Capital and Coast District Health Board

A Report by the

Health and Disability Commissioner

(Case 05HDC11908)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Mr A	Consumer
Ms B	Complainant/Mr A's sister
Ms C	Complainant/Mr A's sister
Dr D	Provider/consultant physician
Dr E	Provider/medical registrar
Dr F	Provider/medical registrar
Ms G	Provider/registered nurse
Ms H	Provider/registered nurse
Ms I	Provider/enrolled nurse
Dr J	General practitioner
Dr K	Respiratory medicine registrar
Dr L	House surgeon
Mr M	Trainee intern
Dr N	House surgeon
Mr O	Medical student
Ms P	Registered nurse
Mr Q	Registered nurse
Mr R	Friend of Mr A's
Dr S	Emergency department consultant
Ms T	Registered nurse
Dr U	Medical registrar
Ms V	Registered nurse

Complaint

On 12 August 2005, the Commissioner received a complaint from Ms B about the services provided by Capital and Coast District Health Board (CCDHB) to her brother, Mr A. The following issues were identified for investigation:

> *The appropriateness of the care provided to Mr A from 23 to 25 September 2004 by Capital and Coast DHB, Dr D, Dr E, Dr F, Ms G, Ms H, and Ms I.*

An investigation of the actions of CCDHB was commenced on 19 September 2005. It was extended on 21 March 2006 to include the actions of Dr D, Dr E, Dr F, Ms G, Ms H, and Ms I.

The investigation has taken 18 months because of the need to contact a large number of people, some of whom are now working outside New Zealand, in order to provide a complete account of the care provided to Mr A. A provisional opinion was issued on 18 September 2006. Multiple responses were received, necessitating further advice from three expert advisors.

Information reviewed

- Mr A's CCDHB clinical record
- Information from:

  Ms B
  Ms C
  The Wellington District Coroner
  Dr J
  Dr D
  Dr K
  Dr F
  Dr E
  Dr L
  Dr N
  Dr M
  Mr O
  Ms P
  Ms H
  Mr Q
  Ms G
  Ms I
  Mr R
  CCDHB Clinical Coordinator
  Capital and Coast District Health Board.

Independent expert advice was obtained from Dr Mary Seddon, general physician and Senior Lecturer in Quality Improvement, Epidemiology and Biostatistics, Dr David Spriggs, general physician, and Ms Janet Hewson, nursing services consultant.

Summary

Mr A (aged 50) was admitted to Wellington Hospital on the afternoon of 23 September 2004 with acute breathlessness, a productive cough, and a raised temperature. Treatment was commenced for acute asthma, and a blood test and chest X-ray were performed in the Emergency Department prior to Mr A's transfer to a general medical ward.

Despite reviews by medical staff on the afternoon of 23 September and the morning of 24 September, the chest X-ray and the blood test that were taken on admission were not reviewed until 5.40pm on 24 September, when a chest infection was diagnosed and appropriate treatment commenced.

Mr A was discovered unresponsive at 6am on 25 September by nursing staff and, following an unsuccessful resuscitation procedure, he was pronounced dead at 6.16am.

CCDHB subsequently investigated the care provided to Mr A, but his family was dissatisfied by the outcome of the internal inquiry, and made a complaint to the Commissioner.

Information gathered during investigation

22/23 September 2004

On 22 September 2004, Mr A, 50 years of age, consulted his general practitioner, Dr J, with an acute onset of a wheeze and breathlessness. Dr J was unable to measure a peak flow[1] because of Mr A's breathless state; his phlegm was described as clear by Dr J. She administered a Ventolin and Atrovent[2] nebuliser, which gave Mr A "marked relief", although his peak flow still could not be measured after the treatment. Dr J prescribed 40mg of steroid (prednisone) to be taken daily for two days, and then 20mg daily for three days. She also prescribed Flixotide[3] and Ventolin inhalers.

Overnight, Mr A's breathing deteriorated. As he was unable to visit Dr J in person because of his difficulty breathing, he telephoned the practice, and staff immediately called an ambulance.

The ambulance arrived at Mr A's home at 11.55am on 23 September. The Ambulance Officer recorded Mr A's condition:

> "Patient sitting at the bottom of the stairs
> [On examination] conscious, alert, …
> Pulse rapid, [breathing] rapid
> Audible wheezes on inspiration
> 6–7 words [per] breath.
> Productive cough — green phlegm."

[1] Peak flow measurement is a procedure in which air flowing out of the lungs is measured. The measurement obtained is called the peak expiratory flow rate. Peak flow measurement may be obtained using a spirometer, an instrument with a mouthpiece that measures the amount of air breathed in and/or out, and the rate at which the air is inhaled and expelled from the lungs. Peak flow may also be measured with a peak flow meter, a portable, hand-held device. Both devices take the measurement as an individual forcefully blows into the mouthpiece of the device.
[2] Ventolin (salbutamol) and Atrovent (ipratropium bromide): used for the treatment of bronchospasm.
[3] Flixotide (fluticasone propionate): a corticosteroid used in the treatment of asthma.

Mr A was taken by ambulance to Wellington Hospital Emergency Department (ED), and Mr R, a friend of Mr A, travelled with him.

23 September 2004 — admission to Wellington Hospital

Mr A arrived at the ED and was assessed by a triage nurse at 12.32pm. She recorded that Mr A had acute asthma. Following triage, Ms T took over responsibility for Mr A's care. Ms T recorded at 1.03pm that Mr A was very short of breath and was only able to speak in short sentences. He had a temperature of 37.5ºC and was given oxygen at a rate of five litres per minute (5L/min). Mr A's pulse oximetry was recorded (98%),[4] and he was given a Combivent[5] nebuliser. He had blood taken for testing, which arrived at the laboratory at 1.06pm.[6]

Mr A was assessed by ED consultant Dr S at 1.06pm. Dr S recorded that Mr A had had a productive cough over the previous two days and had generally deteriorated over the previous week. Dr S noted that Mr A had attempted to visit his GP that morning, but had been unable to walk because of his breathlessness. Dr S also recorded that Mr A was a heavy smoker, and had a history of bipolar disorder for which he was receiving treatment with Lithium and risperidone. Mr A's mental state was described by Dr S as "currently well".

Dr S recorded the diagnosis as an infective exacerbation of asthma or chronic obstructive respiratory disease (CORD). Dr S ordered an urgent chest X-ray and an electrocardiogram (ECG), and referred Mr A to Internal Medicine. Dr S recorded Mr A's diagnosis on the X-ray request form:

> "Infective exace[r]bation of CORD … ?Pneumonia"

Ms T commenced an intravenous (IV) infusion of saline at 1.30pm, to run at 100ml per hour. She recorded at 1.35pm that Mr A was given intravenous hydrocortisone, paracetamol, and continuous nebulisers, and oxygen was administered at 6L/min.

Medical registrar Dr E reviewed Mr A in ED at approximately 2pm[7] as a result of his referral by Dr S to Internal Medicine. Dr E noted that Mr A had been unwell for three to four days with an upper respiratory tract infection and a progressive increase in shortness of breath, and had been coughing yellow phlegm. Dr E also recorded that Mr A had suffered from asthma since childhood, but had had no hospital admissions or treatment with steroids for asthma. Dr E stated that his initial working diagnosis was "an acute exacerbation of asthma, possibly infective in nature". Dr E's

[4] Pulse oximetry, or oxygen saturation, is a non-invasive method of monitoring the percentage of haemoglobin that is saturated with oxygen. The pulse oximeter consists of a probe attached to the patient's finger or ear lobe, which is linked to a computerised unit. The unit displays the percentage of haemoglobin saturated with oxygen together with an audible signal for each pulse beat and a calculated heart rate. A normal reading at sea level is 95–100%.
[5] Combivent: a combination of Ventolin and Atrovent.
[6] CCDHB advised that the blood test would have been analysed within an hour of the sample being received, and the result would have been available within 10 minutes of the analysis being completed.
[7] The clinical record states that Dr E was attending Mr A at 2.08pm.

expectation was that the X-ray would be done during Mr A's transfer to a medical ward, and that it would "be reviewed in the ward that night or the following morning on the ward round". House surgeon Dr L was present as an observer for part of Dr E's assessment.

Ms T recorded at 2.43pm that a peak flow recording was attempted, but Mr A was too short of breath to be able to register a reading.

A chest X-ray was performed at 2.57pm. The radiographer recorded on the request form:

> "I was unwilling to stand [Mr A] up for a 2nd PA [X-ray] — very unsteady, v. unwell."

The left PA X-ray has on it a sticker applied by the radiographer, stating, "PATIENT UNABLE TO CO-OPERATE." The X-ray packet has a fluorescent sticker, stating, "UNREPORTED FILM Please return to Radiology Dept." The side pocket of the X-ray packet provided to the Commissioner contained sets of patient identification labels for 12 patients. Mr A's labels were not among them.

At 3.10pm, Mr A's observations were recorded: pulse 116, respirations 28, oxygen saturation 97% on 6 L/min via Hudson mask.

The ECG was performed at 3.20pm, and reviewed by the ED registrar at 3.40pm. The ED registrar reported that the ECG was "unremarkable". The ECG provided by CCDHB as part of Mr A's clinical record is not labelled with any identifying patient information.

Mr A was assessed by Dr E for a second time at 4.34pm. He recorded in the notes:

> "[Mr A] has been unwell for about 3–4 days with URTI [upper respiratory tract infection]; progressive increased [shortness of breath] and coughing (yellow phlegm). Saw GP yesterday — given [nebulisers] and oral Prednisone. No improvement today — presented here. Has had asthma since childhood; no admissions; no steroids in past!
>
> Alert, distressed at rest.
>
> Talking in short phrases only.
>
> Marked dyspnoea and accessory muscle use."

Dr E stated that by the time of his second review, Mr A's breathing was improving. Dr E advised that he "had a low clinical index suspicion for pneumonia", and thus did not commence antibiotics. He recorded his diagnosis of acute exacerbation of asthma, and noted his plan to admit Mr A to a medical ward, to administer regular nebulisers and steroids, and to have "baseline bloods" taken.

Dr E subsequently advised that he expected that the result of the blood test would be reviewed later that evening or on the post-acute ward round the following day, and that at the time of his second review he was "unaware that any blood tests [had] been taken" (ie, shortly after Mr A's arrival at ED). Dr E stated that "there was no mention of blood tests in the verbal handover from Dr S or in his clinical notes" and that it was not his (Dr E's) practice "to ask every patient if they have had blood tests taken and neither Mr A, nor the support person with him, informed me that blood tests [had already been] taken". Dr E added:

> "It was, and still is, my understanding that the full blood count is rarely helpful in acute asthma. It is known that the white cell count is often elevated in an acute asthmatic attack and does not necessarily reflect an acute infection. Looking retrospectively at [Mr A's] blood results, a white cell count of 11.5 x 10^9/L … would not have caused me to change my diagnosis or management of him at that stage."

Dr E also stated that he was not aware that the chest X-ray had been performed by the time of his second review, which was done after the end of his shift (ie, after 4pm). He did not ask the patient whether an X-ray had been taken, but "neither the patient, nor the friends with him" told Dr E that an X-ray had been taken, and it was not with Mr A at that stage.

Dr E cannot recall whether any particular instructions were given to ward staff, nor any specific details of his handover to the next registrar, Dr U.[8] Dr E noted that "it was custom to discuss all patients admitted, which would have included [Mr A]" and that he was "practising medicine in accordance with [his] peers — there was no formal handover other than at 8.00am each morning". The clinical record does not record a plan for Dr U to review Mr A, and there is no record that she did review him. CCDHB stated that there is currently no requirement for medical staff to document handover information.

According to Mr A's sisters, Mr A was transferred at approximately 7pm from ED to a medical ward.

23 to 24 September — night shift

Ms P was responsible for Mr A's care overnight. (Enrolled nurse (EN) Ms I was also on duty, but there is no record that she provided any care to Mr A overnight.)

On arrival on the Ward, Mr A was admitted to a single-bed room, with a shared en suite shower room and toilet. He was receiving 7L/min of oxygen and IV fluids at 100ml per hour, and had a temperature of 38.3ºC. The registered nurse who admitted Mr A to the ward recorded that he needed to have nicotine patches prescribed in the morning, and that a chest X-ray had been performed. CCDHB stated:

[8] Dr U is no longer working at CCDHB, and is not currently registered with the New Zealand Medical Council.

> "X-rays that are taken on patients in the [ED] who are subsequently admitted accompany the patient to the ward. The reason X-rays are retained with the patient is so that they are immediately available to the medical team looking after the patient."

Ms P stated that when a patient is transferred from ED to a ward, the IV infusions are stopped during transfer, and therefore "the time of infusion is delayed to what it was charted to". Ms P also stated that "several times" during the shift, Mr A disconnected the IV fluids himself:

> "Unfortunately this was not documented but I summarised this behaviour as a part of his agitation, restlessness, and as a non-compliant patient."

Overnight, Mr A was described as agitated, and at 3am he was escorted outside the hospital by an orderly to have a cigarette. CCDHB advised that it would take three to five minutes for Mr A to reach the outside of the building where he could have a cigarette, involving a journey by lift to the ground floor.

At 4.50am, 100mg thioridazine was given as Mr A was described as "restless and anxious ++". IV fluids were continued, and at 5am Mr A was afebrile, with a temperature of 36.9ºC. According to the drug chart, Mr A received nebulisers at midnight, 2am, 4am, 6am, and 6.30am.

Ms P stated that she did not include in her handover to the next shift the fact that nicotine patches needed to be prescribed.

24 September — morning shift
Mr Q was responsible for Mr A during the morning shift.

At 8am, Mr A's respiratory rate was recorded at 26 breaths per minute. (There were no further recordings made on the observation chart of Mr A's respiratory rate.)

Mr A was reviewed by consultant physician Dr D on the post-acute ward round. Also present were house surgeon Dr L, trainee intern Mr M, and 5th year medical student Mr O. However, Dr E was absent as he was due to commence night duty at 11pm that same day. On Thursday 23 September, Dr E was near the end of a week of day shifts. He agreed that afternoon with the RMO Coordinator that he would (at short notice) commence a week of nights, commencing on Friday night, 24 September. This meant that he did not work the day shift on 24 September and missed the post-acute ward round. Dr D stated that neither he nor Dr L were aware that Dr E would not be in attendance. Dr E, however, has a clear recollection of having informed Dr D that he would not be present on the ward round; it was "inconceivable" that he would have "considered the … career-limiting move" of not having informed Dr D of his impending absence. In any event, Dr D believes that he attempted to contact Dr E and, receiving no response, decided to commence the ward round without him.

Dr D reviewed Mr A as the first patient on the ward round at approximately 9am, and took note of the previous treatment he had received and his condition since admission. Dr L told Dr D that Mr A did not look much better than when she had first seen him on the previous evening in ED, "meaning that Mr A's work of breathing looked almost the same as when in ED".

Dr D advised that it was his normal practice during a post-acute ward round to review X-rays and blood tests for each patient. In Mr A's case he cannot specifically recall whether the blood test was reviewed during the ward round. There is no record in the clinical notes that the blood test was reviewed on the ward round. Dr D accepts that the documentation of his initial assessment of Mr A is "very poor".

Dr D stated:

> "[I] did not review the chest X-ray as it was not available on the ward … for the ward round. X-rays are usually sent to the ward after ED review with the patient, but may occasionally reach the ward from ED later in the day after admission.
>
> [Mr A's] nurse spoke to me just prior to the round as she [sic] was particularly concerned about his repeated requests to smoke and his anxious agitated state and wondered if he would benefit from nicotine patches. I pointed out that nicotine replacement for [Mr A] was inadequate as a treatment for his nicotine craving in the acute setting. (The patches and the inhaler contain insufficient dosage to work effectively in a heavy smoking habit and would also require about 36 hours to provide any benefit.)"

Dr D assessed Mr A as short of breath "++"; he was not speaking full sentences because of breathlessness; he had a raised pulse rate; and his oxygen saturation was 92%. Dr D accepts that Mr A had a mild fever at the start of the ward round, but notes that his temperature was not raised from 11.30am to 4.50pm (no recordings after this time), and that it is not uncommon for asthmatics to have a mild transient fever as part of a severe acute attack. Mr A's sputum at the bedside was frothy and mildly discoloured — not purulent, although there was a history of recent purulent sputum production.

Dr D stated that "chest examination did not indicate any focal consolidation to suggest pneumonia and there were no signs of pneumothorax".

Dr D's impression was of a moderate to severe asthma attack. He did not consider antibiotics were warranted immediately or until the chest X-ray had been reviewed. He was far more concerned about the urgent relief of Mr A's severe bronchospasm and the need for respiratory specialist review. Dr D requested a review of Mr A by the respiratory medicine team, to consider whether theophylline[9] should be prescribed.

[9] Theophylline: a bronchodilator used in the treatment of bronchial asthma, bronchitis and emphysema.

Dr D contacted respiratory medicine registrar Dr K. Dr K advised that Mr A should not have theophylline on account of his raised pulse, recommending that Atrovent nebulisers be prescribed instead. Accordingly, these were prescribed to be given at regular intervals, four times a day. The first was administered at 11.30am. Dr D stated that Dr K said he would try to see Mr A later in the morning and that Dr K knew from their discussion that Mr A was acutely unwell and had significant bronchospasm:

> "I had set in place a management plan which was contingent on [Dr K's] assessment of the patient on the same day. There was no doubt about the request to him in this respect and there is a note of it in the record of my initial assessment of [Mr A]."

In contrast, Dr K regarded the telephone conversation with Dr D as a combination of a simple advice call and a non-urgent consultation request. He did not consider the fact that Dr D asked for advice as a reason for him to attend the consultation urgently or to involve his consultant urgently. Dr K advised:

> "Although I have no personal recollection of a conversation with [Dr D] or a member of his team on Friday 24 September, I have a record in my personal logbook of having received a referral to see [Mr A] as a consultation on [that day] and of my intent to do so. I do not have a record of the time this request was made and there is no record that this was an urgent referral.
>
> I have not made an entry in [Mr A's] clinical notes, indicating that the consultation did not take place. I have crossed out the consultation request in my personal record, a notation that means that the job is no longer active. My interpretation is that I did not see [Mr A] on Friday 24 September as the request was not urgent, but would have planned to see him on Monday 27 September. On learning of his death on Monday, I would have crossed out the consultation request.
>
> My personal notes [supplied to the Commissioner] show a record for me to see a patient with the [same surname] on [the ward] with severe asthma and bipolar affective disorder who is taking the medication lithium carbonate and who has a tachycardia with a heart rate of 130 beats per minute."

Dr D recalls a second assessment of Mr A, at the end of his ward round:

> "At the conclusion of the post-acute ward round (about [midday]) I returned to [the] ward and reviewed [Mr A's] response to his treatment. [He] told me he felt much better and wanted to sleep. He was less agitated and his tachycardia had reduced to 100 [beats per minute]. His oxygen saturation was 98% on 6L/min through a Hudson mask. [Dr L] was not in attendance at the time having left the ward round a short time before to begin the post-acute tasks. The trainee intern or the 5th year medical student was with me at the time, but I cannot recall which. We did not have [Mr A's] notes with us and I personally did not document my

> observations in the notes subsequently. However, I passed on my observations to [Dr L] immediately after re-assessing [Mr A] and at that stage left the ward. …
>
> I was not called with any concerns regarding [Mr A's] clinical progress and care either following the round or that night until I was informed of his death on the morning of the 25th."

