to illness. She could see nothing about the triage form or her primary assessment of the deceased which alerted her to the fact the deceased may become acutely

unwell without warning. She believed she would have taken the deceased's pulse whilst she was speaking with her and cannot recall anything unusual,[36] or she would have taken that into account when allocating the deceased to the minor theatre which did not have cardiac monitoring capacity.

CN Wilson was not concerned about the deceased's immediate condition and as a consequence was comfortable she could be placed in the minor theatre pending her moving to the ESA cubicle once it became available. She knew the deceased could speak because she had spoken with her, and she believed the deceased would be able to call for help in the event her circumstances changed. There was not a patient call button in the minor theatre in 2009.

Due to the fact the area was so busy CN Wilson did not believe any of the nurses available to perform the secondary assessment of the deceased would be able to do so before she had moved the deceased to ESA. She had not informed the nurses there was a patient in the minor theatre when she directed the deceased be placed there at 0.24am

The minor theatre had no cardiac monitor or oxygen availability. It was in a corner separate from the main area.

[36] t 5.11.13 p244

Since these events there has been a policy decision the minor theatre not be used for the holding of patients and on the rare occasions it is a call button was placed there in 2010.[37] Although staff claimed it was not in regular use in 2009 it is clear it was used when the circumstances in ED warranted it.[38]

The purpose of the secondary nursing assessment is to perform a comprehensive clinical assessment of the patient prior to the medical assessment for the assistance of the medical assessment. The patient is usually changed into a hospital gown and full clinical observations taken including blood pressure, pulse rate, heart rate and oxygen saturations. The nurse performing the secondary assessment would still not have any accompanying documentation because it would still be in the main part of the ED ready for collection by the next doctor available to "pick up" that patient.

From CN Wilson's recollection and her viewing of the relevant EDIS screen CN Wilson is satisfied she was in the process of changing the deceased's placement from the minor theatre to ESA at approximately 0.35am on 4 September 2009.[39] It was her intention the deceased be moved as soon as a PCA was available.

[37] Exhibit 14
[38] t 5.11.13 p268
[39] t 5.11.13 p248

The evidence of RN Murray Whitson is he was an agency nurse working in RPH ED on a night shift from 3 to 4 September 2009 from 9pm until 7.30am. In his evidence he stated he was responsible for a block of patients with another nurse. This is consistent with the roster Exhibit 8. He stated he had been for a meal break at approximately midnight and on his return from his break another nurse on his team informed him the deceased had come into the department.[40] He did a round of his patients which he believed included the deceased now in the minor theatre. On his entering the minor theatre he found the deceased to be unresponsive and not breathing. He pressed the crash call button to indicate a medical emergency and commenced CPR until help arrived which he believed happened in 30 seconds.[41] The arrest team arrived and he handed over to them. The deceased was taken through to resuscitation and he returned to his other duties. He made an entry on the deceased's triage assessment form about 45 minutes later when he had access to it:

> "pt found in unresponsive state in minor theatres, pulseless not breathing, blue lips, crash call called."[42]

The resuscitation team's entries commence at 00.52 am on 4 September 2009 as follows:

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[40] t 5.11.13 p266
[41] Exhibit 1 Vol 1 Tab 33
[42] Exhibit 1 Vol 2 Tab 1 A

> "To resus no airway – CPR in progress known to have difficult IVC access trying intraossess." [sic] (intraosseous – into the bone).[43]

The deceased's transfer documentation from JHC, including Dr Chan's discharge letter, was never located although the accompanying Patient Care Record was. The information on the deceased's triage assessment form indicates the documentation from JHC did reach RPH because some of that information is reflected in the information on the triage form presumably as a result of the Ambulance Officers reading it to RN Gachokah.

RESUSCITATION

An ECG indicated the deceased had no heart activity (asystole) and she was resuscitated. Intraosseous access was established because vascular access could not be obtained. The deceased was then given Atropine and Adrenaline and a heart rhythm was obtained.

The deceased had a further asystolic episode at approximately 1.18am and CPR was recommenced. She again established a pulse at 1.21am.

The deceased's sister was notified by mobile phone shortly after the deceased's arrests and advised to attend RPH. Ms Cooper and her husband arrived at RPH at around 2.30am on 4 September and spoke to the triage nurse

[43] Exhibit 1 Vol 2 Tab 1 A

indicating she was looking for her sister. Ms Cooper was taken through the ED towards a group of beds in the resus area and it was there they spoke with the registrar who had spoken to her on the telephone. He took them to see the deceased. The registrar explained the deceased had suffered a heart attack. Mrs Cooper was advised the deceased would be moved from the resus area into ICU where further investigations would be undertaken to determine the deceased's prognosis.[44]

ICU

While in the Intensive Care Unit the deceased was under the care of Dr Greg McGrath, a Senior Staff Intensivist at RPH ICU.