There is no record of the pulse rate and oxygen saturation quoted by Dr D from his second review of Mr A (100bpm and 98%). Dr D did not make a record of these observations at the time, but said that "they stuck in my mind as I was quite concerned about [Mr A]". Dr D explained that, when he returned at the end of the round to see Mr A again, the oximeter was lying disconnected on the bed and he connected it to Mr A's thumb and took the reading of 98% himself. This was consistent with the previous readings taken by the nurses as recorded on the observation chart.

Mr M and Mr O were contacted as part of this investigation for their account of the ward round. Since September 2004, they have qualified as medical practitioners. Mr O has no recollection of the ward round. Mr M recalls Mr A, but in no detail apart from his having been admitted with asthma, and that there were concerns about his smoking and mental health. Mr M and Mr O do not recall any subsequent visit by Dr D to reassess Mr A.

Dr D advised that he met Dr L on the ward after his second review of Mr A at the end of his ward round. Dr D stated:

> "My instructions to [Dr L] were to monitor his oxygen treatment and [oxygen] saturations closely, to continue his current treatment as charted and to check the [chest X-ray] when it became available and to call me if she was at all concerned about him. I also emphasised the need for a careful handover to the after-hours team. [Dr L] was well aware of my concerns regarding the ongoing care for [Mr A]. The nurses were instructed to give his stat dose of [Atrovent], … to change his oxygen delivery to a Hudson mask at 6L/min, continue the hourly observations and to monitor and report any deterioration in his saturations and general clinical state. [Dr K] would be reviewing the patient."

Dr L stated that she was not aware that the chest X-ray was unavailable at the ward round. She assumed that the chest X-ray had been reviewed by Dr D in her absence, as she had not been present at the beginning of Dr D's initial assessment of Mr A. Dr L stated:

> "As I was not aware of the absence of the X-ray nor did I make any note of this in the file, then I believe this instruction [to check the chest X-ray] was not given to me. …
>
> I have no recollection of any contact from [Dr D] … following the ward round. There is nothing in the notes written by him following his review which I would expect as I have seen him write notes following his own independent patient

> reviews. [Dr D] is a senior doctor who impressed upon us as junior doctors to document everything, which I always endeavour to do. Had I been contacted I am confident in my own practice that I would have documented the discussion myself, particularly if he had not made a note already."

Dr L stated that she advised Mr Q that if Mr A did not improve "or there were any other concerns", she should be contacted. Dr L was not subsequently contacted during the day. Although Dr E was unavailable, and another registrar was sick, CCDHB advised that there were two other medical registrars available to support Dr L had she required more senior advice during the day.

The clinical record describes the plan for Atrovent nebulisers and for the expected review by Dr K. However, there is no record of the need for hourly observations, oxygen rate or mode of delivery, or for nursing staff to monitor and report deterioration. CCDHB stated that there is no requirement for medical staff to make a record of the clinical observations required, but it "is certainly an expectation and accepted good practice".

Mr Q recorded in the notes that Mr A was short of breath both on exertion and at rest, having a "wheezy and very tight chest". Mr Q stated that "other [observations] viable at time of writing", and that Mr A had needed assistance with "A.D.Ls", meaning activities of daily living such as washing. Mr Q recorded in the notes that two-hourly nebulisers had been given, oxygen had been administered at 6L/min, and that the IV fluids were running at 167ml per hour. He also stated that he recorded Mr A's observations ("blood pressure, respirations, heart rate, oxygen saturations and temperature") every two hours.[10]

Mr A's sister, Ms C, telephoned the ward at approximately 10am and spoke to Mr Q to discuss her brother's condition. She requested that nicotine patches be prescribed for her brother. Ms C telephoned later in the day and spoke to Mr Q to check on her brother's condition. She recalls that Mr Q told her that the nicotine patches were being ordered from the pharmacy. Ms C also recalls that Mr Q said that there had been some discussion about transferring her brother to intensive care, but she was told that there were no beds currently available.

Mr Q finished his shift at 3.30pm and completed his record by writing, "Monitored closely".

24 September — afternoon and evening shift
Ms G was responsible for Mr A's care on the afternoon and evening of 24 September.

[10] Observations of blood pressure were recorded at 8am and 11.30am; pulse recorded at 8am, 10.30am, 11.30am; temperature recorded at 8am, 11.30am; pulse oximetry at 8am, 9am, 10.30am; respiration rate was recorded at 8am.

Ms G spoke to Dr L at some time between 3.30pm and 4pm "regarding the treatment plan … and if there is a possibility that [Mr A] will be transferred to [intensive care]". Ms G stated that Dr L advised that Mr A was stable, and that she would be handing over care at the end of her shift to house surgeon Dr N.

Medical review

According to the clinical record, Dr L reviewed Mr A at 5.40pm, which was after the official end of her shift (4pm). Dr L wanted to "see how he was doing" before she went home. She was concerned by Mr A's condition, "as he was still working hard to breathe". Dr L recorded a respiratory rate of more than 60 breaths per minute and an oxygen saturation reading of 93% on 4L/min of oxygen. Dr L reviewed the chest X-ray, and noted that it showed bilateral "streaky opacification" that was greater on the right side than the left. Dr L also reviewed Mr A's blood test results, noting that the white cell count was 11.5, and the neutrophil count 9.3.[11] CCDHB stated:

> "While the white cell count was slightly raised, it was not above the limit the Laboratory uses to phone a result to the clinical area. ...
>
> We have been unable to find any recorded evidence that [Mr A's] blood test was noted prior to [Dr L's] report in the progress notes at [5.40pm] on 24 September 2004."

As she was concerned about Mr A's condition, Dr L contacted Dr F, who was the on-call medical registrar.

It is not clear that Dr L actually communicated that Mr A's respiratory rate was over 60. As far as Dr F can recall, he was not told this fact; had he been told, he "would have attended Mr A immediately". Dr F recalls:

> "Over the phone I diagnosed pneumonia (from temperature, blood tests, and chest X-ray description) and formulated a plan for further treatment for asthma and pneumonia, together with the need for ongoing monitoring and feedback. I discussed with [Dr L] the possibility of ICU involvement. This is reflected in her clinical note that 'if concerned discuss with medical registrar ? may need ICU review'."

Dr L recalls that Dr F asked whether she thought Mr A required an ICU review. She said she "wasn't sure", and asked Dr F to review Mr A and make that decision.

Following the telephone consultation between Dr L and Dr F, pneumonia was diagnosed and IV antibiotics were commenced (Augmentin 1.2g four times a day). It was agreed that arterial blood gases (ABGs) would be taken, and a litre of IV saline was to be administered over four hours.

[11] Normal range: white cell count: 4–11; neutrophils 2–7.5.

Dr F also instructed that magnesium sulphate 10mmol be given intravenously. He stated:

> "Magnesium sulphate has been shown to improve airflow in people with pronounced bronchospasm and 'may be considered for severely obstructed patients not responding to standard therapies.' (ref. *JP Siwik et al. Medical Clinics of North America 86 (2002) 1049–1071*, The evaluation and management of acute severe asthma p1060–61)."

Dr L stated that Ms G was aware that a medical review had occurred, and that she (Dr L) was concerned about Mr A's "respiratory effort". Dr L also informed Ms G that Dr N was to obtain an ABG.

Dr L handed over responsibility for Mr A to Dr N, who reviewed him immediately.

At 6pm, Dr N attempted to obtain an ABG, but Mr A found it too painful and, according to Dr N, he "kept moving about". Dr N described in the clinical record that Mr A found the attempt to obtain blood gases as "+++ uncomfortable". Dr N stated that Mr A refused to allow her to make further attempts to obtain an ABG. Her record at 6pm stated:

> "ABG attempted, [patient] +++ uncomfortable.
>
> Able to vocalise pain in/out SOB [short of breath]
>
> [Plan] Repeat [ABG] pm."

Dr N cannot recall what instructions she gave the nursing staff about Mr A's observations or oxygen therapy. In a retrospective note, written at approximately 10.30pm, Dr N recorded that she had made a second attempt to take arterial blood gases earlier in the evening, but because Mr A was "anxious ++", she did not persevere. Dr N stated that she last saw Mr A at 10.30pm, and she described him as "anxious and … stable".

At 10.00pm Dr N contacted Dr F about Mr A's condition, and told him that she had been unable to obtain an ABG, but that his condition was "stable" and overall he was settling. Dr F stated:

> "Given that [Mr A] was settling overall and that his oxygen saturation was 97% on oxygen I decided that [Dr N] should defer the ABG until such time as alerted to a deterioration in [Mr A's] clinical status."

Dr F instructed Dr N to inform the nursing staff to observe Mr A closely for any signs of deterioration, and if they were at all concerned about his condition, they were to contact Dr N and request an immediate review. Dr F stated that he informed Dr N of the need to transfer Mr A to ICU if his condition did not improve, and that if a further review were necessary, then either he or the intensive care registrar would decide whether Mr A should be transferred to the intensive care unit. Dr F had no further contact with Dr N. (His shift ended at 11pm, when he was relieved by Dr E.)

Dr F summarised his advice to Drs L and N about when to contact him urgently: if Mr A became drowsy; if he developed respiratory distress; if the oxygen saturation recordings fell below 92%; if "escalating quantities of oxygen were required to maintain oxygen saturation levels"; or if Drs L or N "had any concerns regarding Mr A". Dr F stated that he discussed with both Drs L and N "the possibility of ICU Registrar assessment if the additional therapies … failed to bring about an improvement in [Mr A's] condition". Dr F did not attend Mr A in person because both Drs L and N told him that they believed Mr A's current condition was satisfactory, and did not ask him to attend in person.

Dr F advised that as the on-call medical registrar he was responsible for the emergency medical admissions, phone consultations with GPs, all general medical inpatients at Wellington Hospital, all cardiac arrest calls, and any urgent requests for medical consultation. On the evening of 24 September, he was very busy in the ED with acute admissions, and had no time for a meal break.[12]

Nursing care and family involvement

Mr A's clinical observations of blood pressure, oxygen saturations, temperature and pulse were performed at 4.50pm. (No further blood pressure, pulse or temperature was recorded on the observation chart.) Ms G stated that she attempted to measure Mr A's peak flow "early in the shift", but that Mr A "was not able to blow the peak flow meter properly because of apparent exhaustion". Ms G apparently recorded this on her "note/observations sheet which I carry with me during a shift". She also stated that she measured Mr A's pulse and respirations on an hourly basis, and recorded these on the "note/observations sheet". Ms G stated that due to "other demands" the recordings of the peak flow measurements and the pulse and respirations were "not all transferred to [Mr A's observations] chart. These recordings were summarised in the patient's progress notes at the end of the shift." Ms G was unable to provide the sheet used to record the observations, as they are handed in at the end of the shift and destroyed.

Ms G stated:

> "I made a number of attempts with the patient to take further peak flow readings but the patient was showing increased symptoms of anxiety. The patient was also increasingly more non compliant and only managed to tolerate the pulse oximetry for short periods to monitor his pulse and oxygen saturation. …
>
> Oxygen saturation was recorded straight to the [observation] chart until the patient refused recordings to be taken."

No record was made of the attempts to obtain peak flow readings, or that Mr A was refusing to have his observations recorded.

[12] Dr F provided details of the 11 general medical patients who were admitted from ED to medical wards in the period from 12.42pm to 11.06pm on 24 September.

When Ms C arrived to visit her brother in the late afternoon, she became "very unhappy" because the nicotine patch had not been prescribed, despite her telephone calls earlier in the day. Ms G stated that at this point "[Mr A's] family was starting to intervene and get involve[d] with [Mr A's] care".

Ms C recalls that her brother was far worse than he had been the previous day when admitted. His breathing was audible and laboured, and he was not fully conscious. She stated that soon after the administration of the first dose of antibiotics (at 6.15pm), her brother's condition suddenly deteriorated. Ms C immediately went to get Ms G. Ms C felt that Ms G was becoming "irate" because of the demands of the family. Ms C recalls that she was told by Ms G that she had five other patients to look after. Ms C found Ms G "incredibly rude and disrespectful to us all but particularly [Mr A]".

Ms G commenced the magnesium sulphate infusion at 6.15pm. She stated that she recorded Mr A's pulse and respirations after the infusion; however, Mr A refused to have his blood pressure taken. (No record was made on the observation chart of any observations of pulse and respiration, or of a refusal by Mr A to have his blood pressure recorded.)

As Ms C was concerned about her brother's condition, she called her sister, Ms B, and when she arrived they spoke together to Dr N. Dr N explained that their brother was being treated for asthma, but that antibiotics had been commenced as he had not been responding to treatment.

Dr N prescribed nicotine patches, which arrived on the ward at 8pm, but Mr A refused to have one applied. Ms G recorded that a further attempt to administer the patches should be made the following day.

Ms C stated that during the time she was with their brother, nursing staff did not attempt to take his clinical observations once, and she and the rest of the family were actively discouraging him from going for a cigarette. Ms B only recalls a nurse taking an oxygen saturation reading. Both Ms B and Ms C stated that their brother did not refuse to have his clinical observations recorded during the time they were present. He left the ward for a cigarette twice from 6pm to the time they left the ward.[13] He kept his oxygen mask on at all times, lifting it when he wished to speak, which was not very often, as he was too breathless to talk. They recall that the pulse oximeter was on all the time and was only taken off on the two occasions when he went outside for a cigarette.

Mr R (Mr A's friend who had come to hospital with him the day before) arrived, and Mr A asked whether Mr R could stay overnight to keep him company. Mr A's sisters and their partners left at approximately 10pm. Ms C recalls that when she left, her brother was calmer but his breathing was still laboured.

[13] Ms G stated that Mr A "[w]ent out for smokes twice at [8pm] and [10.30pm]".

Ms G stated in the clinical record that Mr A had received one- to two-hourly nebulisers.[14] She described Mr A as "anxious +++" and very short of breath, even at rest. Ms G recorded in the clinical notes that Mr A's peak flow was "between 160–120 (pre and post) [sic]".[15] Ms G stated that she took pulse, respiratory rate and oxygen saturation recordings "hourly and as much as possible given [her] other patients and duties would allow".[16] She stated:

> "[Mr A] was noted to keep disconnecting himself from [the] oxygen mask, nebuliser and IV fluids in order to go to the toilet and his increasing anxiety and demanding to go … for smokes."

However, Mr A's sisters recall that he was using a urine bottle in his bed, and not walking to the toilet.

Ms G described the information she handed over to the night staff:

> "Reported patient's non-compliance and refusal to treatment and increasing demand to go out for smokes despite explanation of the harm it may cause. … Reported the clinical observations and [Ms H] and [Ms I] were aware that patient was reviewed by [Dr N] at time of report with the plan that [she] has to take ABG if oxygen saturations drop <92%. At approximately [10pm] before patient was reviewed by doctors saturations were between 94–97% at 6L/min via Hudson Mask. Night nurses aware of family's presence and one person staying overnight."

There is no reference in Ms G's clinical record to the plan for ABGs to be taken if the oxygen saturations fell below 92%, the result of clinical observations of blood pressure, pulse, temperature or respirations; or the type or frequency of observations required.

Ms G explained that she did not hand over the possibility of a review by the ICU team because this had only been a possibility earlier in the shift, and the last review by the house surgeon was that Mr A was stable. Ms G stayed at work until 1am "to ensure that an appropriate skill mix was present and at least until all the midnight antibiotics had been administered".

24/25 September — night shift

Ms P was due to be on duty overnight, but had called in sick at some stage of the afternoon or evening. However, this message was not communicated to the nursing supervisor. Consequently, it was not known until after the shift had started that the

[14] The drug chart recorded nebulisers given at 4pm, 5.45pm, 6.20pm, and 9.05pm.
[15] No peak flow readings were recorded on the observation charts for the period of Mr A's admission.
[16] During Ms G's shift, Mr A's temperature, blood pressure and pulse were recorded on the observation chart once (4.50pm), and pulse oximetry six times (4.50pm, 5.50pm, 6.10pm, 6.15pm, on two occasions untimed).

ward would be short-staffed. An agency nurse, Ms V, commenced work at approximately midnight.[17] CCDHB stated:

> "The senior RN on duty that night [Ms H] had responsibility for supervising both [Ms I] and an agency nurse as well as taking overall responsibility for the care of 25 patients."

Ms H stated:

> "[Mr A's] diagnosis on the report sheet was asthma. …
>
> We did not know that [Mr A] had pneumonia."

However, Ms H also advised that "Mr A had been commenced on IV antibiotics and these were due [to be administered] at [midnight]". Until the arrival of the agency nurse, Ms H took responsibility for 16 patients. She stated that she performed all the IV antibiotics at midnight, but Mr A's antibiotics were signed as given by Ms V.

Ms I was given primary responsibility for the care of Mr A (whom she knew from the night before) and eight other patients, including two acute admissions who arrived on the ward close together at approximately midnight, and two patients who required "full cares". The nursing staff on duty overnight did not take a break because of the workload.

Ms I was unaware of the seriousness of Mr A's condition. She received a handover from Ms G, but there was no mention made of clinical observations required. However, Ms G informed her "that [Mr A] was a heavy smoker and had refused nicotine patches [and] that family were taking him downstairs against advice".

CCDHB advised:

> "The understanding was that [Ms I] would approach [Ms H] if there was a problem. [Ms I] was working outside her scope of practice and was not adequately supervised due to the compromised skill mix. The skill mix was due to a delay in communication regarding a senior RN being off sick on night duty."

Ms H stated that in an ideal situation she would have directly supervised Ms I, but the night of 24 September 2004 was not ideal and the other demands placed on her meant that her supervision was indirect. Ms H stated that Ms I offered to take care of Mr A, as "she knew something of [Mr A] from the night before".

The drug chart records that the last nebuliser administered to Mr A was at 12.15am.

Ms H advised that Ms I attempted to take Mr A's clinical observations at 2am, but that he refused:

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[17] Ms V signed Mr A's drug chart at 12.15am to indicate that she had administered IV antibiotics.

> "[T]herefore we had no options left but to keep him under frequent observations."

There was no record made of Mr A's refusal to have observations taken.

At 2.15am, Ms V commenced the next infusion of IV fluids, with 1,000ml of saline to be administered at 250ml per hour. The IV fluids were administered via equipment that monitored the rate of administration. Ms I stated that she monitored the infusion device three times during the shift. She did not perform any clinical observations overnight. She attempted to measure Mr A's pulse oximetry twice, but at midnight and 4.30am Mr A refused to allow her to take a reading.

Ms I stated that the last time she reviewed Mr A was at 4.45am.

Mr R stayed with Mr A overnight, assisting him "five or six times" to go out for a cigarette. Mr R felt that the nursing staff were a "bit rude" when Mr A went out for a cigarette, and he had a "slight thought that maybe [the nurses] weren't giving [Mr A] much attention". Mr R does not recall Mr A refusing to have his observations taken during the night.

25 September — early morning death

Mr R left the ward at approximately 5.15am, when he went to check bus times. He noted that Mr A was "curled up on the bed, sleeping like a baby", and "definitely" had no IV fluids running or an oxygen mask on. Mr R thought at first that maybe Mr A was dead, but discounted that, as he "didn't look dead".