The deceased developed progressive renal failure and had to undergo venovenous haemofiltration, a method of filtrating the blood in acute kidney failure.

The ulcers on her left leg grew Staphylococcus aureus and gram negative rods which were treated with antibiotics. She was continued on inotropes but failed to make any neurological process and it was evident she had severe hypoxic brain damage as a result of her asystolic episodes.

Dr McGrath stated the most likely cause of the deceased's cardiac arrest in ED was as the result of a malignant cardiac

[44] Exhibit 12

dysrhythmia. This is an abnormal rhythm of the heart which results in the loss of contraction of the heart with subsequent lack of blood supply to vital organs like the brain. The deceased was known to have a diabetic cardiomyopathy with severe ventricular diastolic dysfunction which would have predisposed her to arrhythmias.

It is clear that although the resus team managed to restart the deceased's heart she had been for a period of time without sufficient oxygenation of her brain tissue which resulted in hypoxic brain injury. The deceased was very vulnerable to any form of insult to her system and would have been predisposed to a severe outcome from any insult. As Dr McGrath stated in evidence the first treatment for a period of hypoxia is to place the patient on full life support, which was done for the deceased, and then allow the body to attempt to recover from the injury. In the case of a mild event it may be possible for the recovery to be complete, the more serious the injury the less likely there is to be recovery from the event. It was a matter of wait and see with full support as to whether there was a prognosis which would be compatible with independent or assisted survival.

In the case of the deceased it became apparent to the doctors the injury to the deceased's brain was such she

would never recover to be herself again. She would certainly never be able to function without full life support.[45]

By the 10 September 2009 Dr McGrath was concerned the deceased was very vulnerable to further cardiac events which would require aggressive resuscitation. He was not of the view aggressive resuscitation would do anything but further harm the deceased's medical status. The deceased was already unable to withstand her current situation and any further harm would only reduce her functioning, if indeed she survived at all.[46]

The ICU found it difficult to communicate with the deceased's family due to the need for her father to be away from Perth from time to time. Consequently Dr McGrath found he was unable to discuss the implications of the deceased's situation with the family when the prognosis was still in issue. Dr McGrath's wish was to discuss matters face-to-face with family members rather than over a telephone. While attempting to arrange family meetings Dr McGrath asked doctors within RPH who had prior knowledge of the deceased to assist him with his assessment for the deceased. He had the deceased visited by Dr Seymour who had been involved with the deceased in different capacities during her previous stays at RPH. He also received input from

[45] t 5.11.13 p167-8
[46] t 5.11.13 p171

Dr Stanton, an Endocrinologist who had treated the deceased previously.[47]

Dr Seymour gave evidence she had discussed life issues with the deceased and was satisfied the deceased's wishes were to live independently at home and that she was totally resistant to any type of residential care. Dr Seymour was of the view the deceased would not wish to be resuscitated in the event of a further cardiac event merely to return to a vegetative state. Dr Seymour explained in evidence she felt it would be against the deceased's wishes to prolong care on life support with no function if there was no prospect of improvement.

Following Dr Seymour and Dr Stanton's input into the deceased's medical notes Dr McGrath had a conversation with Dr Seymour to confirm Dr Seymour's view and her consultation with Dr Stanton.[48] Dr McGrath believed the deceased had *"No prospects of improvement beyond comatose existence and was until the end of her life not able to be weaned from the ventilator because of her recurrent apnoea caused by her hypoxic brain injury."* As a result of those discussions with the deceased's clinicians Dr McGrath signed a Not for Resuscitation Order on the deceased's file on 10 September 2009 at 10.30am.[49]

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[47] t 4.11.13 p27
[48] t 4.11.13 p31-2
[49] Exhibit 1 Vol 2 Tab H

In evidence Dr McGrath said the purpose of the Not for Resuscitation Order was to ensure that no further harm was done to the deceased. That was also his view of the withdrawal of some of the deceased's medications. It was not done to end her life but rather to do her no further harm pending the arrangements for a family discussion.[50]

That family discussion did take place on 12 September 2009 and by that time the deceased's family understood her prognosis was dire and did not ask the Not for Resuscitation Order be rescinded.