At 6am Mr A was found unresponsive in bed when Ms I and Ms V went to administer Mr A's 6am antibiotics. Resuscitation was attempted but was unsuccessful.

Ms I recorded in the clinical notes at the end of the shift:

> "Friend with patient intermittently overnight taking [Mr A] out for smokes. IV line disconnected and leaking on floor (by friend). In wheelchair [because] unable to breath[e]. Put to bed and [oxygen] reapplied. Sat upright. Settled. IV [antibiotics] due [6am. Patient] found unconscious. 777 called [patient] pronounced dead [6.16am]. For post mortem."

Dr E recalls that he attended "the very stressful and failed resuscitation" and "went through the available clinical notes to determine the cause of death". He was unaware of the diagnosis of pneumonia, which was not mentioned anywhere in the clinical notes. Dr E advised:

> "I completed the necessary documentation, called the family and the Police (in view of the fact that I was unable to sign a death certificate with a cause of death and thus referred it to the Coroner)."

Mr A's sisters were called and came to the hospital. They and their partners were told by a male doctor (who appears to have been Dr E) that "a full investigation would be undertaken into [Mr A's] death" as it had been unexpected.

Following the post-mortem examination on 27 September 2004, the cause of death was reported as respiratory failure and pneumonia with an antecedent cause of obstructive airways disease.

Subsequent events

Communication with Coroner

Following Mr A's death, Dr E contacted the Police, who acted on behalf of the Wellington Coroner. Dr E described the resuscitation procedure in his facsimile to the Coroner, and stated:

> "[Mr A] admitted on 23 September 2004 to [the ward], via ED, with moderate to severe asthma. Treated with appropriate medication."

Dr E did not mention Mr A's pneumonia, or any delay in the review of his chest X-ray or commencement of antibiotics, since he was at the time unaware of these matters.

An initial report for the Coroner (undated) refers to Mr A disconnecting himself from oxygen and infusions, and refusing a nicotine patch. There is no reference to a refusal to have his observations measured.

The Coroner stated:

> "My understanding of events immediately prior to death was that [Mr A] twice interfered with his intravenous line and left the Ward to have a cigarette, with disconnection of oxygen. I was unaware that [Mr A] was then in the grip of an evolving pneumonia, as appears from subsequent post-mortem examination, and that questions had been raised as to adequacy of clinical management. My understanding of events from the advice I initially received was that death was likely to be due to a severe asthmatic attack, COPD/asthma having been exacerbated by the hypoxic effects of disconnection of oxygen in order that [Mr A] might go outside to smoke."

The post mortem, performed by a pathologist on 27 September, identified respiratory failure and pneumonia as the direct causes of Mr A's death. Obstructive airways disease was identified as an antecedent cause.

Dr D also contacted the Coroner. Dr D recalls:

> "After the weekend I rang the Coroner in case there was further information he required. He informed me that an inquest was inappropriate and he did not need further details from me having seen the notes and noted the difficulties with [Mr A's] care during the night."

The Coroner recalls his conversation with Dr D as follows:

> "I received a call from [Dr D] on 12 October 2004. A note made by me at the time shows that he sought a copy of the post mortem report. I suggested he ring [my pathologist], to discuss matters. It would appear that [Dr D], for whom I have the utmost respect, states that I informed him that 'an inquest was inappropriate'. I would not have used the word 'inappropriate'. It is probable that I said an inquest would be unnecessary on the facts as I then knew or understood them. Whilst I would have noted the difficulty with [Mr A's] care during the night, I had limited information before me at the time. [Dr D] did not inform me that a question had arisen as to the adequacy of medical care or that an internal review had been instituted."

The Coroner described his expectation of hospital staff reporting to him or the Police:

> "The expectation is … that they will report fully and frankly. It is the consultant who should report, but often that task is delegated to registrar or house surgeon. … Had a complaint not been made to the Commissioner, I would have decided, upon learning what had gone on, to hold an inquest."

The Coroner stated that he would not formally record his finding as to the cause of death until he had considered the Commissioner's final report.

CCDHB internal investigation and dealings with family
Mr A's family are very unhappy about how CCDHB dealt with them following Mr A's death.

Ms C advised:

> "The [doctor] in the hospital who advised us of [Mr A's] death was unable to tell us why he had died at that stage and that we would have to wait for the post mortem and then the hospital would be in touch to discuss this. We received a copy of the [post mortem report] about a week later and obviously found the medical jargon quite difficult to understand and [we] waited for the hospital to contact us to explain exactly what had happened."

On 4 October 2004, Dr D had a meeting with the nursing staff involved in Mr A's care. CCDHB advised that this was "more for the purpose of debriefing than a formal review".

Ms C had not heard from CCDHB since her brother's death so, on 15 October, she wrote to "the Registrar" at CCDHB:

> "Last week I rang Wellington Hospital with a request to speak with the Hospital registrar only to be refused and told to contact Medical Records within business hours, prove that I was related to [Mr A] and request his medical records so that I could then investigate the matter myself.
>
> I am saddened by this callous response and am merely asking for someone to talk me through the events leading to my brother's death (which still hasn't happened

> to date). I have not even been granted the courtesy of being advised of [Mr A's] primary hospital caregiver (even though I asked a number of times when in the hospital with [him]) and this is why I am seeking your assistance.
>
> I would really appreciate the opportunity to talk to you, or someone familiar with [his] case, so that I am able to finally answer some of the questions that my family have been left wondering about."

Ms C received no response to her letter. (Dr E, who may have been the intended recipient of the letter, never saw it and was "distraught" to learn it was never answered.)

Ms C wrote again to "the Registrar" at CCDHB on 24 November asking about the results of the internal inquiry into her brother's death. In the letter she stated:

> "The doctor who advised us of [Mr A's] death informed us that an internal inquiry would take place and that we would be advised of the outcome."

On 20 December, Dr D met with Ms C and Ms B, and informed them that the events surrounding their brother's care would be investigated, and they would be sent a copy of the inquiry report.

On 12 January 2005, Ms H completed a Reportable Event form describing the events of the night of 24–25 September 2004, although on the form she incorrectly stated that the date of the event was 23 September. Ms I also completed a Reportable Event form, but this was not signed or dated.[18] On neither form did Ms H or Ms I describe a refusal by Mr A to having his clinical observations recorded.

On 15 January, CCDHB declared a serious event "as per [the] Reportable Events Policy". The review was completed on 29 June, and sent to Ms C on 6 July. CCDHB advised:

> "[T]he reason [Mr A's] death was not considered a reportable event prior to receipt of [Ms C's] letter was that, while [Mr A's] death was unanticipated, the staff involved and the Team Leader did not at that time deem his death to be due to errors or omissions in his care.
>
> The policies developed and implemented in the time between [Mr A's] death and the declaration of his case as a Serious Event provide staff with improved clarity on the process for reporting and investigating unexpected deaths."

On 8 August 2005, Ms B advised CCDHB that the family was not satisfied by the results of the inquiry, copying her letter to the Health and Disability Commissioner. The findings of the inquiry, and the recommendations that arose, are set out in

[18] Ms I's form was stamped "Received" on 5 January 2005, and was allocated a number, 87646. Ms H's form was allocated 87659 and stamped "Received" on 14 January 2005.

Appendix 1. In their letter to CCDHB, enclosed with their complaint to my Office, Ms C and her sister stated:

> "[Of] great concern to us is your finding that '[Mr A's] mental history did not impact on the care he received'. Your report provides no validation of this statement and, contrary to your finding, our feeling at the time was that neither the seriousness of [his] condition nor the concerns we raised regarding his care, were treated with the gravity they deserved. Rather, we were made to feel that requiring any attention at all was an enormous imposition, and on at least four occasions when we approached the nurses' station, we were ignored by the nurses who were present, for a considerable length of time.
>
> However, if your statement is true, it is a sad indictment of your staff protocols, as it signals that it is common practice for patients and their families to be treated poorly and with little regard for their comfort, safety, or concerns."

The CCDHB Reportable Events Policy[19] (the Policy) states in its introduction:

> "Reportable Events … are those events that require reporting because they had the potential to, or did result in injury or harm. Through analysis they provide the opportunity to learn about system failure, error and in particular, ways to prevent recurrence. To allow this analysis we must first know about the events that occur, that is they need to be reported."

The Policy gives examples of a reportable event, including:

> "…
>
> - Inappropriate, insufficient or impaired staff
>
> …
>
> - Unacceptable clinical treatment delay".

Appendix 3 of the Policy sets out mandatory reporting requirements, and includes "all unexpected or sudden deaths" of mental health consumers, and all deaths that are reported to the Coroner.

Other matters

Oxygen therapy

Oxygen was not formally prescribed for Mr A. The CCDHB policy, Prescription of Oxygen (16 October 2000), states:[20]

[19] 16 December 2003.
[20] Superseded on 19 July 2005.

> "Oxygen is a medicine and must be prescribed by a registered medical practitioner.
>
> - For in-patients the order is written on the Medicine chart A580."

Care planning
During the period of Mr A's admission, no record was made in the clinical notes of the type or frequency of clinical observations that were required to monitor his condition. During the same period, no care plan was completed.

X-ray reporting
CCDHB stated:

> "[A]ll inpatient bedside X-rays are considered urgent and routinely reported on within one working day. If any other inpatient X-ray requires reporting urgently, this can be initiated at the request of the doctor as there is a Radiologist available 24hrs a day to review urgent films. … [Mr A's] chest X-ray was not reported because it was never returned to Radiology for reporting."

In March 2007, CCDHB advised that the computerised system for the acquisition, storage and distribution of X-ray images had been implemented, and that staff are currently being trained in its use.

Medical staffing
CCDHB stated in its internal investigation report:

> "The Internal Medicine medical cover appears (in this case) to have been inadequate, especially in light of the 'out of hours/on call' workloads and responsibilities. In particular:
>
> - Workloads of Medical Registrar and House Surgeon are high and this may have resulted in difficulties/failures to reassess, investigate and re-evaluate [Mr A].
>
> - The medical registrar did not attend the post-acute ward round as he was not rostered on during the day due to the requirement to undertake nights.
>
> - It is difficult to provide adequate coverage to all Internal Medicine patients with large 60+ numbers of patients and the long ward round."

CCDHB advised the Commissioner:

> "[T]here were no Senior Medical Officer roster or cover issues during [Mr A's admission]. The cover was considered a full complement of medical staff for Internal Medicine at that time."

Dr E stated:

> "I have made it clear to the CCDHB review panel that there were inadequate medical, especially registrar, staffing in the General Medical teams at the time of the incident and there was a high workload for only one registrar per team. This may well have contributed to this very unfortunate incident. Had there been adequate staffing, there would not have been any need for me to change shifts at short notice and I would have been present on the ward round the following morning, where I may have prompted an earlier review of the chest X-ray."

Asthma assessment sheet

CCDHB provided a copy of an asthma assessment sheet. This was developed in December 2002, and reviewed and updated in August 2003. The Business Manager,[21] stated that the document "was intended to be primarily a device to standardise asthma treatment in the ED. There has been staff education regarding its use and the sheets are available in common areas around the ED." The sheet requires the measurement of FEV_1 (forced expiratory volume in 1 second) at initial assessment, following nebulisers, and then at final assessment.

The asthma assessment sheet was not completed in Mr A's case. CCDHB stated that it is routinely not used "as not all staff know of it and it doubles up on paperwork".

Asthma Management Algorithm

The Asthma Management Algorithm provided by CCDHB states that it is "The Asthma Management Protocol currently in use in the Wellington Hospital Emergency Department", and was last reviewed on 21 August 2003. The algorithm is available on the internet,[22] and forms part of the "Adult Asthma Management in the Emergency Department" section of the "Resident Medical Officer's on-line Handbook".[23] The on-line project is part funded by the Ministry of Health under the provider development programme Health Information Initiative, and sponsored by CCDHB. Dr Geoffrey Robinson, Chief Medical Officer at CCDHB, stated that the on-line handbook is a set of guidelines rather than an agreed set of procedures for staff to follow.

The guidelines state:

> "The degree of improvement in FEV_1 after nebulised bronchodilator has been shown to be the best marker of requirement for hospital admission in severe asthma."

The guidelines define severe asthma:

> "...
> - [Patient] too wheezy or breathless to complete sentences in one breath
> - Respiratory rate >25 breaths/min

[21] Medical and Surgical Services, CCDHB.
[22] http://mentor.wnmeds.ac.nz/groups/rmo/asthma/asthma5.html
[23] http://mentor.wnmeds.ac.nz/

- Heart rate > 110 beats/min
- FEV_1 <50% of predicted normal or best

Caution: Patients with severe attacks may not be distressed and may not have all of these abnormalities. The presence of any of them should alert you to the severity of this attack."

With reference to arterial blood gas measurement, the guidelines state:

> "If more severe asthma is present or if patients do not respond to initial therapy, a blood gas assessment is an essential investigation, with attention focusing on the [arterial carbon dioxide pressure] as a marker of likely requirement for transfer to an intensive care unit."

The algorithm requires spirometry to be performed at initial assessment and during treatment to assess a patient's progress. Spirometry was not performed during Mr A's admission.

Blood tests results
CCDHB stated:

> "[CCDHB] does not have a specific policy regarding the checking of blood test results by clinical staff however the medical records management policy in use on 23 September 2004 states that, in relation to diagnostic test orders and results entries, any relevant abnormalities, and actions taken to address these, must be documented in the Examination and Progress notes section."

Smoke-free policy
Included in the recommendations of the internal review (5 July 2005) was that the smoke-free policy would be reviewed "to consider the needs of mental health patients in general inpatient areas". CCDHB advised the Commissioner (23 June 2006) that the smoke-free policy has not been reviewed "since the completion of the internal review of [Mr A's] care".

High Dependency Unit (HDU)
There was no HDU at Wellington Hospital at the time of Mr A's admission. The internal investigation included a recommendation that "CCDHB consider provision and resourcing of a high dependency unit at Wellington Hospital". Dr D advised:

> "The particular recommendation for the establishment of a High Dependency Unit in the medical wards is still under negotiation with senior management."

Independent advice to Commissioner

Medical advice

The following expert medical advice was obtained from Dr David Spriggs:

"I, David Arthur Spriggs, have been asked to provide an opinion to the Commissioner on Case Number: 05/11908. I have read and agreed to follow the Commissioner's guidelines for independent advisors.

I am a vocationally registered physician practising as General Physician and Geriatrician at the Auckland City Hospital (formerly Auckland Public Hospital). I have been in this role since 1992. I have been Clinical Director of General Medicine at Auckland City Hospital since September 2003. My qualifications are: BSc (Medical Science) 1977 University of St Andrews, MBCHB 1980 University of Manchester, MRCP (UK) 1984, MD 1993 University of Newcastle-upon-Tyne, FRACP 1993.

My referral instructions from the Commissioner are to provide expert advice as follows:

1. Please comment generally on the standard of care provided to [Mr A] by medical staff between 23 and 25 September 2004.

If not answered above, please answer the following specific questions, giving reasons for your views:

2. The chest X-ray performed at 2.57pm on 23 September 2004 was not reviewed until 5.40pm on 24 September. If it is your view that the chest X-ray should have been reviewed prior to this time, please state when, and by whom.
3. Please comment on the appropriateness of [Dr D's] order to [Dr L] on the ward round of 24 September that she was to check the chest X-ray when it became available and to call him if she was at all concerned about [Mr A] (see page 72 of enclosed documentation). If [Dr D] made such an order to [Dr L], was there a requirement for him to ensure that [Dr L] performed this review? (Please note that [Dr L] disputes [Dr D's] account.)
4. Please comment on [Dr D's] responsibility to check Mr A's chest X-ray and blood results during the post-acute ward round.
5. [Mr A's] blood results were available at approximately 2.15pm on 23 September, but were not reviewed until 5.40pm on 24 September. If you believe that these blood tests should have been reviewed at an earlier stage, please advise when, and by whom.
6. Should the results of the blood test taken at 1.06pm on 23 September, combined with his clinical presentation, have prompted a change in [Mr A's] treatment? Please comment on [Dr E's] view that the blood test would not have caused him to change [Mr A's] management (see page 25).

7. [Dr E] reviewed [Mr A] at 4.34pm on 23 September. Please comment on [Dr E's] responsibility to review [Mr A's] chest X-ray and blood tests at this time.
8. Please give your opinion on whether antibiotics should have been prescribed prior to 5.40pm on 24 September. If so, for what reasons, when, and by whom?
9. Please comment on [Dr E's] reasons for not prescribing antibiotics on the afternoon/evening of 23 September (see page 27).
10. Please comment generally on the oxygen treatment provided to [Mr A]. In particular, please comment on the absence of a formal prescription for oxygen.
11. Should medical staff record the type and frequency of the clinical observations required?
12. What would you consider to be the appropriate clinical observations (temperature, pulse, respirations, blood pressure, peak-flow, oxygen saturation, etc) for these stages:
    a. On [Mr A's] transfer to the ward from ED;
    b. Following the post-acute ward round;
    c. At 6pm on 24 September?
13. Should a sputum specimen for bacterial culture have been requested? If so, when, and by whom?
14. Should nicotine replacement medication have been prescribed at an earlier stage? If so, when and by whom?
15. Please comment on [Dr D's] rationale for not prescribing nicotine patches on the ward round on the morning of 24 September (see page 71).
16. Please comment on the relevance of obtaining arterial blood gases (ABGs) in this case. Please comment on whether further attempts should have been made to obtain an ABG, and whether local anaesthetic should have been used.
17. Should there have been any further actions taken on the evening of 24 September as a consequence of the failure to obtain arterial blood gases from [Mr A]?
18. Please comment on [Dr F's] decision not to attend [Mr A] on the evening of 24 September (see pages 40–42).
19. Please comment on [Dr F's] decision to manage [Mr A] on the ward, as opposed to transferring him to intensive care.
20. Please comment on the relevance of IV fluid management in this case. Was [Mr A's] fluid balance managed appropriately?

21. Please comment on the absence of the registrar ([Dr E]) on the post take ward round on 24 September.
22. Was there appropriate clinical support available to [Dr L] on 24 September during the day?
23. Please comment on the standardised asthma assessment and treatment sheet used in the ED (see pages 143a–143c). Please comment on the reasons given by the DHB why it was not used in this case (see page 12).
24. Please comment on the adequacy of the information communicated to the Coroner by [Dr E] on the morning of 25 September (see pages 34 and 94–95).
25. Are there any systemic issues that you believe contributed to deficiencies in [Mr A's] care?

If, in answering any of the above questions, you believe that [Dr D], [Dr E], or [Dr F] did not provide an appropriate standard of care, please indicate the severity of their departure from that standard.

To assist you on this last point, I note that some experts approach the question by considering whether the providers' peers would view the conduct with mild, moderate, or severe disapproval.

Are there any aspects of the care provided that you consider warrant additional comment?

I have been provided with the following supporting information:

1. Background;
2. Letter of complaint, including internal review (pages 1 to 16);
3. Notification, further information request letters, and responses by individuals, including information from GP and Coroner (pages 17 to 99);
4. Notification, further information request letters and responses from DHB (pages 100 to 131);
5. DHB policies and assessment documents (pages 132 to 143);
6. Clinical record (pages 144 to 177).

A summary of events has been provided to me by the Commissioner's Office.

My opinion is as follows:

1) [Mr A's] care fell significantly below the standards expected in a New Zealand hospital:

a) the lack of availability of the X-rays when needed by the clinical staff,

b) the failure to view the X-rays,

c) the failure to diagnose and treat Pneumonia in a timely manner,

d) the failure to seek advice from colleagues when needed,

e) lack of appropriate Consultant review, and

f) the failure of the Respiratory Service to respond meaningfully when asked

all fall significantly below the standards of usual clinical care.

The failure to communicate fully with the Coroner is a cause for concern. Justification of this opinion is detailed below.

2) The failure to examine the chest X-ray of [Mr A], for more than 24 hours after it was taken falls clearly below the standards of acceptable clinical practice. The responsibility for reviewing the chest X-ray lies initially with the doctor who ordered the investigation, [Dr S]. He formally handed over that responsibility [to] [Dr E], the Medical Registrar. The X-ray should have been available for viewing soon after it was taken at 2.57pm on the 23rd September. If it was not available, it was [Dr E's] duty to ensure that the X-ray was seen subsequently. [Dr E] reviewed [Mr A] at 4.34pm but did not see the X-ray. It was [Dr E's] duty to ensure that if he had not seen the X-ray by the end of his shift, the X-ray should have been reviewed by the succeeding Registrar, [Dr U]. This handover was not achieved. The following morning it is my expectation that the reviewing Consultant, [Dr D], should have had the X-ray available to him and he should have reviewed it. His failure to do that falls below acceptable clinical standards. It is our professional consensus that the overall responsibility lies with the supervising Consultant. However, Capital and Coast District Health Board has an obligation to ensure that the X-rays are accessible. From the supporting information I have, it is not possible to say whether the X-ray was even accessible to [Dr D] should he have asked to see it. I note that in supporting information there is no formal report of the X-ray or any evidence that it has ever been seen by anyone other than [Dr L].

3) It is reasonable for a supervising Consultant to ask his House Officer to find and look at a chest X-ray and to call him with the result However, there is a responsibility for the Consultant to chase up that advice if he has not received the appropriate phone call. [Dr D] states that at the end of the ward round he returned to see [Mr A] about midday. This was yet another opportunity for the X-ray to be found and reviewed. I note that [Dr L] had not been present for the initial part of [Dr D's] assessment of [Mr A], and [Dr L] stated that she assumed that the chest X-ray had been reviewed. She does not recall any instruction from [Dr D] to chase up the result of the chest X-ray.

4) It is accepted common practice that an SMO is responsible for checking X-rays and blood tests and drugs prescribed during the post acute ward

round. It is not clear whether [Dr D] checked the blood tests He certainly did not review the X-ray.

5) The responsibility for checking blood tests lies initially with the doctor who ordered the tests. The bloods were received at the laboratory at 1.06pm. It is not clear who ordered them, however, at this stage the patient was under the care of [Dr S] in ED. On transferring the patient's care to [Dr E], the responsibility for reviewing the tests lay with him. [Dr E] presumably had the results of the blood tests available to him when he reviewed [Mr A] at 4.34pm. It is not clear what [Dr E] meant by 'baseline bloods'. The blood tests should have been reviewed by [Dr D] on his post take round. It is usual practice to do a full blood count and biochemical screen on such patients, although [Dr E] may be right in that, 'the full blood count is rarely helpful in acute asthma', this does not absolve his responsibility from checking the results and the blood count may be useful in excluding other potential differentials.

6) When [Dr S] first assessed [Mr A] in ED [Dr S] did not have the benefit of X-rays or blood tests. However he interpreted the history and signs as indicating 'infective exacerbation of CORD … ?Pneumonia' which he wrote on the X-ray request form. Subsequently, also without benefit of X-ray or blood tests, [Dr E's] initial diagnosis was 'acute exacerbation of asthma, possibly infective in nature'. The respiratory distress, mildly raised temperature (37.5°C) and productive cough should have increased [Dr E's] suspicion of an infective cause This is neither supported nor refuted by a white cell count of 11.5 x 10^9/L. [Dr E] reassessed [Mr A] at 4.34pm when he states that [Mr A] was coughing up 'yellow phlegm'. Discolouration of sputum is a classical sign of infection within the lungs, be it bronchitis or pneumonia. Sputum can be discoloured in asthma, however this is relatively unusual. In this clinical context, yellow phlegm should have been considered an indication of pulmonary infection However, despite this and the mild fever [Dr E] advised that he 'had a low index of suspicion for pneumonia'.

7) As stated above [Dr E] did have a responsibility to seek out [Mr A's] chest X-ray and blood tests at the time he reviewed him at 4.34pm.

8) The presentation of increasing shortness of breath, mild fever, purulent sputum and respiratory distress in a smoker would usually prompt early use of antibiotics. I accept that there is debate about the significance of a fever 37.5°C. However in this context it should have been considered an indicator of infection within the lungs and I believe that there was enough evidence to start antibiotics at 4.34pm on the 23rd of September. By the following morning there was absolutely no doubt that [Mr A] was septic, the temperature recorded at 22:00 hours on the 23rd of September is 38.4°C, fell to 37°C at 5.00am and at 8.00am when he was about to be reviewed by [Dr D], the temperature had risen again to 37.8°C. When

[Dr D] reviewed [Mr A] on the post take round, the history of purulent sputum and fever should have prompted antibiotics at that stage, even if the chest X-ray was unavailable. It is not clear whether [Dr D] was aware of the fever at that time, although the notes recorded at 22:30pm by the staff nurse the night before, had recorded the temperature of 38.3°C. These notes were available to [Dr D] at the time even if the observation file had been mislaid.

9) I do not believe that [Dr E's] reasons for not prescribing antibiotics, ie, he only had a 'low grade fever or afebrile' and the fact that yellow sputum is 'not clearly purulent' would be accepted by most Registrars in training. The absence of signs of consolidation on listening to the chest in no way excludes infection in the lungs. Guidelines from the National Institute for Clinical Excellence in the UK, from February 2004 state 'antibiotics should be used to treat exacerbations of COPD associated with a history of more purulent sputum'. This is an A Category recommendation which means that it is strongly endorsed and has strong supporting evidence from controlled trials.

10) CCDHB has a policy that [states] 'Oxygen is a medicine and must be prescribed by a medical practitioner'. This approach to oxygen is supported by most senior medical staff. It is however common practice for oxygen not to be prescribed formally. Nurses are usually authorised to give oxygen to people who are short of breath, have chest pain etc and junior doctors often give verbal orders for such. In the context of a patient who is reluctant to keep the oxygen mask on, any attempt to give oxygen in a controlled way may be seen as futile.

11) It is not current practice for medical staff to record the type and frequency of observations required. This is usually considered to be a professional judgement by the nursing staff.

12) In the clinical context of a man in severe respiratory distress who is at times unco-operative and refusing assessment which in itself might indicate worsening respiratory failure, close observation must be attempted. Such patients would usually be nursed in an area adequately staffed such as a 'high dependency unit' and observations of pulse, blood pressure, oxygen saturation, are ideally continuous and electronic. In this context that may have been impossible because of [Mr A's] behaviour in which case at least hourly observations should be attempted. Temperature and peak flow observations need not be as frequent but need to be regularly planned, temperature being approximately four hourly and peak flow four times a day. After the post acute ward round, when [Mr A's] condition was causing increasing concern, the necessity for such observation should have become more apparent and if the nursing staff on the ward were unable to form such observations, [Mr A] should have been

transferred to an area where he could have been more closely watched. It seems that there was little emphasis on respiratory rate; this is a non-invasive investigation that does not require patient co-operation. I note that [Dr L] on reviewing [Mr A] at 5.40pm on the 24th September recorded the respiratory rate of 'more than 60 breaths per minute'. This should have prompted urgent senior review as it is a very serious prognostic indicator. [Dr L] should have sought further advice and should have felt empowered to do so irrespective of the busyness of the hospital. The advice could have been sought from the medical Registrar on call, the respiratory Registrar on call or the intensive care unit.

13) It is common but not universal to send a sputum culture specimen in cases of infective exacerbations of obstructive airways; if however the diagnosis had been asthma, sputum culture is less common. The result usually takes 48 hours to come back and I don't think the failure to send a specimen in this case deviated significantly from usual practice.

14) Nicotine replacement in the context of [Mr A's] illness is unlikely to have improved his distress. Replacement takes time to work and at any rate was declined by [Mr A]. It is however common but not universal practice to provide nicotine replacement if requested for such patients. This could have been done by [Dr E], when he first assessed [Mr A] or by [Dr D] on the post acute round.

15) [Dr D's] rationale for not prescribing Nicotine patches on the acute round is consistent with common practice; however, as said in the answer to question 14, this may have been a lost opportunity.

16) Arterial blood gas measurements in cases of respiratory failure are important. They add additional information to that gained by oxygen saturation; in particular they give information on how well the patient is ventilating (breathing). In the context of a man clearly distressed and confused probably due to the respiratory failure, blood gas estimation is accepted clinical practice. However, I acknowledge that in this particular clinical context, when [Mr A] was unsettled and resisting attempts to perform blood gases, it may have been impossible to get an appropriate specimen. Local anaesthetics can be used, however, this is not common practice. [Dr F] seems not to have considered the use of topical anaesthetic cream. I am not sure if that was available on the ward. It would have been usual to try to obtain arterial blood gases later in the evening to ensure that [Mr A's] ventilation was adequate. [Dr N] was unable to obtain the specimen and she should have been able to seek advice from a more senior doctor or an anaesthetist.

17) [Mr A's] deteriorating clinical condition, his agitation and the failure to monitor his blood gases, should have prompted [Dr N] to seek further advice from [Dr F] (medical Registrar) or from DCC [Department of

Critical Care], or phone the responsible Consultant, [Dr D], or the Consultant on call.

18) It is clear in [Dr F's] submission that his clinical work load was heavy. He admitted about 11 patients, was attending cardiac arrests, urgent medical consults and answering GP phone calls and assessing patients in the emergency department. He had talked to [Dr L], set up a management plan and spoke to [Dr N] at approximately 20:00hrs when she told him that she had failed to obtain blood gases. It is not clear that [Dr N] made any further comment suggesting that she was worried about [Mr A's] care nor did she specifically ask [Dr F] to attend. I am unable to decide whether this was reasonable as the relative priorities for [Dr F] at that time are not clear.

19) [Dr F] was asked by [Dr L] whether [Mr A] required an intensive care review. [Dr F] was unsure and he was asked by [Dr L] to review [Mr A]. [Dr F] did not do this as he believed he had made an appropriate action plan. By the evening of the 24th September it should have been clear that [Mr A] was deteriorating, his respiratory rate had reached more than 60 breaths per minute and he was clearly distressed and confused. Managing [Mr A] on a general ward was inappropriate and if there was no high dependency unit available, intensive care was indicated. It is usual for intensive care specialists to be readily available for consultation in big tertiary hospitals however there is no evidence that they were even contacted and [Dr F] should have made that call even if he had no time to see [Mr A] himself.

20) In the absence of fluid balance charts it is impossible to comment on the appropriateness of his IV fluid management, however, the fluid prescription charts suggest that the first litre which was prescribed to take 12 hours, took 18 hours, the second litre ran to time over six hours, the third litre prescribed for six hours, took about 10 hours suggests that the fluid was running slowly. In the context of a man who is distressed, disconnecting his tubes and going for smokes, it is not unusual for such fluid not to run to time and I do not think that his management in this regard was below usual standard, nor do I think that his fluid management had any effect on his outcome.

21) Continuity of care is a major issue in the current staffing of hospitals. [Dr E] was not available to do the post take round. This is not unusual and adds risks to patients. It also interferes with the training opportunities. Hospitals are bound by the collective employment contract and a nationwide shortage of RMOs and the situation that arose in the case of [Mr A] happens many times during the course of the year in New Zealand. This does not make it acceptable.

22) [Dr L] was poorly supported during her shift. She was not with [Dr D] at the start of his consultation with [Mr A] and she states that another house officer was most likely to have been with [Dr D] at that time and he 'actually began writing in the notes which I subsequently finished'. She returned to [Mr A] after her shift had ended and was concerned enough to 'immediately' page the on call medical Registrar, [Dr F]. She expressed her concerns to him. I am not aware of what other support was available for [Dr L] during the day on the 24th September. She seems to have acted appropriately but for reasons that are unclear, she did not feel it appropriate to speak directly to a) [Dr D], b) the intensivists, or c) medical Consultant on call. She did speak to the Registrar but he was busy. It is part of the 'culture' of junior doctors that they are reticent to ask for advice and it is important that this culture be changed and doctors of all grades be encouraged to seek advice when things are going wrong. There should have been channels of communication available for doctors in the situation of [Dr L] which 'bypassed' an overworked Registrar.

23) The 'asthma management algorithm' and the standardised 'asthma assessment and treatment sheet' are in themselves pretty standard and do not obviously deviate from usual practice. As is common with such algorithms and assessment sheets, this was not used as 'not all staff know of it and it doubles up on paperwork'. This is clearly an unsatisfactory response. The reason for not using the asthma assessment sheet in the case of [Mr A] is that he was not suffering from asthma but pneumonia. It is characteristic of New Zealand hospitals that there are multiple guidelines, protocols, policies, algorithms and assessment sheets. Such aids to the management of patients are often poorly used, inaccessible and frequently unknown to the clinical staff. I believe that it is the duty of all organisations not only to produce such advice, but to make them readily available to clinical staff.

24) [Dr E's] communication with the Coroner that [Mr A] was admitted 'with moderate to severe asthma treated with appropriate medication' is inadequate. I do not know if there was any other communication. If [Dr E] believed that the death was due to asthma, then the referral to the Coroner would not have been appropriate. It should be stressed to junior doctors that communication with the Coroner must be full and frank and the omission of important clinical data, such as the failure to give antibiotics for more than 24 hours, is inappropriate. It would be usual clinical practice for the Consultant concerned, [Dr D], to either communicate with the Coroner directly or closely supervise such communication by the Registrar. I notice the 'Capital and Coast Health Record of Death form' states that this be filled out specifically by House Surgeon or Registrar, however, before referring such a case to the Coroner it would be usual practice to discuss with the Consultant the course of action. I should note that I am not aware of the Coroner's instructions and interaction with CCDHB, nor of the degree of detail that he/she requests, nor of his/her

interaction with clinical staff in Wellington. It may be that there was locally some agreement either explicit or implied that allowed such registrar communication.

25) Systemic issues that have contributed to deficiencies in [Mr A's] care include:

a. Staffing. There was a lack of continuity of care amongst junior medical staff and probably a shortage of such. Nursing staff were short and [Mr A] was looked after by an enrolled nurse probably without sufficient senior supervision.
b. Lack of High Dependency Care. It may have been available but it was certainly not used.
c. Probable lack of availability of chest X-ray at some of [Mr A's] care. I have no information on where and when the films became available.
d. The failure of the smoking policy to provide those who crave nicotine (some of whom are at the end of their lives) with appropriate means to relieve their distress. This is an issue throughout the New Zealand health system.
e. A culture in which there seems to have been abject failure to consult senior medical staff when appropriate.
f. Lack of full consultation with the Coronial Service.

In addition to the above, I think comment needs to be made about the respiratory referral. It would not be considered standard practice for a respiratory Registrar, [Dr K], to be consulted by a senior physician, [Dr D], advise over the phone that theophylline would be inappropriate, recommend [an] Atrovent nebuliser and proceed no further. It is standard practice for Registrars when consulted on behalf of their specialist team, to discuss that consultation with their Consultant. In the case of [Mr A], [Dr D] was significantly concerned about [Mr A's] progress. He asked for advice and the Respiratory Team, in particular [Dr K], should have come to see [Mr A]. Once more this was a lost opportunity to review the chest X-ray and reach a rapid diagnosis. This consultation should have occurred on the morning of the 24th of September. It is not clear what support was available to [Dr K] nor what instructions he had been given by his supervising consultant or the Respiratory unit about responding to requests for help.

In reviewing the information available to me, I believe that:

[Dr D's] clinical care of [Mr A], in particular his failure to ensure that the X-ray was reviewed, the blood tests were seen and the significance of the fever was noted and his failure to oversee the total care of [Mr A] including the referral to the Coroner, falls significantly below the standard of care expected of his peers and I believe his peers would view his conduct with moderate disapproval.

With regard to [Dr E], he too should have seen the chest X-ray or ensured that it was viewed. He should have diagnosed the chest infection on clinical grounds and his failure in this regard and to prescribe antibiotics would be viewed by his peers with moderate disapproval.

I do not have enough information on the workload under which [Dr F] was struggling to make a clear judgement about his personal responsibility for not reviewing [Mr A] in the evening of the 24th of September, however, his peers would consider that had he the opportunity to do so, he should have clinically reviewed this patient.

In addition, I believe the failure of [Dr K] to follow up on a referral from a senior Consultant fell significantly below accepted standards although I have no information on the instructions [Dr K] received from his team about the handling of referrals. The failure to assess [Mr A] was significantly below accepted standards and would be viewed with disapproval by his peers.

Dr D A Spriggs"

Nursing advice

The following expert nursing advice was obtained from Ms Janet Hewson:

"I have been asked to provide an opinion to the Commissioner on case number 05/11908.

I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

I am a Registered General and Obstetric Nurse with a Clinical Masters Degree in Nursing. I have 37 years' experience in nursing. My background has been mainly in acute care/high dependency nursing and as an educator in advanced nursing.

The purpose of my referral is to advise the Commissioner whether an appropriate standard of nursing care was provided to [Mr A] (deceased) from 23 to 25 September 2004. I have been asked to comment and give reasons for my views on specific questions.

The background of this case is as follows:

[Mr A] was admitted to Wellington Hospital on the afternoon of 23 September 2004 with acute breathlessness, a raised white cell count, a raised temperature, and a productive cough. Treatment was commenced for acute asthma, and a blood test and a chest X-ray were performed in the emergency department (ED) prior to [Mr A's] admission to [the ward].

Despite reviews by the medical staff on the afternoon of 23 September and the morning of 24 September, the chest X-ray and the blood test that were taken on admission were not reviewed until [5.40pm] on 24 September.

From [4.50pm] on 24 September, no clinical observations were recorded on the temperature and pulse chart. Two unsuccessful attempts were made from [6pm] to obtain arterial blood gasses, but [Mr A] found the procedure too uncomfortable to tolerate.

[Mr A] was discovered unresponsive at [6am] on 25 September by nursing staff and, following unsuccessful resuscitation procedure, he was pronounced dead at [6.16am].

CCDHB subsequently investigated the care provided [Mr A], but the family was unsatisfied by the outcome of the inquiry, and made a complaint to the Commissioner.

1. I will answer each question put to me individually and then comment about [Mr A's] overall care with some measures that could have been undertaken to perhaps minimize harm.

2.

Q: Comment on the actions taken by nursing staff to ensure that IV fluids ran as prescribed.

A: [Mr A] had his fluids stopped during transfer from the ED to [the Ward] (apparently usual hospital practice as noted in [Ms P's] interview). I also note that his intravenous catheter needed replacement once he was on the ward. Both of these activities, depending on how long each took, would lengthen the infusion time. I also note from [Ms P's] interview that [Mr A] disconnected his IV fluids 'several times' on her shift. Again this would lengthen the infusion time. None of these events were the fault of the nursing staff and in my opinion they managed the infusion as well as could be expected in the circumstances. I note that at some point [Mr A's] infusion was placed on a pump, which ensures greater accuracy with the advantage of alarms to notify the nurses of problems that may arise. Using a pump for this patient was the expected standard as his infusion rate was altered twice over the next 20 hours.