In evidence Mr Nielson indicated he understood by that time nothing could be done for his daughter and she would not have wanted to live on life support in a comatose state.

Following the Not for Resuscitation Order all drugs apart from the deceased's insulin and heparin were ceased and on 15 September 2009 the deceased passed away.

POST MORTEM REPORT

A post mortem examination of the deceased was conducted by Dr Clive Cooke, the Chief Forensic Pathologist at PathWest. In his report he noted:

- Healing erosions to the skin of her legs

[50] t 5.11.13 p175

- Congestion of the lungs with features suggestive of bronchopneumonia (often a feature with patients requiring ventilation)
- Congestion of the liver and spleen
- Enlargement of lymph nodes,
- Fibrous scarring of the pericardial cavity around the heart
- Pallor of the kidneys
- Neuropathology confirmed the presence of hypoxic brain injury.

The toxicological analysis showed some prescribed-type medications and the deceased's glucose levels were not raised.

Dr Cooke gave the deceased's cause of death as hypoxic brain injury following an unexplained cardio-respiratory arrest.

Microbiology did not reveal any organisms, however, in view of the antibiotic therapy the deceased had been provided with that was to be expected. The erosions on her legs were healing by the time she had died.

FAMILY CONCERNS

The mother of the deceased died shortly after her daughter's death and the rest of the deceased's family as represented

by her father, Mr Nielson, wished to understand how the deceased had left JHC ED, by ambulance, arrived at RPH ED and was within an hour incapable of sustaining independent life.

Following the deceased's death they were also concerned the Not for Resuscitation Order had been signed on 10 September 2009 without direct input with family members. Mr Nielson was concerned that despite his occupation as a truck driver he was always within mobile contact. In the event there was no signal any message left on his mobile would have been dealt with when he was next available.

I do not believe the family are still concerned with the Not for Resuscitation Order having heard the evidence in court. They understood on 12 September 2009 the deceased would no longer be in a position to live an independent life at home, or indeed any form of life whatsoever.

In those circumstances I do not intend to deal with that matter further but will review the evidence with respect to the relatively insignificant occurrences which led to such a final tragic outcome for all people involved in the deceased's death.

THE EFFECT OF THE EVIDENCE

It is clear from the evidence the deceased was a young, 24 year old woman, who was determined to lead as normal a life as was possible despite the accumulation of a number of serious comorbidities which had essentially arisen due to the fact she was a brittle Type I diabetic. By the time she was 24 she had a number of comorbidities arising from her primary illness which put her in the category of someone requiring acute geriatric care to enable her to have any quality of life.

The deceased was very vulnerable to minor traumas and insults to her physical health which, in a normal 24 year old, would be of little or no consequence.[51] She was in the category of person whose quantity of life may be extended by a deterioration in the quality of her life. The deceased wanted quality of life, and embarked upon a course which would give her as much independence as possible, with the assistance of her family, allowing her be as independent as was feasible for somebody in her situation. She was resistant to any form of residential care and consequently would be exposed, by normal living, to additional insults to her already compromised system.

Arrangements were made for her to be cared for by Silver Chain and Hospital in the Home (HITH) Program.

[51] t 5.11.13 p182-186

On the 2 September 2009 the deceased was seen at home by a Silver Chain doctor who prescribed her the antibiotic cephalexin due to ruptured blisters on her lower limbs. The following day the Silver Chain nurse reviewed her and advised her to attend hospital due to the extent of the rash and its accelerating features. As a result the deceased presented to the JHC/ED on 3 September 2009.

It is clear the deceased was seen promptly upon presentation at JHC ED, despite her triage score of 3. Dr Chan saw her and commenced an assessment almost immediately which he discussed with his supervising registrar. From their assessment the JHC doctors were concerned enough about the deceased's medical history, in conjunction with her current skin lesions, to contact RPH as the appropriate tertiary institution to deal with her situation due to their extensive knowledge of the deceased and their access to tertiary dermatological review.

Communication from JHC to RPH was comprehensive. Dr Chan rang RPH and was put in touch with the medical registrar of the Acute Assessment Unit on shift, Dr Futtermenger. He obviously communicated his concerns because Dr Futtermenger discussed additional information she required in order to accept the deceased on a hospital transfer. The fact Dr Futtermenger informed RPH ED of the

situation at that point in time is reflected on the EDIS entry timed at 5.10pm[52].