3.

Q: Comment on the absence of fluid balance charts (FBC).

A: There was no direct medical order for a FBC on [Mr A]. However it is also a nursing decision, based on clinical judgment, if a patient requires a FBC. The purpose of the FBC is to track all intake and/or output of fluids. The accuracy and effectiveness of the FBC, as described by M. Louey (2006), is problematic due to the lack of control of ingestion and excretion of fluids in patients. In [Mr A's] case he was able to eat, drink and go to the toilet independently. It is my opinion that an accurate FBC could not have been maintained from the descriptions of [Mr A's] behaviour and therefore incomplete data is of limited value for clinical

decision-making. However it is also my opinion that a FBC was not essential on [Mr A]. The nurses accurately documented the intravenous fluids on the 'intravenous fluid order form'.

4.

Q: Comment on the clinical observations performed by the nursing staff during [Mr A's] admission (including pulse oximetry and peak flow measurements). In particular, comment on the observations performed in the 13-hour period after [4.50pm] on [24 September]. Comment on the severity of any departure from acceptable practice.

A: A full set of standard observations was documented at [4.50pm] on [24 September]. After that oxygen saturations were documented 4 times until sometime after [6.15pm] (no time recorded for final saturation). No other observations were recorded on the 'temperature and pulse chart'. [Ms G] said in her interview that she recorded a pulse and respiration (and attempted to take a blood pressure but [the] patient refused) after the Magnesium infusion. There is no evidence of this in the clinical record. However it would have been the expected standard to take a blood pressure (BP), pulse and respiratory rate before and during a Magnesium infusion due to potential adverse reactions (hypotension, bradycardia, respiratory depression) of this drug when given intravenously (New Zealand Healthcare Pharmacists, 2004). [Ms G] also states she did a pulse, respiratory rate and oxygen saturation recordings 'hourly and as much as possible given her other patients and duties allow'. However none of these observations were documented in the clinical record. It would have been the expected standard to take and document pulse, respiratory rate and saturations at least every 2 hours on [Mr A] in this acute presentation (Otago District Health Board, 1999; Dunedin Hospital Formulary, 2004). She also states in the clinical record that [Mr A] received 1–2 hourly nebulisers, however the only recordings that she administered medication to [Mr A] was recorded at [6–6.20pm] and [9pm and 9.05pm]. If she did take observations and give nebulisers as described in her notes and interview, she has met the expected standard of care. However she did not meet the expected standard of documentation of this care by the New Zealand Nurses Organisation (2003) which states, 'provide documentation that meets legal requirements, is consistent, effective, timely, accurate and appropriate' (standard 1.10) nor the Nursing Council of New Zealand (2005) which states, 'maintains clear, concise, timely, accurate and current client records within a legal and ethical framework' (competency 2.3). This lack of documentation would meet with moderate disapproval from the profession.

In the clinical record [Ms G] describes events that occurred on her shift. I am given the impression she was in and out of [Mr A's] room often during this duty. This watchful surveillance would be the expected standard regardless of formal observation taking and documentation. The peak flow measurements in [Mr A] were problematic. Peak flow requires patient ability and co-operation. According to the Joanna Briggs clinical information service, peak flow rate is contraindicated

in acute respiratory distress and when the patient is unable to speak in short sentences (Louey, 2005). As [Mr A] was extremely breathless and anxious I do not believe peak flow measurement would [have been] achievable or reliable. [Ms G] did attempt to take a pre and post nebuliser peak flow measurement but the results appeared unreliable.

On the night shift it has been stated in the interview by [Ms I] that no observations were taken. There were two attempts to take oxygen saturations [midnight and 4.15am] however a reading was not obtained because the patient's hands were not accessible. As previously stated the minimum requirement would have been to take the pulse, respiratory rate and oxygen saturations at least every 2 hours. Although [Mr A's] hands were not accessible for a pulse oximeter, the earlobe or toe can be used. This issue should have been raised with [Ms H] or the duty manager, [Ms B]. Regardless, the respiratory rate and pulse could have been counted and documented. Not taking at least the respiratory and pulse rate is well outside the expected standard of practice in this situation and would meet with severe disapproval by the nursing profession. Although [Mr A] had been visibly seen on many occasions during the night, he was not 'closely monitored' for clinical indicators that could alert the nurse to a deterioration in his condition. While [Ms H] has stated that [Ms I] is 'a good observer of sick people', [Ms I] did not take the necessary objective data, nor ask for help from a registered nurse when the oxygen saturations could not be taken. If she had been under direction and supervision by the RN, other strategies may have been taken to assess [Mr A].

5.

Q: What actions could have been taken when [Mr A] allegedly refused to have his observations taken?

A: As previously stated, earlobe or toe oximetry is an alternative when fingers are inaccessible or too cool. I would expect the CCDHB to have this available. Although continuous saturation measurement is ideal, in this case regular one-off measurements would have been adequate. As well, counting respiratory rate takes no co-operation from the patient and is a sensitive indicator of respiratory function. The carotid pulse site could have been used to measure heart rate. [Ms I] needed advice from the registered nurses on how to manage this situation.

6.

Q: Comment on the standard of nursing care provided on the evening of [24 September] at around [6pm], in particular the clinical observations performed.

A: I believe I have commented on this in answer 4.

7.

Q: Comment on the responsibilities of registered nursing staff in relation to the planning of clinical observations.

A: t is the responsibility of the registered nurse (RN) to first assess the patient, and then using clinical judgment make a decision on what observations are required, the frequency of those observations, who should perform those observations and when to report back to the RN. This is strictly within the scope of practice of the Registered Nurse as outlined in the Nursing Council of New Zealand (2005) competencies which states, 'provides planned nursing care to achieve identified outcomes' (competency 2.1) and is an expected standard of practice from the New Zealand Nurses Organisation (2003) which states, 'work within their scope of practice based on current nursing knowledge, professional judgment, experience and competence, within their area of practice and job description' (standard 1.2). The RN may delegate clinical observations to the enrolled nurse (EN) who has the skill and knowledge to perform and evaluate these observations while knowing when to report back to the registered nurse with any observations outside the normal parameters set by the RN.

8.

Q: Comment on the responsibilities of registered nursing staff in relation to the correct administration of oxygen therapy.

A: Oxygen therapy is to be prescribed by the medical staff on the appropriate form (Otago District Health Board, 2003). Usually a flow rate or percentage of oxygen is ordered to keep the oxygen saturations above a specific parameter. In [Mr A's] case oxygen therapy was in continuous use with variable flow using different delivery devices to keep his oxygen saturations above 92%. There was no prescription for oxygen however it was noted in the clinical record several times to keep the oxygen saturations above 92%. The nurses did alter the flow rate and delivery device to achieve this outcome. [Mr A] was mainly on a simple mask (Hudson) at a flow rate of 4–6 litres. The minimum flow rate for this delivery device is 6 litres to ensure accumulated carbon dioxide is flushed out. I note he was on 6 litres via a Hudson mask during the afternoon shift of [24 September]. It is not stated what his oxygen flow/delivery device was during the night shift. Having oxygen formally prescribed by the medical staff is often not done. Nurses can remind the medical [staff] to chart the oxygen. However not having oxygen charted would not preclude the nurses from administering oxygen safely to achieve the desired outcome for the patient. The nurses met the expected standard by adjusting [Mr A's] oxygen to keep his saturations >92%.

9.

Q: Comment on the standard of nursing documentation. In particular, please comment on the absence of a formal care plan.

A: The standard of nursing documentation in the clinical record of [Mr A] was adequate on [23 September] by [Ms P], on [24 September] by [Mr Q], and on [24 September] by [Ms G]. However the nursing documentation on [24–25 September] night shift was inadequate as there is no reference to [Ms I] being supervised. I would have expected some written documentation by [Ms H] particularly because [Mr A] arrested and died. This lack of documentation on the night shift would meet with severe disapproval by the profession. Generally the documentation of all nurses is without a systematic approach as reflected in registered nurse competency 2.2 (Nursing Council of New Zealand, 2005). The lack of a thorough subjective and objective assessment, decision-making for care requirements from those findings, evaluation of care implemented and further planning for the shift (Otago District Health Board, 2006) would meet with moderate disapproval by the profession.

The lack of documented observations on the temperature and pulse chart is inadequate from [4.50pm on 24 September] to the time of death. Although [Ms G] states she 'summarized' the observations in her nursing notes, this does not replace documenting specific observations at specific times. Summarizing in the notes does not reflect a trending picture, which is one of the objectives of an observation chart. There were absolutely no observations documented on the night shift either in the nursing notes or the temperature and pulse chart. This is an extreme deviation from the expected standard and would meet with severe disapproval from the profession.

Although a verbal handover does not replace nor negate the requirements for accurate and complete written documentation, the verbal handover given by [Ms G] to [Ms I] and [Ms H] needs comment. From [Ms G] and [Ms H's] interview notes it seems there was no reference to the fact [Mr A] was not improving, may need Intensive Care review, had an abnormal chest X-ray, and that IV antibiotics had been started. All of these pieces of information should have been verbally passed on as it may have sent a red flag for the oncoming nurses. These indicators were critical to enable the nurses to prioritize and plan [Mr A's] care and may have altered the patient allocation arrangement.

The purpose of a verbal handover is to ensure efficient and effective communication and *exchange of essential* clinical information between nursing personnel in order to maintain the continuity, safety and quality of patient care over all shifts (although this pertains to all staff, accountability remains the responsibility of the supervising registered nurse). A verbal plan of care is to be reflected in clinical patient documentation and once the verbal handover is completed and the team sets the plan for the shift, it is expected that staff will read the written progress notes within one hour of commencing the shift (Otago District Health Board, 2006).

I do not think the night shift nurses would have had time to read the patients' notes considering their workload and the problem with staffing. This is all the

more reason why the verbal handover be in depth, alerting the oncoming nurses to [Mr A's] lack of progress and risk for deterioration. In my opinion and experience, the verbal handover for [Mr A] was much more relevant and critical than any formal plan of care, as it was unlikely the nurses would have had the time to read his clinical record on this particular shift.

10.

Q: Comment on the relative responsibilities of [Ms H] and [Ms I] in relation to the delivery of care to [Mr A] on the night shift of 24 to 25 September. In particular comment on [Ms H's] responsibility to supervise [Ms I].

A: [Ms H] was responsible for supervising [Ms I] during the night shift. There is no evidence of [Ms H] assessing [Mr A] (RN responsibility) and planning care with [Ms I]. There is no evidence that [Ms I] asked for advice or direction from [Ms H] concerning [Mr A] during the night. There were two specific issues she should have talked to [Ms H] about: [Mr A] being without his oxygen for several periods of time (while away for a smoke) and her inability to do oxygen saturations. Both of these issues needed to be managed as they were putting [Mr A] at risk of harm. Nursing Council of New Zealand (2005) competencies for the enrolled nurse states 'identifies and reports situations that affect client health and safety' (competency 1.5). As previously noted, [Ms H] did not document in the clinical record concerning [Mr A]. I would have expected this in light of his arrest and death.

The definition of 'direction' from the Nursing Council of New Zealand (2005):

> 'Direction is the active process of directing, guiding, monitoring and influencing the outcome of an individual's practice. Direction is provided directly when the registered nurse is actually present, observes, works with and directs the person; direction is provided indirectly when the registered nurse works in the same facility or organization as the supervised person but does not constantly observe her/his activities. The registered nurse must be available for reasonable access.'

In the case of [Mr A] it is my opinion [Ms H] should have directly supervised [Ms I]. This departure of direction and supervision indicates a severe departure from the expected standard in these circumstances.

11.

Q: Comment on whether [Ms I] was working outside her scope of practice. If she was, whose responsibility was this?

A: Yes, [Ms I] was working outside her scope of practice. [Mr A] was a complex patient whose condition was neither predictable nor straightforward. He presented with many challenging behaviours and was not physically improving despite treatment [over] almost 36 hours. The overall responsibility for ensuring health

professionals work within their scope of practice [lies] with the individual (Nursing Council of New Zealand (2005) competencies 1.3, 1.4, 1.5) and in this case the employer, CCDHB. The duty manager, who is acting for the CCDHB out of hours, was aware of the situation on [the ward] the night of 24 to 25 September. It was clear from the internal review interviews that [Ms I] was not receiving direction and supervision from the registered nurses due to the busyness of the ward. [Mr A] was assigned to [Ms I] without considering his complexity. [Ms G], [Ms H] or [the clinical co-ordinator on the evening shift] should have recognized he was not an appropriate patient for an enrolled nurse.

Comment: The standard of care provided to [Mr A] by the nursing staff varied. Clearly the omissions of collecting and documenting observations were not to the expected standard and the lack of direction for [Ms I] was unacceptable. However there were issues regarding [Mr A's] need to smoke that made his care problematic for the nursing staff and put [Mr A] at risk.

The many occasions and the length of time on each occasion (from 3–5 minutes travel time each way, time to smoke and perhaps extra time to just stay outside) meant [Mr A] was without his oxygen. [Mr A's] potential for hypoxemia (low levels of oxygen in the blood) and tissue hypoxia (lack of oxygen to vital organs) was great. He had a high demand for oxygen in this acute asthma/pneumonia state and during the time he was off his oxygen, was getting a very low supply. This imbalance of oxygen supply and demand is a fundamental concept that should have the utmost priority in his nursing care. Nurses are responsible for surveillance; surveillance is important work and is a nursing responsibility. However you cannot survey a patient when they are not in the ward under the watchful eye of the nursing staff.

Professional vigilance is the essence of caring in nursing. It is the sustained attention, the perpetual scanning, that must be present [in nurses'] practice. It is not the action of taking the observations, dressing the wound or starting the intravenous [fluids]. It is the 'watchfulness' that is always part of the nurse's thinking process as activities such as these are completed (Meyer and Lavin, 2005). It is my opinion that [Mr A] was watched by the nursing staff during the time he was in the ward. There is sufficient evidence that the nurses did see [Mr A] when they: took observations, attempted to take observations, gave medication, re-connected his IV line, re-positioned him in bed and assisted with activities of daily living. Conversely when he was off the ward having a smoke the nurses could not 'watch' him. This made management of [Mr A] difficult.

[Mr A] had special needs in relation to smoking that were not met by the CCDHB. No one seemed to be able to think beyond the 'smoke free policy'. Nicotine patches/spray were not a practical option for this man at this time in his illness (as noted in the interview by [Dr D]). He was stressed and craved the smokes. Attempting to reason with him about the detrimental effect of smoking was extremely limited with [Mr A] at this time. Ethically the competing principles of

patient autonomy/self-determination and non-maleficence/doing no harm must be weighed up so that the final outcome would be to avoid harm and prevent future harm for [Mr A] (New Zealand Nurses Organisation, 2001).

This means to minimize the time he is off oxygen and away from the watchful surveillance of the nursing staff. This could have been achieved by allowing [Mr A] to smoke in the bathroom (his room had a private ensuite). He may not have required a full cigarette each time, just enough to curb his cravings. This would have significantly minimized his time off oxygen, may have calmed him knowing he was allowed to do this, and kept him in close proximity of the nursing staff.

Exemptions to smoke-free policies may be provided in exceptional circumstances (Otago District Health Board, 2005). Under the Smoke-free Environments Act 1990, special provisions for certain institutions states 'any hospital shall also include a requirement that any patient who is so incapacitated as to be unable to move readily or to be moved readily may be permitted to smoke in an area that is not a permitted smoking area' (abridged). It is my opinion that [Mr A] fits these criteria as his medical condition was such that he should not be expending the energy to go for a smoke plus spending the time off oxygen.

In conclusion, this unfortunate case reflects the problems that may distract nurses from giving the best possible care, specifically that [Mr A] had special needs in relation to his tobacco habit and the night shift did not have the vital information to plan and allocate care. The busyness of the night shift with the staffing issue also contributed to inadequacies in [Mr A's] care. And finally the level of direction and supervision and the standard of observation collection and documentation was very poor.

…

Janet Hewson RGON, MN
Independent Nurse Advisor

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Expert advice on hospital systems
The following expert advice was obtained from Dr Mary Seddon:

"I have been asked to provide an opinion to the Commissioner on case number 05/11908 ([Mr A]), and I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

Qualifications: MBChB, MPH, FAFPHM, FRACP.

Training: Graduated Otago Medical School 1987, MPH (Auckland) 1999.

Experience:

Medical Registrar appointments in Auckland and Tauranga 1990–1995.

General Physician Middlemore Hospital 2000–2002.

Senior Lecturer in Quality Improvement, Epidemiology and Biostatistics, School of Population Health, University of Auckland, 2000–2004.

Referral instructions: Expert Advice Required
[Here Dr Seddon lists the information provided, and the questions asked of her, which are referred to again in her advice.]

Brief synopsis of case:

[Mr A] was brought to Wellington Hospital by ambulance on the 23rd of September 2004 (a Thursday). He had seen his GP the day before complaining of shortness of breath and cold symptoms for five days. His cough was productive of clear phlegm and [Dr J] diagnosed an exacerbation of asthma — apparently [Mr A] obtained good symptomatic relief with a Ventolin nebuliser at the surgery. He was prescribed bronchodilator inhalers and oral prednisone. [Mr A] was no better by the next day and called an ambulance. The ambulance sheet notes that [Mr A] was tachycardic and in respiratory distress with rapid wheezy breathing, able to speak only 6–7 word sentences. His phlegm was noted to be green.

According to [Ms B], [Mr A] was a life-long heavy smoker but had developed difficulty breathing only in the last several years, there was no history of childhood asthma and no other admissions with asthma.

The ambulance reached Wellington hospital at 12:21 hours. The first observations were taken at 12:32 when he had a temperature of 37.8ºC. [Mr A] was seen at 12:44 by [Dr S] (Emergency Care doctor). His observations were repeated at 13:02 hours and showed a persistent temperature (37.5), tachycardia of 125 beats/minute, tachypnoea with a respiratory rate of 28 breaths/minute and his blood pressure was normal at 138/92. His oxygen saturations were 98% on 5L of oxygen.

[Dr S] noted that he could only get a limited history due to [Mr A's] shortness of breath, but he again noted deterioration over a week. There is no documentation of a peak flow recording — it was attempted at 14:43 but was unsuccessful as [Mr A] was too short of breath. [Mr A] was given four Ventolin nebulisers — the first at 13:00 hours. He was also started on hydrocortisone intravenously. The clinical notes refer to 'long-standing' asthma but this is disputed by family members who note late onset breathing problems.

[Dr S's] impression of [Mr A's] clinical condition is documented as 'an infective exacerbation of asthma/CORD (Chronic Obstructive Respiratory Disease)', and the plan is for 'maximal asthma therapy, a CXR, ECG and referral to the medical team'.

[Dr E] — medical registrar — saw [Mr A] at 16:34 hours. [Dr E] obtained a history of [Mr A] being unwell for only 3–4 days and a cough productive of yellow phlegm. Again [Dr E] documents a history of asthma since childhood but no admission or previous oral steroids. He also notes [Mr A's] bipolar disease with a recent flare of his mania 7–10 days prior for which he had been started on respiridone in addition to Lithium.