There was then a delay while the results of the additional investigations were received and Dr Chan persuaded the deceased she really would be better served by attending at RPH, who both knew her and were in a position to deal with her skin condition.

Once the deceased had been persuaded she should go to RPH and the investigations were completed, Dr Chan rang Dr Futtermenger again and spoke with her. Although Dr Futtermenger cannot recall that conversation she stated in evidence the results Dr Chan stated he gave to her would have prompted her to agree to the deceased's transfer. Everything Dr Chan said he did accorded with her usual practice.[53] Dr Futtermenger accepts she told Dr Chan she would accept transfer of the deceased and that she would inform the ED to expect the deceased and page her on arrival. Dr Chan also telephoned RPH ED and advised them he was a transferring doctor and the reasons for the transfer. Dr Futtermenger agreed in evidence that was the accepted procedure. Dr Chan asked Dr Futtermenger be paged on the deceased's arrival. There is no record of an entry on EDIS

[52] Exhibit 3
[53] t 6.11.13 p298

on behalf of Dr Futtermenger between 8 and 9pm on 3 September 2009.

It is at this point the beginning of a difficulty with communication appears to commence. As Dr Platell stated on behalf of RPH, communication is everything when dealing with patients with the potential to deteriorate suddenly and unexpectedly.

Dr Futtermenger cannot recall specifically, but agrees she was in a position to be expecting the arrival of the deceased in RPH. It was accepted practice for transfers out of hours to go through the ED and undergo medical assessment. The doctor accepting transfer would be advised at some point. Dr Futtermenger agreed on occasion there would be a direct call to the doctors in AAU but there was not an expectation doctors in AAU would follow-up expected patients within a specified time. Dr Futtermenger cannot recall if there were handover sheets or whiteboards reflecting patients in AAU and those expected to AAU for the purposes of handover. Dr Futtermenger agreed that if the arrangements had been made shortly after 8pm there would be an expectation the deceased would arrive sometime after 9pm.

The fact there is no traceable evidence of notification to ED by Dr Futtermenger of the deceased's arrival is not

outstandingly significant in itself. However, it is to be hoped, had a call been received from Dr Futtermenger, she would have outlined the results of the clinical investigations provided to her by Dr Chan which had persuaded her the deceased should be transferred to the hospital. They would have been on EDIS for triage.

The second miscommunication at that stage was the recording of the deceased's surname on RPH EDIS when Dr Chan telephoned the transfer coordinator, Louise Down, and advised her he was transferring the deceased to RPH. The entry in EDIS for that telephone call was placed under the surname NEILON.[54] While the deceased's address, date of birth, and complaint issues tied in quite appropriately with the earlier EDIS entry, the fact of the misspelling in the surname meant the RPH EDIS system did not repopulate the deceased's entry on EDIS[55] with the additional information from Dr Chan including the need to page the medical registrar on arrival. It is for this reason a call from Dr Futtermenger to the ED for the purposes of EDIS entries would have been invaluable. It would be unlikely the deceased's name would be recorded inaccurately twice.

The next significant difficulty for the deceased was the delay in transfer from JHC to RPH due to the unavailability of

[54] Exhibit 4
[55] Exhibit 3

St John Ambulance transfers for apparently haemodynamically stable hospital patients on that night. Aside from the time taken to persuade the deceased and obtain sufficient results for RPH to accept transfer, there was then an additional delay for the deceased from 8.07pm until 11.20pm before the availability of an ambulance.

All hospital emergency departments appear to have been working well above capacity on the evening of 3 September 2009. JHC had been on ambulance divert, there had been a number of priority 1 calls for the St John Ambulance service that evening and by the time there were ambulances available to transfer the deceased most of the major hospital emergency departments were overfilled.

The significance of the delay for the deceased was, although she appeared to be haemodynamically stable from a primary assessment perspective, her blood results, which had persuaded Dr Futtermenger she should be transferred that night, were some six hours out of date by the time the deceased was received at RPH ED. Some categories of patients do appear to remain haemodynamically stable for surprising lengths of time. When they decompensate they do so rapidly, often without warning and with serious outcomes.

Those blood results in themselves had caused Dr Futtermenger enough concern to agree to transfer of the deceased. There is no record of the results giving cause for concern on EDIS.

At the time the deceased was admitted to RPH ED, 0.01am on 4 September 2009, Dr Futtermenger was no longer on shift but had handed over to Dr Kruger.