[Dr E's] impression is one of an acute exacerbation of asthma and he suggests admission for regular nebulisers, oral prednisone and 'baseline bloods'.

[Mr A] had a [chest X-ray] at [1.27pm] ordered by [Dr S] who had entered the clinical details on the CXR request form as 'infective exacerbation of CORD, ? Pneumonia.' The radiology technician noted at the time of the examination that 'I was unwilling to stand the patient up for a 2nd PA (posterior-anterior) — very unsteady and very unwell.'

The CXR was not reviewed by either [Dr S] or [Dr E].

Note: I do not seem to have the radiologist's formal report of the CXR.[24]

[Mr A] was transferred to a medical ward where a nurse notes that [Mr A's] temperature is 38.3ºC for which Panadol is given. [The nurse also] notes that he is a smoker and requests nicotine patches to be 'prescribed mane'. [Mr A] is awake for most of the night and agitated at 03:00 hours — wanting to have a cigarette. He was escorted downstairs and outside by an orderly for a cigarette.

[Mr A] was reviewed on the post acute ward round though [Dr E] who would normally have been on the ward round to present the admissions to [Dr D] had been asked to work a night duty on that Friday night and so was at home resting. According to the house officer's note (assumed to be [another house surgeon] for first part of note and [Dr L] for second part), [Mr A] was still very short of breath.

[24] Commissioner's comment: the chest X-ray has not been reported.

[Dr D's] examination revealed audible wheeze, accessory muscle use and tachycardia (134). He noted decreased air entry, a very 'tight' chest (not much air movement) and oxygen saturations of 92%.

The 'impression' was 'moderate–severe asthma attack' and the 'plan' was for Ipratropin and review by [Dr K] (respiratory registrar). [Dr D] discussed [Mr A] with [Dr K] during the round and was expecting him to review [Mr A]. [Dr L] in her reply to the HDC documents that she told [Dr D] that [Mr A] did not look improved from the previous day. In [Dr D's] reply to HDC he states that it is his practice to review CXRs after seeing each patient but in this case remembers asking [Dr L] to review [Mr A's] CXR as it was not available on the ward.

[Dr L] reviewed [Mr A] at 17:40 hours and noted that his respiratory rate was greater than 60 breaths/minute, he was still tachycardic (121 beats/minute) and short of breath. She reviewed his bloods from the previous day which were left shifted (a sign of infection or inflammation) and then his CXR. This she reports as showing 'streaky opacity bilaterally R>L'. Her impression is that [Mr A] is not improving and although it is not documented in the notes, according to her later correspondence, she discussed his case with [Dr F] the on-call medical registrar. [Dr F] apparently asked [Dr L] whether she thought that [Mr A] needed to be in ICU — [Dr L] replied that 'she wasn't sure'. It was decided to start [Mr A] on antibiotics, and to get an arterial blood gas. [Dr L] notes that 'if concerned discuss with Medical registrar ? may need ICU review'. [Dr L] did not do the ABG but handed over [Mr A's] care to [Dr N] — the on-call house surgeon for the evening.

At 18:00 hours [Dr N] attempted an arterial blood gas but was unsuccessful and noted that [Mr A] found it very painful — she decided to try again later. The nursing notes of the evening report [Mr A] becoming very anxious and short of breath. Nebulisers were given every 1–2 hours. Nicotine patches arrived on the ward at 20:00 hours but [Mr A] refused to have them and was wheeled outside for a cigarette.

Sometime in the evening (time not documented) [Dr N] reviews [Mr A] and noted his anxiety. A formal examination is not documented but he is assessed as stable with an oxygen saturation of 97% on 6L. The only instructions for the nurses are 'please call H/S for review if oxygen saturations decrease < 92%'. No comment is made as to the frequency of observations or to the other parameters of note.

Note: there are no recordings of temperature, blood pressure, pulse or respiratory rate after 16:50 hours on the Friday. The last respiratory rate was in fact done at 08:00 hours. The nurses did continue with oxygen saturation recordings.

The night nursing staff roster was a nurse down due to the late communication of a sick nurse. One RN stayed until 0100 hours, but [Mr A] was nursed by an enrolled nurse ([Ms I]). [Ms I] was asked to take on eight patients during the night shift. [Ms I] was supposed to be under the oversight of a Registered Nurse — [Ms H], but [Ms H] had 16 patients under her care. [Ms I's] documentation notes that [Mr A] continued to be taken out by his friend who stayed with him, for cigarettes

during the night. She notes that [Mr A] reported being unable to breathe and was put to bed with oxygen reapplied.

At 05:58 [Mr A] was found unresponsive and a cardiac arrest call was made. [Dr E] on night duty responded — the monitor showed asystole — and resuscitation was attempted. Despite adrenaline and CPR [Mr A] was pronounced dead at 06:16.

[Mr A's] post mortem concluded that he died of respiratory failure secondary to pneumonia and obstructive airways disease. The histology of the lungs showed widespread pneumonia with areas of incipient abscess formation.

General question:

Please comment generally on the systems in use at CCDHB, and whether they contributed to provide [Mr A] with a suboptimal standard of care.

[Mr A's] case highlights a number of systematic weaknesses in the care provided in CCDHB at the time. At several points in his care the seriousness of his condition was mistaken, sometimes downplayed as 'anxiety' and his addiction to cigarettes was used to explain a level of non-compliance.

It is difficult to know without seeing his CXR or report, but his history (and later his post-mortem) is suggestive of an infective exacerbation of his COPD (Chronic Obstructive Pulmonary Disease) secondary to his smoking. The delay in seeing the CXR and starting antibiotics may not have been a significant problem if the other systematic failings were not present.

The crucial systemic weakness in this case was that CCDHB had no system to help staff predict, identify and manage patients who became physiologically unstable.

The key components of a system to identify and manage physiologically unstable patients are:

1. A culture of openness that allows junior staff to highlight concerns to more senior staff, and nurses to raise issues with doctors (see below).

2. A clear communication of the monitoring instructions that are required for each patient, which includes the parameters to be measured, the acceptable range of values and what to do if that range is exceeded.

   As stated above [Mr A] has no documented physiological observations after the afternoon of the 24th and the only monitoring instructions in the notes are either vague or of limited value ('please call H/S for review if oxygen saturations decrease < 92%.'). Indeed this over-reliance on the oxygen saturation level is a concern — the respiratory rate (RR) is a much more

sensitive indicator of a patient's physiological state. The last RR recorded for [Mr A] was in the morning of the 24th.

3. A Medical Emergency Team (MET) or ICU-outreach team. These teams generally use a set of physiological criteria or staff concern about a patient to provide extra help for nursing and junior medical staff in the care of very sick or rapidly deteriorating patients. The MET criteria used in some NZ hospitals are:

   - Heart rate <40 or >140 beats/minute
   - Systolic BP < 90 mmHg & or fall in systolic BP>50mmHg
   - Respiratory rate <8 or >40 or severe respiratory distress
   - Sudden fall in level of consciousness or prolonged seizures
   - Any patient staff are seriously worried about.

   MET teams have been shown to decrease the cardiac arrest rates in hospitals where they are used, as patients are identified earlier.[25] [26] [27]Having MET teams is also one of the six key improvements in the Institute for Healthcare Improvement's (IHI) saving 100,000 lives campaign.[28]

   This concern over both the recognition and management of the physiologically unstable patient has been recognised in some DHBs, though it is likely to be a problem present to some extent in all hospitals in New Zealand. CMDHB [Counties Manukau District Health Board] and WDHB [Waitemata District Health Board] are currently collaborating to build on the current strengths of their approaches. CMDHB has a MET team and is building a nurse practitioner-led ICU outreach programme. WDHB has built their ICU-outreach programme on a UK model which requires nurses to take observations (P, BP, RR) and use these to produce an acuity score for each patient every time that the observations are done. The score then drives the action — a score of 1 asks the nurse to inform her supervisor and increase observations to 2 hourly, a score of 2 increases both observation frequency and supervision and 3 or above empowers the nurse to get a medical officer review. In cases where a house surgeon or registrar is having to see several patients at the same time the score helps prioritise who they should see first.

[25] Tibballs J, Kinney S, Duke T, et al. Reduction of pediatric in-patient cardiac arrest and death with a medical emergency team: preliminary results. *Archives of Disease in Childhood*. 2005; 90: 1148–52.
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[28] http://www.ihi.org/IHI/Programs/Campaign/

[Mr A] had a tachycardia for most of his admission and on at least one occasion his respiratory rate was 60 breaths/minute and yet this did not trigger any action.

A functioning MET team or ICU-outreach team may have identified [Mr A] earlier and ensured that he got an increased intensity of care.

4. Another crucial strand in ensuring effective care of these patients is either a High Dependency Unit or an ICU that links out into the general medical and surgical wards.

   [Dr L] was asked by [Dr F] whether [Mr A] needed ICU admission, but without set criteria to refer to and, coupled with a lack of an ICU-outreach team, [Dr L] was having to rely on a very short period of clinical experience and gut instinct.

5. An on-going interdisciplinary education programme on the utility of monitoring instructions and the role of either a MET team or ICU-outreach team.

6. An audit function to evaluate utility of any such programme used to feedback to staff.

In the response to the HDC by CCDHB dated 23rd June 2006, it is stated that a 'preparatory proposal' for an ICU outreach/MET team has been prepared and that it is currently in the 'business case development process'. I am not sure what this means but it appears to be a very slow response to a critical systems failure in an organisation. There is plenty of evidence as to the efficacy of the ICU outreach/MET team approach and it would be unfortunate if CCDHB stalled progress waiting for a 'business case development process'.

At the time of this incident, the systems of care — the numbers and experience of junior medical staff and nursing staff (particularly on the night shift), the allocation of patients, the communication patterns — made patients vulnerable to unsafe care. Without a system to identify and effectively manage the critically ill patients — no High Dependency Unit (HDU), no Medical Emergency Team of ICU-outreach capability — CCDHB displayed a sub-optimal standard of care.

Comment specifically on:

1. Communication between medical staff

It is difficult to assess the communication as most of it appeared to be verbal and different doctors have different recollections of the communication (not surprising given the time delay). It is of concern that important discussion and decisions were not documented — this has traditionally been the practice but is probably far from ideal and is a source of errors. For example the traditional ward round has the SMO discussing the patient's history and condition with the patient and the

attending RMO is supposed to try to write examination findings, deduce an impression and plan. Sometimes SMOs are more prescriptive in what they want written down, but it would be preferable if the essential findings, their conclusion and plan were clearly documented (perhaps dictated) in the notes. In the case of [Mr A], two house surgeons were involved, one left during the review of his case and the registrar had to be on nights so was unavailable. It is not surprising in this situation that there was a miscommunication about who was supposed to chase the CXR results.

The initial handover from [Dr S] to [Dr E] is not well communicated, though in that transaction, [Mr A's] condition went from an infective exacerbation of COPD with possible pneumonia, to an acute exacerbation of asthma. There was very little evidence of hyper-responsive airways disease, but labelling it as asthma led subsequent staff to focus on this without reassessing the possibility of infection. [Dr E] has stated that in cases of asthma he finds that CXRs and blood tests are often unhelpful and this may have contributed to his not reviewing either on admission.

The communication between [Dr L] and [Dr F] is also problematic, mainly because in a phone conversation [Dr L] was asked to make a call as to whether [Mr A] needed to be in ICU. While [Dr F] says that this is his practice and I agree that an experienced person on the spot might be able to make this call, it was outside [Dr L]'s experience level. As stated above, an acuity scoring system for assessing the physiologically unstable patient may have assisted in this communication.

The communication between [Dr L] and [Dr N] on Friday afternoon failed to alert [Dr N] to the seriousness of [Mr A's] condition or the vital need to get an arterial blood gas (ABG). If this had been done, then the state of his respiratory compromise might have been identified earlier.

There was no communication between the 'junior' doctors and [Dr D] on the Friday. [Dr D] was not made aware of the fact that the respiratory registrar had not reviewed [Mr A], nor was he made aware of [Dr L's] concerns late Friday afternoon.

2. Communication between medical and nursing staff

Like the communication between doctors, the communication between doctors and nurses was mainly verbal. Crucially there seemed to be no real communication about what to do if [Mr A] deteriorated, what observations were needed to spot any deterioration and who to call. While an experienced senior nurse would be expected to know what to do, [Mr A] was inappropriately given to an enrolled nurse on the night of his death, and because of the nursing shortage that night, she was not well supervised.

[Ms H] reported that neither she nor [Ms I] was aware that [Mr A] had been considered for ICU placement earlier in the day or that his condition had been a cause for concern.

Much communication will continue to be verbal in any team situation, and that is not necessarily a problem, but the informal, verbal communication falls down when there are junior doctors, inexperienced nurses and when English may not be the first language. It is for this reason that some hospitals are moving to more prescriptive monitoring instructions and out-reach teams as described above.

It is a concern that [Mr A] was labelled anxious and agitated (presumably his bipolar condition impacted on the staff's perception of this) when hypoxic patients are known to display these features.

Also a concern is that the nurses overnight on the ward continued to receive acute admissions ([Ms I] had 2 acute admissions). This practice puts stress on the ward nurses and threatens patient care. CCDHB would be better to have a medical observation ward attached to ED where such patients could stay the night before being transferred to the wards in the morning when staffing levels are safer.

3. Medical staffing, in particular house officer support and post-acute ward round cover

The medical staffing was compromised by [Dr E] having to start night duty on the Friday night and therefore being unavailable for the ward round. The ward round itself seemed to be disrupted with one RMO starting the transcription of [Dr D's] assessment of [Mr A], before [Dr L] took over.

RMO support particularly in the evening and overnight seemed less than ideal. The on-call registrar had a heavy workload and was not readily available to support the RMO.

4. Management of patients wishing to smoke

[Mr A] had been smoking heavily for many years and was almost certainly addicted to it. Although the community now views smoking with the abhorrence it deserves, that abhorrence should not extend to individuals who are sick, frightened and whose addiction is not something that they can control. The impact of [Mr A's] addiction was not considered as a problem in itself and there are a number of nursing entries quite critical of the fact that he was taken outside for a cigarette. This is also mentioned as a factor in the internal investigation.

There was considerable delay in getting nicotine patches and these were unlikely to give [Mr A] much relief as they take some time to develop sufficient nicotine blood levels and will never be able to replace the 'hit' that smokers get from a cigarette. There are some alternatives and I see that the family brought in a nicotine inhaler. There are also other alternatives which supply a nicotine replacement — such as 'snus' which is widely used in Scandinavian countries.

However, the primary problem here was a failure to recognise the hold of nicotine addiction, and instead staff imposed their normative anti-smoking values onto [Mr A] when he was not in a position to give up smoking. This contrasts starkly to

the hospital management of a patient with a heavy drinking history for which there is a recognised alcohol withdrawal scale.

There is a comment in the internal investigation 'review smoke free policy to consider needs of mental health patients in general inpatient areas'. However, this is to miss the point, it is not only 'mental health' patients who suffer while in hospital but any heavily addicted patient needs to have their needs addressed.

5. CCDHB internal investigation process

For a variety of reasons this investigation took place a considerable time after the event and there seems to be no clear process by which a case is identified as a reportable (serious) event and an investigation is started. The investigation itself is quite thorough as to the record of events but it is incomplete in the section on recommendations. While there are general recommendations made, the columns headed 'actions required', 'by whom', 'by when', and 'date completed' are all empty. The only concrete actions taken were:

i. Enrolled nurse not rostered onto nights
ii. Nurses calling in sick must speak to the nurse in charge of the ward.

There is no evidence that the recommendations will be instituted and no plan to measure their effectiveness. e.g. 'education of medical and nursing staff re management of patients with severe respiratory illness (COPD, asthma) be conducted with the implementation of an appropriate protocol.' There is nothing to suggest that this education has occurred, and if it has occurred whether there is any measure of its success. Education is a very weak improvement technique especially if it is not continually reinforced.

Likewise — 'Staff (medical and nursing) attend a communication skills workshop.' Has this happened? Which staff were sent? How were the outcomes measured? It is likely that the communication problems are system-wide and are not confined to the doctors and nurses involved in this case. It would seem that a better approach would be to have a formal programme for all RMOs and nurses that used simulation techniques to focus on the communication requirements in the management of a physiologically unstable patient programme. Such a programme exists at WDHB and CCDHB could adopt a similar approach.

The investigation notes no problems with 'Equipment' but many hospitals are now moving to digital X-rays to ensure that the risks and frustrations associated with finding and tracking conventional X-ray are diminished. I see from CCDHB's note dated 23rd June 2006 that CCDHB is in the acquisition phase of a digital radiology system (due for completion by the end of the year). While this is encouraging the internal investigation failed to identify this as a problem.

The internal process seems to be a genuine attempt to investigate this event but it fails to convincingly get at the root causes of the problems, still focuses on individuals, suggests weak actions, and does not document whether these have

been carried out or any evidence of their efficacy. It does not therefore inspire confidence that the basic problems in this case have been addressed.

6. Any other aspects of care provided to [Mr A] that you consider warrant additional comment

The staffing level for nurses is a serious concern. Although the internal investigation has recommended that enrolled nurses are no longer rostered onto nights, this does not address the basic problem of very high patient:nurse ratios. It is difficult to see how a nurse looking after 16 patients (including many needing interventions and frequent monitoring) could possibly provide safe care.

As stated above, not having a system to detect and manage the critically ill patients is a major weakness in the current model of care. [Dr D] also notes that the 'establishment of a High Dependency Unit in the medical wards is still under negotiation with senior management'.

It is unlikely that Wellington Hospital is the only hospital in New Zealand running out-dated systems of care without the required back-up, where clinicians are frustrated by the time delays and 'business-case inertia' that impede improvements in patient care."

Responses to provisional opinion

Dr E
Dr E responded:

> "I have reviewed this case a thousand times in my own mind and don't think that I will ever forget it. I can only state that … I treated a patient according to the facts available to me at the time of assessment and without the luxury of retrospective information. … At the time [Mr A] admitted to the diagnosis of asthma since childhood … This part of the history, in combination with the clinical signs at the time, led me to believe that he had an exacerbation of asthma, rather than [COPD]. Had I known it was a recent onset of respiratory symptoms, as stated by his family, I would almost certainly have entertained the possibility of an exacerbation of COPD. …
>
> With the benefit of hindsight, I agree that I was probably treating a patient … with an early chest infection on the afternoon of 23 September 2004. I acknowledge that I did not review [Mr A's] X-ray or his blood tests on that day. It was an oversight that I will forever regret and I sincerely apologise to [Mr A's] family for this omission. …
>
> **High temperature**
> The assumption is made … that [Mr A] was admitted with a raised temperature, when his temperature was measured at only 37.5C. There is considerable debate and controversy about what defines a 'raised temperature' or a fever. To quote from the most influential textbook in Internal Medicine, Harrison's Internal Medicine, Chapter 16: Fever and Hyperthermia: 'The maximum normal oral temperature is 37.2C (98.9F) at 6am and 37.7C (99.9F) at 4pm; these values define the 99th percentile for healthy individuals. In light of these studies, and AM temperature of >37.2C (>98.9F) or a PM temperature of >37.7C (>99.9F) would define a fever …'
>
> … An upper respiratory tract infection, which [Mr A] admitted himself to have, can cause a 'mild fever' as well. I do not think it is best evidence based practice to prescribe antibiotics to everyone with a temperature of 37.5C; especially not in current times where there is great concern about the indiscriminate use of antibiotics, in fear of increasing resistance.
>
> …
>
> **Sputum**
> The question about discolouration of sputum is a controversial issue. … [Mr A] admitted to having a productive cough, with yellow sputum. …
>
> [T]he ambulance officer's report states [Mr A] had 'green phlegm'. This is inconsistent with what [Mr A] said to me on direct questioning. …

Blood tests

…

It was custom … in the Department of Internal Medicine that admission biochemistry screening and full blood count is done on admission; therefore my plan to do 'baseline bloods'. I don't believe that I would have changed my management of [Mr A] at that stage, even if the blood tests were seen. …

X-ray

…

I was unaware that the chest X-ray had been done … by the time of the second review. … The X-ray was not with the patient at that stage and I did not look around, as I did not know one had already been taken and the main aim of this review was a clinical assessment of [Mr A's] progress and his response to the initial treatment. This review was well past the end of my shift and after verbal handover to [Dr U]. …

I have to emphasise that my second assessment of [Mr A] at [4.34pm] was a brief clinical assessment, to ensure that [Mr A] is improving with the prescribed medication for asthma. I thought he looked clinically better and I was satisfied that appropriate treatment was commenced. This was already after the end of my shift and after the clinical handover. Regrettably I did not make any mention of this second review in my notes, something I have since rectified in my practice.