Dr Kruger indicated his shift commenced on the 3 September 2009 at 10pm and he and Dr Futtermenger would have been together in AAU for an hour for the purposes of handover. Dr Kruger recalled handover being on printed sheets of paper which identified patients in the AAU as well as those expected. He was provided with a hand over for the deceased by Dr Futtermenger as an expected patient, without a specific time. Dr Kruger believed the printed sheets were destroyed following their own handover to the next oncoming shift. As a result he cannot remember the information he was given about the deceased, but was clear he was expecting her into the AAU some time during his shift.

Dr Kruger was not paged as the AAU medical registrar on duty on the deceased's arrival at RPH ED. He stated there was no expectation the medical registrar from AAU attend ED to "follow up" expected patients, only attend when

contacted by the ED with respect to a medical assessment. Dr Kluger coincidentally observed the deceased in ED during her resuscitation due to his attendance there with respect to another patient. He recognised her because he had been on her treating endocrinology team earlier in the year.

The St John Ambulance officers recorded on the Patient Care Record the deceased was stable from their observations of her and her responses to questions. They had queried her breathing and she had acknowledged she usually had difficulties with noisy breathing following a drink. She had slept for most of the trip and on arrival at RPH ED the ambulance officers had handed her over to the triage nurse.

The effect of the difficulty with communication via EDIS came into operation on triage nurse Gachokah's triage of the deceased.

RN Gachokah did not look in the documentation accompanying the deceased from JHC and took her history from the ambulance officers' handover. The only EDIS information she had was that the deceased had been discussed with the medical registrar in AAU between 5 and 5.30pm on 3 September 2009. She did not have the information from the later telephone call from Dr Chan, nor anything additional on EDIS from AAU.

RN Gachokah did not see Dr Chan's accompanying discharge letter, and completed her primary assessment from her communications with the deceased and the information provided verbally by the ambulance officers. She triaged the deceased as ATS 3. This is consistent with the deceased's triage at JHC approximately 12 hours earlier. She had a history of an accelerating skin condition but no indication there might be some instability in the deceased's biochemistry.

In evidence, when RN Gachokah was shown the JHC discharge letter, she agreed there was enough in the deceased's history and pathology sections of the discharge letter to have caused her concern as a triage nurse. Dr Futtermenger and CN Wilson indicated they could appreciate a concern from the discharge letter, however, they were not clear it would have been apparent to a triage nurse from the layout of the information.

RN Gachokah did not have that difficulty and agreed had she had access to the discharge letter alone she would have considered a triage score of 2 due to the history and some of the abnormal readings. Equally, she was clear that if she had had the information on EDIS relevant to the deceased, but entered under the wrong name at 8.10pm, she would have contacted the medical registrar on the pager.

This is the third difficulty with communication to affect the deceased.

In addition to RN Gachokah's original triage assessment of 3, CN Wilson also performed a primary assessment on the deceased when she made the decision she was stable enough to go into the minor theatre before her secondary nursing assessment.

CN Wilson was also not in possession of the deceased's discharge information from JHC.

CN Wilson, who I accept is an experienced and competent clinical nurse, indicated in evidence it was her understanding she had the deceased placed in the minor theatre at approximately 0.24am at which time she judged the deceased to be stable. The deceased's colour was reasonable, she was responsive and appropriate to questions asked of her by CN Wilson, including the fact she felt cold.

CN Wilson believed the deceased would be capable of calling out for assistance from the minor theatre which is around the corner from the control desk where she was located. It was CN Wilson's intention to have the deceased moved to ESA for her secondary assessment at 0.35am and

she had already logged that change of location on EDIS in anticipation of it happening.

Unfortunately it did not happen. The deceased was still in the minor theatre when located there at approximately 0.51am. The deceased had not been observed for approximately 27 minutes. Had the ED in the early hours of the 4 September 2009 been in a position to complete the deceased's medical assessment within 30 minutes of triage, she should have been seen by 0.40am. CN Wilson was also not in possession of the deceased's discharge information from JHC because it was theoretically with the clerks in preparation for collection by the doctor who was to have performed her medical assessment.

It is impossible to say when between 0.24am and 0.51am the deceased arrested. Even with an ATS of 2 the deceased may still have suffered an arrest while in ED. The whole issue of delay, since her blood was taken between 5 and 6pm at JHC, was an unrecognised risk for the deceased.

Realistically, the failure of RPH ED to perform within the Australasian Triage Score Assessment Time in the conditions in ED that night was not unexpected.

Tragically, for the deceased, it was the culmination of a delay in her being appropriately medically assessed since

8pm on the 3 September 2009. In reality the delay for the deceased was in the order of hours from when her bloods were initially noted to be of some concern, not minutes.