…

Post acute ward round

I strongly disagree with [Dr D's] statement that he was unaware that I would not be on the post-acute ward round. … I can clearly recall talking to him and I remember he was quite unhappy with the situation and especially with the absence of a registrar on the post-acute round. … I find it inconceivable that I would even have considered the possible career-limiting move of not informing [Dr D] of my absence the following day.

…

Diagnosis

I totally agree with Dr Spriggs' observation … that antibiotics should be used to treat exacerbations of COPD associated with a history of more purulent sputum. However, (i) there was no history from the patient to indicate that his sputum had become more purulent, but only that it was yellow in colour and (ii) there was no history of COPD from the patient, but a definite history of asthma since childhood. Had he given me a clear indication that his sputum had increased in volume or had changed in colour, then I would have followed international guidelines and considered antibiotics.

…

I do not agree with Dr Spriggs' opinion … that a chest infection should have been diagnosed on clinical grounds … I do, however, acknowledge that in hindsight, [Mr A] might have had an infective exacerbation of COPD when I assessed him in the Emergency Department and that, had I all the information available to me at that stage, I might have prescribed antibiotics.

…

Coroner's notification

…

I did not mention [Mr A's] pneumonia [to the Police, acting for the Coroner] as I was unaware of this diagnosis at the time and it was not mentioned in the clinical records. I was also unaware of the delay in reading the chest X-ray.

…

I had no direct communication with the Coroner, as he is unavailable out of hours … and I therefore communicated with the Police as per CCDHB policy. I informed [Dr D] of the unfortunate event at a later stage."

Dr D

In his response, Dr D stated:

"The critical issue for [Mr A] which I correctly identified was his bronchospasm, which was the potentially treatable acute pathology for [Mr A]. This occurred on a background of heavy smoking and a prior history of regular bronchodilator treatment extending back over more than ten years (I have reviewed all of [Mr A's] old notes and there is evidence of treatment for asthma going back over ten years). Dr Spriggs has not apparently recognised the prior history of asthma and has chosen to accept the PM finding of pneumonia as the sole cause of his death. This does not account for the finding of severe bronchospasm as the prime cause of his hypoxia, at the time I first assessed him. The clinical notes were very poor and were not a reliable indicator of the clinical assessment of [Mr A].

Dr Spriggs claims that there was significant delay in assessment of the CXR and implies that this meant a delay in antibiotic treatment. The latter cannot be denied but it is questionable whether this contributed to [Mr A's] death around 6am the following morning. In my view Dr Spriggs may not have appreciated the significance of [Mr A's] non-compliance with oxygen treatment, in large part due to his acute hypomanic state. Added to this is the non-compliance with treatment during the night when he removed his oxygen (I believe over 5 times) in order to leave the ward for several minutes to have a smoke, whilst being high flow oxygen dependent. … I can confirm that at the debrief meeting I had with the nursing staff, the nurses were very clear about the difficulties with [Mr A's] non-

compliance with treatment, his insistence on smoking, and his refusal to use nicotine patches. …

A golden rule in these situations is that intermittent oxygen is recognised in acutely desaturated states as being worse than no oxygen at all, as a risk factor contributing to his hypoxaemia. …

Dr Spriggs comments that the failure to supply a nicotine patch was a 'lost opportunity'. It is my understanding from the nursing staff that [Mr A] consistently refused the patches (despite the demands of his relatives for the nurses to supply them). Furthermore, nicotine patches would have been of no value in this acute setting. There was no 'lost opportunity' — rather, these difficulties should have prompted urgent medical review during the night. I believe this was the lost opportunity.

Dr Spriggs has not commented on the root cause of the chain of failures which was the lack of contact with me or follow-up with the respiratory registrar by [Dr L], when the registrar back-up did not eventuate. Dr Spriggs notes a 'culture' amongst junior staff not to trouble seniors which in my opinion tends to minimise this critical point in the subsequent course of events. In any event I do not believe that such a 'culture' exists in the Internal Medicine Service at Wellington Hospital. This observation is made in my capacity as Clinical Director with oversight of the service and the behaviour of the junior staff within it. …

Dr Spriggs is critical of my initial assessment. I accept that the notes do not give all the detail around the assessment (the documentation is very poor).

…

I am also concerned about the lack of support … by the specialist respiratory service. I had set in place a management plan which was contingent on [Dr K's] assessment of the patient on the same day. There was no doubt about the request to him … and there is a note of it in the record of my initial assessment of [Mr A]. … The HDC [report] does not reflect that this arrangement was the key part of the post acute management for [Mr A]. The fact that I was not informed that [Dr K] had not seen [Mr A] was the first step in the chain of failures of communication.

…

My main concern is that [Dr L's] first contact would have been me, if she was having difficulty. She was well aware of this. Her comment that none of the ward staff contacted her about the patient during the day also needs to be carefully considered — she was on the ward all day doing post acute work and she knew that [Mr A] was the sickest patient of the acute admissions. …

I met [Dr L] on the ward, after seeing [Mr A] on both the first review at the start of the round, and again after I had reviewed [Mr A] for the second time at the end

of the round. [Dr L] apparently denies any recollection of this meeting. I didn't have the notes and should have got them and written my own note. … I can confirm that the handover to [Dr L] regarding the patients not seen by [Dr L] in the last phase of the post acute ward round took place in the nurses' station on the ward. [Dr L] seems to be suggesting that this did not take place.

…

It is accepted practice for all junior RMOs to write in the notes when there has been a discussion with the consultant, particularly in [Mr A's] case where [Dr L] was well aware of the concerns I had already expressed.

…

[The] point is made that if I was really concerned about [Mr A] I should have followed up my concerns. The short point is that I did follow up my concerns — I discussed these with [Dr L] at the handover at the end of the ward round. …

My issue with respect to the assessment of [Mr A] during the day was that although I was not on call I was available to be called at any stage. …

When on call and post acute I frequently get called to see patients and have no compunction in leaving my [Clinical Director] duties to do so. However, where there is a treatment plan in place, as there was for [Mr A], I rely on instructions being carried out at the ward level. I have always made it perfectly clear to my junior staff at the start of every run that I should be contacted whenever necessary. … I was utterly dismayed when I learned the morning after of the train of events preceding [Mr A's] death, that … [Dr L] had not contacted me at any stage. …

I reviewed the notes in the morning after [Mr A] died, when I came in to do a follow-up ward round. A striking feature in the notes is the lack of documented detail around the observations that I had made after the post acute round. I don't routinely edit all of the RMO notes. Furthermore there was no indication apart from a retrospective nursing note written after [Mr A's] death, concerning the difficulties later related to me at the nurses' debrief regarding [Mr A's] non-compliance with medication, including oxygen, his agitation, or the difficulties regarding his determination to smoke. …

When I first rang the Coroner, as a courtesy to check whether he required more detail of the case, in the week after [Mr A's] death (the Coroner notes I made the call on 12 October 2004 but I think it was earlier than this) he was quite emphatic that he did not require further assistance and that there 'certainly was not going to be an inquest', because of the 'circumstances' relating to [Mr A's] lack of compliance with treatment. The Coroner did not ask me for any further information. The Coroner has since stated … that I did not inform him on 12 October 2004 that a question had arisen as to the adequacy of medical care or that an internal review had been instituted. That is correct. I could not possibly have done so at this early stage after [Mr A's] death [as] at that stage neither I nor

anyone else would have been aware that the case would be the subject of a review — or that questions had arisen as to the adequacy of medical care. A mortality/morbidity review was conducted … on 6 December 2004. … No decision was made as to further action from that meeting until I indicated the need for the case to be reported as a serious event and signed off the terms of reference for the serious event review on 13 January 2005.

…

[Mr A] had a mild fever when I examined him at the start of the ward round, but his temperature was not raised from 11.30am to 4.50pm (no recordings after this time). I should point out that it is not uncommon for asthmatics to have a mild transient fever as part of a severe acute attack. At the time of my initial assessment his sputum at the bedside was frothy and mildly discoloured — not purulent, although there was a history of recent purulent sputum production. A purulent sputum is not necessarily indicative of a pneumonia in this setting and nor does it automatically warrant administration of an antibiotic.

I do not recall the blood test and given the circumstances of [Mr A's] severe asthma on the basis of my assessment, this would have been a secondary concern … The clinical findings on examination and the chest X-ray are of greater diagnostic relevance.

Taking all circumstances into account at the time and having the benefit of a clinical assessment, … I did not consider antibiotics were warranted immediately or until the chest X-ray had been reviewed. On clinical assessment I was far more concerned about the urgent relief of [Mr A's] severe bronchospasm and the need for respiratory specialist review.

Dr Spriggs has drawn the conclusion that [Mr A] had an infective exacerbation of chronic airways disease and therefore should have been prescribed antibiotics immediately. However, Dr Spriggs has not commented on [Mr A's] history of steroid and bronchodilator treatment going back to 1994 at least. There is no doubt from my assessment that [Mr A] had severe asthma when he was admitted. … Dr Spriggs' statement that [Mr A] 'absolutely' did not have asthma is not sustainable from my assessment, given [Mr A's] history, and appears to be made largely on the basis of the PM report, and with the benefit of hindsight.

…

I fully accept that it was my responsibility to review the chest X-ray and I would have done so if [Dr L] had advised me that the respiratory team had not seen [Mr A], as we requested.

…

> I did not commence antibiotics at the time because I did not consider infection to be the therapeutic priority, rather I felt that his tachycardia and other features on examination indicated significant bronchospasm which required urgent treatment and specialist review, which I instigated.
>
> With the benefit of hindsight I accept that my judgement may have been incorrect. I have referred previously to the fact that the few hours delay resulting from my assessment, in starting antibiotic treatment is unlikely to be the sole factor responsible for [Mr A's] death, there being significant issues subsequently with his compliance with oxygen administration."

Dr F
Dr F responded:

> "When I was contacted by [Dr L] she expressed concern that [Mr A] had *not improved* over the day since [the] ward round at 8.30am; rather than being concerned that he had deteriorated.
>
> There is also the important issue of [Mr A's] reported respiratory rate. So far as I can recall … [Dr L] did not inform me that [Mr A's] respiratory rate was greater than 60 per minute. I believe if I had heard about a respiratory rate of greater than 60 per minute I would have attended immediately.
>
> …
>
> I believe I did my very best to provide a reasonable standard of care given the circumstances under which I was practising. Given the available information and workload demands I diagnosed and set a treatment plan in place with reasonable skill; I stressed on two occasions that care for [Mr A] on the medical ward required direct feedback to me if there were any concerns about deterioration; I did not receive such feedback and thus I did not get the red flags that I needed to review my management plan and provide additional care."

Dr F also submitted an expert opinion obtained from respiratory and general physician Dr Lutz Beckert, who reviewed this case and commented:

> "It was [Dr F] who made the diagnosis of pneumonia and recommended the appropriate treatment. [Dr F] was at the time in the Emergency Department responding to consult requests, GP enquiries and admitting several patients including two patients with pneumonia. It was [Dr F] who made the appropriate diagnosis and initiated appropriate treatment.
>
> …
>
> In my opinion, [Dr F's] responsibilities and workload placed him in an impossible position; he could not discharge his duties to [Mr A] at the same time as discharging his duties to the acutely unwell patients in his care ED. … [Dr F]

cannot be held accountable for that lamentable state of affairs; it is a function of the Hospital's inadequate systems and resources.

In my opinion [Dr F] diagnosed [Mr A] appropriately, recommended the correct antibiotic treatment, and settled a reasonable management plan, which included collecting objective information and instructions to call him to reassess the patient if need be. His care of [Mr A] was in accordance with the standards reasonably to be expected of him in the circumstances."

Dr K

Dr K responded:

"I am disappointed that [the Commissioner] has commented adversely about my role in [Mr A's] management, and [I] make the following comments.

My personal logbook for Friday the 24th of September indicates that I was not busy that day. Had I received an urgent consultation request I would have attended the consultation promptly. The most common reason for the Respiratory Medicine Team to attend to consultations regarding General Internal Medicine inpatients with asthma was for asthma self management education, discussing trigger avoidance in the future and arranging outpatient follow-up. The in-hospital management of the patient is carried out by the General Internal Medicine team usually without recourse to the Respiratory Medicine Team except for the non-urgent consultations above and the occasional advice calls as described below.

At Wellington Hospital at the time, it was not unusual for me as a senior Respiratory Registrar to receive calls simply for advice from senior physicians in other disciplines. Often this would be a question about the appropriateness of a medication, as in this case. Such a request did not imply that the Respiratory Team was being asked to see the patient either urgently or at all. If I was confident that I was able to accurately answer such a question based on my knowledge and experience at the time and to the satisfaction of the caller, then I would not need to contact my Consultant. If I had any doubt that I was able to accurately answer the question, then I would refer the question to my Consultant.

I regarded the phone conversation between myself and [Dr D] on Friday the 24th of September as a combination of a simple advice call and a non-urgent consultation request. As such, in contrast to the opinion Dr Spriggs, the fact that [Dr D] asked for advice did not constitute reason for me to attend the consultation urgently or to involve my Consultant urgently.

The usual practice regarding Respiratory Consultant involvement in inpatient consultations was for me to attend the consultation initially and then to discuss the case with my Consultant once I had obtained first-hand clinical information. If urgent Respiratory Consultant advice was required, the referring team could contact the Consultant directly. In this case, I had intended to see the patient on Monday the 27th of September and then discuss the case with my Consultant."

Ms G
Ms G responded:

> "Observations
>
> It is common practice in [this ward] for the nursing staff to write the recordings on the piece of paper that they carry with them. It is this practice that I was following when taking the observations of [Mr A]. My intention was to transcribe them at the end of the shift, as is my usual practice. I did not do this because of the stress of trying to comply with requests from [Mr A's] family, and fulfilling my role as afternoon charge on the ward.
>
> I documented the earlier observations as I had time to do this immediately. It was because of work pressures later in the shift that I put the later observations onto my piece of paper. This paper is disposed of in the shredding box at the end of each shift and is not available for you as evidence. Often taking respiration and pulse are not noticeable to relatives, and so their view may not be as convincing as you have taken them to be. …
>
> Monitoring of [Mr A]
>
> … I was frequently in and out of [Mr A's] room for various reasons other than for observations. I was able to observe him each time and saw no change in his condition. It was my actions that ensured the medical team responded to the family's concern about the nicotine patch and brought [Dr L] to review [Mr A].
>
> Handover
>
> I did not handover about possible ITU review as this had only been a possibility earlier in the shift, but the last review by the House Surgeon stated that [Mr A] was stable. It was this decision that I based my handover on. In the circumstances of the evening, with one staff member not arriving and trying to find other staff, my handover and documentation were of a reasonable standard. My verbal handover was not inadequate but reasonable in the circumstances. [Mr A's] condition appeared unchanged, he was saturating at 97% and the doctor who assessed him last stated he was stable. I believe that I handed over the requirement of an ABG if his saturations dropped below 92%. This is not recorded in my documentation because the doctors in their clinical notes above mine had written it.
>
> I stayed on until 0100 hours to assist until another registered nurse arrived. I provided the best care that I could in the circumstances of the shift."

Ms H
Ms H responded:

> "[N]ot enough emphasis has been placed on the surrounding circumstances that affected my judgement and availability on the night of 24 September 2004.

Employers have a general obligation to ensure that employees have enough time to do what is required of them in their jobs. The Court of Appeal reinforced this in *Attorney-General v Gilbert* [2002] 2 NZLR 342. This obligation was not met by Wellington Hospital on this night.

… [T]he shift from the beginning was disrupted by the miscommunication of [Ms P] being off sick. This meant that Report was late and for the better part of an hour was spent trying to establish where [Ms P] was, and how the Ward was to be staffed, [Ms G] stayed on until 0100, [Ms V] arrived at 2400. This staffing arrangement and the high number of patients, as well as the high acuity, meant that something in my role had to give. Unfortunately that was direct supervision of Enrolled Nurse [Ms I].

I would like to reiterate how heavy my workload was by summarising the other patients I was caring for:

- Until 0100 I had 16 patients, eight were mine and eight were Staff Nurse [Ms P's]
- Two patients on red blood cells
- Patient restless and on BIPAP and hourly recordings
- One patient being closely supervised, multiple drug overdose and drowsy
- Ten waiting IV antibiotics, some with two antibiotics and one patient requiring three antibiotics
- I also had the responsibility for one patient who was deteriorating and required full nursing cares every two hours
- One patient in respiratory isolation who was unsettled
    - care required IV antibiotics, IV fluids, blood sugar level and bedding changes during the night
- Two of my other patients were in the isolation unit, very sick but not in isolation. This unit is completely separate from the ward; patients are not allowed to be allocated to staff working outside of [the ward].
- At 0100 approximately I gave Staff Nurse [Ms V] a report of her eight patients and general cares. Then we both did turns of incontinent patients.

The expert advisor … stated that in the case of [Mr A] I should have had direct supervision of [Ms I]. I admit that in an ideal situation this would be the case. But the night of 24 September 2004 was not ideal and the other demands on me meant that my supervision was indirect. I refer to Ms Hewson's statement … where she refers to the definition of direction. This definition does include indirect supervision of an enrolled nurse where the registered nurse works in the same facility or organisation as a supervised person but does not constantly observe his or her activities. The Registered Nurse must be available for reasonable access. I was available in the ward during the shift.

I was reliant on [Ms I] to bring any changes in [Mr A's] condition to my notice. This inability to provide direct supervision is directly related to the systems failure in Wellington Hospital on that night. That is, not providing adequate staffing. Also the failure for medical team to clearly state in the clinical notes that [Mr A] required close observation, particularly what observations were to be taken and the frequency of the various observations, and that his condition was deteriorating. It was my impression from verbal and written communication that although there were concerns, his condition was stable. I refer you here to the clinical records and the note made by the House Surgeon that the patient's condition was stable.