Errors in communication aligned with delays due to the pressure on all health services during that time period resulted in a catastrophic outcome for the deceased, her family, and all those caring for her during the last months of her life.

EXPERT OVERVIEW

The court sought the assistance of a Consultant Emergency Physician, Dr Sweetman, to assist with a review of the documentation with respect to the deceased.

Dr Sweetman noted the deceased was a 24 year old female with a complex past medical history well documented in the records provided to the court. She had been transferred to RPH for treatment of a desquamating skin condition and suffered an unwitnessed cardiac arrest within the ED 42 minutes after arrival. She had been placed in a minor theatre area following her triage, without any vital observations (temperature, pulse rate, blood pressure, respiratory rate with pulse oximetry and a finger prick blood glucose analysis) taken to check her status, prior to placing her in an unmonitored and invisible area of ED awaiting medical assessment.

In Dr Sweetman's analysis vital sign observations should have been performed on arrival in the ED following triage, and then be repeated at intervals consistent with a patient's triage score.

In the case of the deceased Dr Sweetman was of the view that, with the full information surrounding the deceased's transfer, her triage score should have been ATS 2 (to be seen within 10 minutes). Dr Sweetman pointed out the additional information relevant to her triage score, but not incorporated in the triage decision were those that were relevant to the decision, to transfer the deceased in the first place.

That information consisted of:

- original clinical concern about her condition
- Impaired renal function with evidence of hyperkalaemia
- Uncertain aetiology of her illness with a rash spreading on the limbs and markedly raised inflammatory markers
- Background history of brittle diabetes mellitus, poor cardiac reserve and prior history of cardiac arrest.[56]

Dr Sweetman considered the deceased's initial management and treatment at JHC was completed within a reasonable timeframe.

Dr Chan had assessed the deceased as having a serious condition which warranted her transfer to a centre who was

[56] Exhibit 1 Vol 1 Tab 29

familiar with her medical history and had the provision for specialist assessment relevant to her presenting condition. Dr Chan had made contact with an appropriate centre, RPH, to arrange such a transfer and had involved a senior registrar in emergency medicine in that decision making process. While done in conjunction with input from that senior registrar, baseline investigations had been undertaken at JHC which confirmed the initial clinical impression of an evolving illness, with raised inflammatory markers, and deterioration in the deceased's renal function with hyperkalaemia.

Dr Sweetman thought the provision of intravenous fluid in conjunction with the deceased's known impaired heart function and relative cardiovascular stability at that point in time was reasonable, and the decision to omit antibiotics due to concerns her presenting problem may be the result of a drug reaction was also reasonable. This was on the understanding there was an intention to transfer her for urgent assessment.

Dr Sweetman thought the delay between the decision to transfer, and the reality of transfer, was unreasonable in view of the known difficulties for the deceased, however, they are a reality with which hospitals have to contend.

On the deceased's arrival at RPH ED Dr Sweetman considered it would be reasonable, despite the potential for hindsight bias, for the deceased to have been given an ATS 2 due to:

- Clinical concern by her referring clinicians
- Documented hyperkalaemia
- Diagnostic uncertainty in view of the spreading skin lesions
- Her background multiple comorbidities
- Renal impairment
- Compromised cardiac function
- Previous episode of cardiac arrest
- Evidence of raised inflammatory markers.

He agreed the immediate assessment at triage would have taken those factors into account, along with a review of her airway, breathing, and circulation (ABC) which was essentially the triage assessment, without the above information. Had all those parameters been understood he considered the deceased should have been transferred to a cubicle in the assessment area of the ED that had cardiac monitoring capability.

At ATS 2 it would be reasonable to expect the deceased to have a secondary nursing assessment of her vital signs taken immediately, with repeat observations at 10 minute windows. Dr Sweetman considered the deceased should have been monitored in view of her known clinical situation, by way of continuous ECG, non-invasive blood pressure and pulse oximetry. Blood sugar levels testing at the bedside would be essential.

In addition, the fact of her compromised cardiac function should have encouraged venous blood gas analysis to inform those caring for her as to her electrolyte status. She should have had intravenous catheter access confirmed and early senior medical review of her condition regarding her immediate care and disposition.

The initial assessment should also have included a decision regarding where within the assessment area was a reasonable level of care pending her full assessment.

I accept that, if RPH ED had had an assessment cubicle available, the deceased would have been placed in such an area, despite her triage score of 3. It was because her ABC, without the clinical information in the discharge summary appeared appropriate she was assessed as a 3, and this supported the decision to place her in the minor theatre.

Dr Sweetman acknowledged most hospital transfers require assessment via the accepting ED even though the transfer is for a higher level of care. Dr Sweetman did not consider the entries on EDIS for the deceased (accepting there was a misspelling in the second entry) were as comprehensive as the information which was available to RPH at the time of those entries.

In particular, Dr Sweetman considered the second EDIS entry (NIELON), while noting the deceased's condition and background, did not specifically include the information he believed was communicated by Dr Chan to Dr Futtermenger. That was:

- Degree of renal impairment
- Documented hyperkalaemia
- Elevated inflammatory markers
- Persisting tachycardia
- Concern about sepsis.

Dr Sweetman was of the view had that information been placed on EDIS, it was sufficiently obvious the deceased warranted ATS 2 status.

Dr Sweetman pointed out more recently emergency departments have moved from seeing patients in ATS order for categories 3, 4 and 5 as part of the National Emergency Access Target. Patients are now seen in order of arrival unless they are what would have been the equivalent of the old ATS 1s and 2s. The order of arrival was the target for RPH ED in 2009, and that was supposed to have been within the 30 minutes of arrival.

Dr Sweetman also advised that on the information from the documentation available he was of the view the deceased's cardiac arrest could have occurred at any time following the blood results documented on 3 September

2009.[57] It could have occurred even with appropriate management and monitoring and, from Dr McGrath's perspective, due to the deceased's prior co-morbidities it is impossible to state with any certainty the prognosis for the deceased would have been any better.

Earlier resuscitation may have improved her chances of survival but perhaps not to a level at which she would have been able to continue with her independent living.

CONCLUSION AS TO THE DEATH OF THE DECEASED

I am satisfied the deceased was a 24 year old female who had been living with the clinical conditions brought on by her diagnosis of Brittle Type 1 Diabetes since at least 9 years of age. In addition she had suffered eating disorders and depression which had resulted in malnutrition and poor control of her diabetes requiring frequent and prolonged inpatient care.

As a child she had attended Princess Margaret Hospital (PMH) and when she became an adult was mostly seen by RPH and JHC. She was particularly vulnerable to infections, diabetic ketoacidosis and hypoglycaemic episodes. Her diabetes was categorised as extremely brittle and this occurs in about 1 to 2% of diabetics and is characterised by dramatic and recurrent swings in glucose levels, often

[57] t 4.11.13 p144

occurring for no apparent reason. This can result in irregular and unpredictable hyperglycaemia and serious hypoglycaemia.

The deceased developed major complications from her diabetes which included recurrent infection, kidney disease, damage to the retina of her eyes and cataracts, autonomic and peripheral neuropathy and osteoporosis. Arising out of the osteoporosis she suffered falls and fractures which necessitated extended inpatient stays. She also developed a depressive illness which contributed to her poor health and left her mostly wheelchair bound.

Despite all of these difficulties the deceased was regarded by her family as being extremely positive about her life and the things she hoped to achieve. Her extended family was fully supportive of her and prepared to care for her and provide as much assistance as any family could provide for somebody with the deceased's difficulties.

On the 17 July 2009 the deceased contracted Swine Flu and was admitted to RPH. She suffered an episode of pulseless ventricular activity without a definite cause. She required ventilation and was transferred to the ICU following that episode. After four days in ICU she was transferred back to the general ward where she stayed until 24 August 2009

where she discharged herself against medical advice (DAMA). She was assisted by both RITH and HITH.

Silver Chain persuaded the deceased she needed treatment for ruptured blisters on her lower limbs and a GP saw her at home on 2 September 2009 and commenced the antibiotic cephalexin. On their review the next day Silver Chain advised the deceased to attend hospital due to the rash appearing to escalate.

On 3 September 2009 the deceased presented to the JHC ED with respect to the rash and its rapid progress. She was assessed at ATS 3. Her temperature was recorded as 35.4°C, pulse 107 and oxygen saturation 99% but dropping to 93% at one point.

The deceased was reviewed by Dr Chan who was very concerned and, in conjunction with her background, determined she may be susceptible to a rare and serious, potentially life threatening, condition. He and his supervising registrar felt the deceased needed to be transferred to RPH where there was an expert dermatological unit not available at Joondalup, and where her medical history was extremely well known.

Once transfer was agreed there was a further delay of 3 1/2 hours before the deceased was transferred to RPH ED by ambulance.

On her arrival at RPH ED there was insufficient information on EDIS as to the reasons for her transfer, which resulted in the deceased again receiving ATS of 3 on an ABC primary assessment, without information from the JHC discharge letter.

Once in the ED the deceased was again given an ABC assessment, without additional vital sign observations. She appeared haemodynamically stable and was placed in a minor theatre with no further assessment or observation in the expectation she would remain stable for a short period of time, pending an appropriate secondary nursing assessment prior to a medical assessment. Neither her secondary nursing assessment nor a medical assessment took place within the intended 30 minutes.

Realistically, I do not believe it occurred to any of the nursing staff performing primary assessments on the deceased she had the potential for a cardiac arrest at any time on the information with which they were armed.

Twenty-seven minutes after the deceased was last observed she was located unresponsive in the minor theatre.

Resuscitation was commenced and continued until a heart rhythm was obtained. She suffered a further asystolic episode some 15 minutes later and CPR had to be recommenced. Her pulse was again established at 1.21am on 4 September 2009 whereupon she was stabilised and transferred to ICU and maintained on life support.

The deceased failed to make any neurological progress and it was clear she had severe hypoxic brain damage as a result of the asystolic episode and would not recover further.

She was reviewed by Dr McGrath, who in consultation with Dr Seymour (Consultant Geriatrician) and Dr Stanton (Endocrinologist) signed a Not for Resuscitation Order. She was maintained on insulin and heparin until there was a family discussion as to the appropriate course of action.

It was agreed life support should be withdrawn and the deceased passed away on 15 September 2009 as the direct result of her hypoxic brain injury on the background of her significant co-morbidities.

I find death arose by way of Natural Causes.

COMMENTS WITH RESPECT TO THE TREATMENT OF THE DECEASED

As outlined extensively above the main features which needed improving in the treatment and management of the

deceased were the delays between appropriate assessment and decision making, and the lack of communication of known information in a way which ensured it was taken into account when making decisions as to her appropriate management through transfer from hospital to hospital and prior to medical assessment in the RPH ED.

Dr Platell gave quite extensive evidence as to the changes that have been instituted since the death of the deceased, a number of which appear to have arisen directly from her death. It is apparent the death of such a young person who had fought so hard for independence, clearly distressed all practitioners with whom she came into contact.

Dr Platell indicated the ED now works on a four hour rule for patients other than priority 1 and 2, and they tend to be assessed in the order of arrival. It is unclear whether this would in reality have improved the situation for the deceased on 4 September 2009.

Emergency services across the metropolitan region were stretched to the limit. Doctors in emergency departments have continually indicated the delays experienced in being able to move patients appropriately through emergency departments costs lives. The death of the deceased clearly demonstrated earlier holistic assessment and monitoring may have allowed the possibility of intervention before her

catastrophic and unobserved collapse between 0.24am and 0.51am on 4 September 2009.

Dr Platell indicated transfer documentation now remains with a patient on transfer, and would therefore have been immediately available to the triage nurse and CN Wilson on her second primary assessment.

The minor theatre is no longer used for the holding of patients prior to their secondary assessment, and in the event of an emergency a call button was inserted in 2010.[58]

There is no doubt the pressure on emergency departments and St John Ambulance Services at times of peak usage causes delays in appropriate clinical assessment which may cost lives for patients as vulnerable as the deceased. Most people are in hospital EDs because they are vulnerable in some way or another. This is especially the case for hospital/hospital transfers.

RECOMMENDATIONS

1. **Doctors accepting patients on doctor/hospital transfer ensure they provide RPH ED with clinical information supporting their reason for accepting transfer at the time the decision is made and request it be placed on EDIS.**

[58] Exhibit 14

2. **RPH ED considers the use of "smart computers" to interrogate entries to EDIS where there may be an error in name spelling or date of birth to assist with effective repopulation of patient's files.**

3. **Triage assessments be done by sighting appropriate discharge/transfer information, especially where they provide a base line for further assessments.**

4. **While I accept transfer documents now move with a patient through ED, and not via a hydraulic system, team leaders in the ED making decisions about appropriate placement of patients awaiting assessment ensure they understand the significance of transfer documents to ensure decision-making for placement is as informed as possible.**

5. **RPH ED consider the facility of introducing some vital sign observations at triage and any following primary assessment rather than reliance on ABC alone where there is likely to be a delay before secondary assessment and/or medical assessment due to the pressure on ED when operating over capacity.**

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