Ms Hewson's comment … supports the effect [of] workload on staff, particularly on our ability to read the notes within one hour of our verbal handover. This impact did not stop there. It had a flow on effect to my ability to directly supervise Enrolled Nurse [Ms I]. I believe in the circumstances of this case I gave the best supervision I could.

If at the beginning of the shift I had been clearly informed about the seriousness of [Mr A's] condition, I would not have allocated him to [Ms I]. Instead I would have liaised with the Duty Manager to attempt to have him under ICU care for the night because of safe staffing issues. Alternatively I would have taken his care myself and allocated [Ms I] another patient.

I also direct your attention to Ms Hewson's remarks on my failure to document in [Mr A's] notes … that this lack of documentation would meet with severe disapproval by my peers. I reject this finding and refer you to your Opinion that 'a nurse's obligation to document … must be tempered by the practical situation …' (98HDC13685, page 100). In that case[29] you found that it was reasonable in the circumstances of the demands of other patients and the patients' overall physical demands that a nurse had not documented her findings."

Ms I
Ms I responded:

"I accept in general the Opinion of the Commissioner's Office in regard of my care of [Mr A]. I accept that I relied … too much on mechanical equipment rather than relying on visual cues.

… I felt unsupported generally on this night in terms of [the] busy state of the ward and inadequate staffing. I had no break after 2300 and no time out to think critically about [Mr A's] refusal to allow observations to be done.

… [Mr A] did not verbally refuse to have his observations taken, but he would not actively allow me to do this. For example, he would not allow me to move his arm so that I could attach the equipment to it. … I did not put his refusal down as a

[29] The case involved the failure of a registered nurse (in an emergency department on a very busy night) to document informal observations of a sleeping, intoxicated patient who had suffered a fall.

clinical indication of a deteriorating condition because of the pressures on my other work.

If I was aware fully at the beginning of the shift of the seriousness of his condition, I would not have accepted this patient. I felt that in the circumstances of the night that I did make sufficient attempts to take his clinical observations but I was unable to do so. I did omit to obtain a respiratory rate but I was not directed specifically to do so. On reflection I realise that I ought not to have omitted to take his respiratory rate and I have changed my practice accordingly."

[Ms I] has provided an apology to [Mr A's] family:

"I wish to pass on my condolences to your family regarding the death of [Mr A]. The night of [Mr A's] death was an extremely busy and stressful time for me. I felt that I gave [Mr A] the best care that I could under the circumstances. I do apologise that I made insufficient attempts to record [Mr A's] clinical observations during the night."

Capital and Coast District Health Board
The Board responded:

"Firstly, on review of our complaint and serious event review files we have identified that we have not previously apologised to [Mr A's] family. We are very sorry for this oversight and would like to take the opportunity to rectify this prior to release of the final report.

On behalf of CCDHB we sincerely apologise to [Mr A's] family for the serious shortcomings in his care and in our communication with them. We would also welcome the opportunity to meet with [Mr A's] family to reiterate this apology and discuss any aspects of our internal review and this submission.

Unfortunately, we do not know who [Mr A's] family spoke to when they made their initial enquiries. We were extremely disappointed to read [Ms C's] report that she was told to request the medical records and investigate the matter herself. We agree that this response was callous and unreservedly apologise for this.

We agree that certain aspects of [Mr A's] care and communication with his family were inadequate and this was identified in our internal review. We believe however that the HDC report draws broad conclusions about CCDHB culture, systems and commitment to patient safety from this one case that are unjustified and inaccurate. We acknowledge that there are shortcomings in our systems, as there are in all hospitals, but we are committed to continuously improving these systems and procedures.

…

Communication

Communication skills

We aim to continually improve teamwork and communication. Since 2003 we have, for instance, invested heavily in a series of communication skills workshops using the Cognitive Institute's excellent programs. As at October 2006, 902 staff have participated in these workshops.

Care planning

Since September 2004 we have created a generic multi-disciplinary 'Admission to Discharge Planner' which is now being used by most areas in the hospital. The use of the integrated care planning tool has been audited since its implementation and demonstrates good uptake.

Availability of clinical information

We are pleased to advise that we have now implemented an electronic picture archiving (PACs) system which will make X-rays available digitally throughout our services, and will speed up the reading and interpretation of X-rays. In addition the Electronic Health Record due to be implemented from 25 November 2006 will include the requirement for electronic 'sign-off' of clinical test results by the responsible medical staff.

Medical Registrar Staffing

A Business Case supporting the need to increase the number of registrars by four plus two relievers was developed and approved in August 2005. These additional staff allowed for the medical load issues to be addressed, the team structure and allocation of registrars to the teams realigned to support improved continuity of care, improved admission and discharge management and improved coordination of communication.

NRT [Nicotine replacement therapy]

The issue of offering timely NRT has been addressed by improving the availability of NRT on the wards and guidelines have been developed to complement our Smoke Free Policy. In addition, our internal review recommendations will be extended with the aim of addressing, within the current legislation and environmental restraints, the very complex issue of meeting the needs of nicotine addicted patients who are too unwell to leave the ward but for whom NRT does not negate the overwhelming desire to smoke.

We do not intend to provide smoking areas on medical wards in future iterations of the policy, but we believe we can help manage nicotine addiction symptoms by more consistent and assertive NRT therapy.

We note that [Mr A] refused NRT when it was offered.

Scope of practice

The Enrolled Nurse scope of practice policy was updated on 21 January 2005, soon after [Mr A's] death. Enrolled Nurses now only work on morning and afternoon shifts where they can be given more focused supervision.

In addition, CCDHB has taken a number of steps to address nursing staffing issues …

Reportable events

We are currently in the process of setting up a regular audit whereby all deaths at CCDHB are checked against all deaths reported to the Coroner, all post mortem examinations and all deaths reported as reportable Events. This audit will be led by our Death Review Committee and will assist us with identifying and addressing reporting issues.

The requirement to complete Reportable Event forms for all deaths reported to the coroner was reiterated with the Senior Medical Officers at the Chief Medical Officer's forum on 6 October 2006 and will be followed up in writing.

Duty of candour

We acknowledge that [Mr A's] family did not receive adequate responses to their requests for information shortly after his death. Unfortunately we have not been able to identify to whom these initial enquiries were made.

We agree that open and timely disclosure of all adverse health events ought to be the accepted norm. However, we doubt that many hospitals throughout the world currently achieve this standard. We know that in our hospitals some departments and some clinicians are very good at open disclosure. Others are not. We have been socialising the expectation of open disclosure over the past 12 months and expect that it will be endorsed as CCDHB mandated policy in our next review of the Serious and Sentinel events protocols.

We are concerned that the HDC action and approach in this report may be an impediment in persuading clinicians that open and immediate disclosure is the right course to follow.

High Dependency Unit (HDU) and ICU Outreach

HDU services are currently provided within our ICU. The preparatory proposal referred to in the report … for an ICU outreach team relates to the formation of a specific dedicated team providing this service. This has not been progressed at this stage as we identified the need to first increase the number of ICU beds to better

meet demand for ICU and HDU patients. This has been accomplished with the addition of two ICU beds and ten additional nurses.

We completed an audit across the organisation to assist with identifying whether a HDU was required. From this a business case was developed to support the implementation of a medical HDU [to] address the needs identified. The case was approved in June 2006 and is now being implemented.

…

Safe healthcare environment

…

In addition to the individual efforts of clinicians, CCDHB has made major gains in recent years to improve standards of care and to provide safe systems. We have, for instance, invested in Quality Facilitator roles (6 FTEs) throughout the services (in addition to the 8 FTE Quality Improvement Unit staff). We continually review systems, issues and errors through our reportable, serious and sentinel event review processes and through clinical audit and quality monitoring projects. We have achieved full accreditation and certification.

We recognise that flaws remain in systems and in practice that result in unsafe care sometimes being provided. In that we are no different to any hospital in New Zealand (or throughout the world).

Medical emergency team/ICU outreach/ICU capacity

CCDHB is criticised in the report for not having a Medical Emergency or ICU Outreach Team.

CCDHB has had a 777 emergency call process in place for many years, including separate calls for Cardiac Arrest and Medical Emergency. This has always been part of our emergency response. …

While CCDHB does not have a designated outreach team, the system that is in place is a formal one whereby if a deterioration in a patient's condition is identified the registrar can ask for a consultation by the ICU registrar. The ICU registrar will then assess the patient and in consultation with the Intensivist confirm whether the patient requires ICU admission or provide advice if an admission to ICU is required.

…

We have checked ICU records and can confirm that on the night of the 24/25 September 2004 there was capacity to admit if required. CCDHB has been steadily increasing capacity in the ICU to ensure that patients can access this service when clinically indicated.

We dispute Dr Seddon's assertion that CCDHB has a critical systems issue … We have been considering developing an ICU outreach team with dedicated staffing, however the evidence for effectiveness of such teams is not yet compelling.

…

We are concerned that Dr Seddon has suggested that CCDHB suffers from 'business-case inertia' and question the basis for this comment given that no detailed information about our business processes has been requested or provided in relation to this case. As a public entity we have an ethical and constitutional responsibility to ensure that funds are utilised in an effective manner. That requires the proposals are subject to rigorous challenge and analysis before decisions are taken. Such an approach is neither unusual nor inappropriate.

Medical Staffing

…

The level of Resident Medical Officer (RMO) cover had been identified as an issue and was under consideration at the time of [Mr A's] death. The internal investigation confirmed that there was inadequate RMO cover and this has since been addressed.

…

While [Dr E] was not available for the post acute ward round due to a change in shifts at short notice, we do not agree that this constitutes a breach of the Code. Gaps in continuity of care are an unavoidable consequence of shift work and 24 hour healthcare. For example, unavailability of a specific registrar for the post acute ward round occurs every Friday when that registrar starts their week on night duty. This form of roster arrangement is common in New Zealand hospitals.

…

Smoking

…

While the previous Smoke-free Environments Act may have allowed smoking in these circumstances on the ward, such an arrangement would have contravened CCDHB standard practice, exposed other patients and staff to the adverse effects of passive smoking and would also have been contrary to the policy in most public hospitals in New Zealand at that time.

Current legislation would not allow smoking in a shared ensuite.

Nursing staffing

…

While it was recognised in our internal review report that, in hindsight, nursing skill mix was compromised, at that time CCDHB (i.e. the Duty Manager), was not aware of [Mr A's] acuity or that his assignment to an enrolled nurse was inappropriate.

Internal Investigation
Reportable events
…

Once the circumstances of [Mr A's] death, which included reporting to the Coroner, were known outside the clinical team, it was recorded as a Reportable Event. The explanation given for [Mr A's] death not being reported as a Reportable Event at the time of his death … was the reason given to CCDHB by the [Nursing] Team Leader of the ward on behalf of the clinical staff involved. It does not reflect the view of CCDHB and specific education has been given about this error in policy interpretation.

Addressing nursing documentation and care planning

…

Following our internal review of this event, there was a specific action identified relating to evidence of clear instructions and evaluation of observations documented within the patient's file. An audit of observations required and audits completed was conducted in October – December 2005.

…

Medical culture

We refute the comments regarding CCDHB having a medical culture of reluctance to ask for advice and lack of teamwork. The actual evidence in the report is that doctors called each other without hindrance to discuss concerns and issues. … This free flow of discussion does not support the premise that CCDHB has a particularly hierarchical approach to care delivery.

…

Summary

CCDHB acknowledges that mistakes were made in providing care for [Mr A], and that his death has highlighted opportunities to improve CCDHB systems. We are concerned however that the [provisional opinion] paints an unfair picture of CCDHB as an organisation that does not regard patient safety or quality as prime drivers. We believe that this is an unwarranted conclusion reached on the basis of one case without adequate understanding of CCDHB actual systems and processes. …

Again, we ask that you pass on our apologies to [Mr A's] family. We are aware that an apology at this stage may provide little comfort. However, we hope that they are able to accept the sincerity of its intent."

The Board provided further information on 27 February 2007:

"I confirm that a business case was developed in mid 2004 for the provision of four additional medical registrars plus two reliever registrars. This was to improve the safety and quality of the care of general medical inpatients (about 60 beds) at Wellington Hospital, improve expeditious assessment of those presenting acutely unwell, meet the increasing RMO MECA requirements for leave and to improve the general medical training opportunities within CCDHB. The business case was approved in October 2005.

These positions were filled by four RACP Advanced Trainees from the first 2006 Registrar rotation commencing in December 2005, together with two registrars, as we were below benchmark in this latter area. The four registrars were each allocated to the four medical teams, so each team increased to two registrars.

I can confirm the respiratory registrar is occasionally rostered onto night duties for one week, and this post is then backfilled by day relievers. As you know the respiratory registrar was available, ie on call, and not on night duty at the time of the death of [Mr A]. … Please be aware that currently CCDHB has one of the highest rates of RMO placement and lowest number of RMO gaps compared to most DHBs across New Zealand.

We have had preliminary discussions with the RDA regarding changing medical registrar night duty rosters from 7 nights to 3/4 consecutive nights and improving fatigue management across this workforce group. Significant changes to RMO night coverage present practical difficulties whilst we are currently running general medicine 2 hospital sites (Kenepuru and Wellington). There is a planned program of work to improve the night and after hours coverage across all disciplines, to be completed for the transition and opening of the New Regional Hospital."

Ms B and Ms C
Mr A's sisters responded:

> "Thank you for your investigation into the death of our brother, [Mr A], in Wellington Hospital on September 25 2004, and your subsequent report dated 18 September 2006.
>
> Our decision to bring this matter to your attention was, as you know, because of our dissatisfaction with Wellington Hospital's internal inquiry. We formed an opinion about the level of care [Mr A] received in Wellington Hospital, based on Wellington Hospital's own report and your report reinforces that opinion by providing further insight into the events between [his] arrival at Wellington Hospital on 23 September 2004 and his death, two days later.
>
> Your report highlights the failure of the various staff members involved in [Mr A's] care to perform the most basic tasks required to ensure that an accurate picture of his condition was available and appropriate care could be provided, as well as the numerous contradictions in their statements.
>
> The Doctor who assessed [Mr A] on his admission ordered an urgent X-ray and suspected pneumonia. The radiographer who performed the X-ray also noted the seriousness of [Mr A's] condition and his inability to stand.
>
> …
>
> The lack of any requirement to provide documentation of a patient's care, including diagnosis and observations, professed by several of those involved in [Mr A's] care is very worrying to us. We find it difficult to believe that in a large organisation responsible for the lives and deaths of gravely ill patients there is no requirement for written records to be kept.
>
> Our belief, based on own experience at this time and strengthened by your report, is that [Mr A's] inability to co-operate, due to his deteriorating condition, led to him being labelled as a 'non-compliant' patient. That label, along with his history of mental health issues, led to a situation where many of the medical professionals involved in [Mr A's] case seem to have down-graded the level of care they provided, based on their own prejudice and as a punitive measure against him for being 'non-complaint'.
>
> Notwithstanding the tragic outcome of this behaviour, the behaviour itself constitutes a terrible injustice and we wonder how many other seriously ill mental health consumers are subjected to the same mistreatment. As [his] family, we were considered 'troublesome' by association and treated with the same lack of respect. Once again, we wonder how many families of mental health consumers without the privilege of our resources are treated with the same extraordinary insensitivity.
>
> [Mr A] was critically ill and described as 'agitated'. We, his family, also became 'agitated'. Our agitation, and [Mr A's], was exacerbated if not caused, by the fact

that [he] was clearly being provided with sub-standard care and the hospital was disregarding our concerns about [his] condition and our advice regarding nicotine patches. …

While we accept that some variation in people's recollection of events is understandable given the amount of time that has elapsed, we find the radically differing accounts of what happened on 24 September deeply disturbing …

During the time we were with [Mr A] on the evening of 24 September 2004, he was semi-conscious and unable to move without help. Even with assistance, his breathing was so seriously impeded that for him to move from a prone to an upright position took approximately ten minutes. …

Ultimately, attempting to unravel the conflicting accounts of the events of 24 and 25 September is extremely difficult. What does seem clear is that while no-one present is prepared to admit any responsibility, between them they colluded in an orchestrated campaign of neglect, which they now seek to excuse by repeated and unsubstantiated allegations of [his] non-compliance and refusal of treatment.

…

[Mr A] was an unassuming and gentle person, painfully aware of the views generally held by society towards mental-health consumers and the treatment that often resulted. The injustice and unfairness of this situation made him very sad, and after more than thirty years in the mental health system it was something he had become resigned to. During his stay in Wellington Hospital, [Mr A] told us on several occasions not to get a nurse or make a fuss as it would 'just make them angry'. …"

Further expert advice

Further expert advice was obtained from the Commissioner's expert advisors. They were provided with a copy of all the responses to my provisional opinion and a copy of the provisional opinion, as well as documents previously sent.

Ms Hewson
Ms Hewson stated:

> "I have reviewed the documents you sent me regarding [Mr A] (ref: 05/11908). I have no further relevant comments or amendments to make from my original advice submitted in July 2006.
>
> I appreciate the difficulties encountered by the nursing staff, however I still believe they did not meet the expected standards as detailed in my report."

Dr Spriggs
Dr Spriggs stated in regard to CCDHB's response to the provisional opinion:

> "Much of CCDHB's response does not challenge in any way the Commissioner's provisional report. I would, however, make the following observations:
>
> **1. Medical Registrar Staffing**
> It is important to ensure that having developed and approved a business case for improved staffing, that such staff are recruited and deployed to reduce the work overload suffered by the Registrars looking after [Mr A].
>
> **2. Nicotine Replacement Therapy**
> Again it is important to ensure that the 'Internal review recommendations' be followed up. If their recommendations are satisfactory, it may be useful to other DHBs in the country to take a lead from CCDHB in this regard.
>
> **3. Duty of candour**
> I have no idea what the phrase 'We have been socialising the expectation of open disclosure …' means. It would seem disingenuous to criticise the HDC for championing such open disclosure by implying that the criticism of staff for failing to achieve such candour is itself an 'impediment in persuading clinicians that open and immediate disclosure is the right course to follow'.
>
> **4. High Dependency Unit**
> CCDHB are absolutely right in saying that '[Mr A] was not referred to the ICU nor was the ICU Registrar asked to assess him'. It would therefore be unreasonable to criticise the lack of ICU response. However, the Commissioner in his recommendations, asks for 'Standardised assessment, treatment and investigation including assessment of need for ICU or other higher level of care' and it is on this matter that CCDHB had failed [Mr A]. Their response does not address the lack of systems for contacting ICU.

5. Medical culture

CCDHB refutes the comments about a 'medical culture of reluctance to ask for advice and lack of team work' quoting the evidence of various doctors who called each other 'without hindrance to discuss concerns and issues'. Although this comment is true, the discussions between doctors failed to result in any important change to [the] treatment plan and it failed to escalate the opinions sought from Registrar to Consultant. On the one occasion a Consultant (Dr D) asked for advice from the Respiratory Registrar, he was given some verbal advice and there was no further follow up. [Dr D] was not consulted again nor was the Respiratory Consultant, nor an ICU specialist. I believe this failure to escalate problems supports the Commissioner's finding of a need for 'Consultants to spell out very clearly their expectations about being contacted by junior doctors'.

CCDHB comment that 'it is not justified on the basis of this single occasion … to conclude there is a generalised problem …' may or may not be correct. However, it is by careful scrutiny of such serious incidents that the DHB should be prepared to extrapolate to more global systems and cultures that are found wanting. To claim this is a one-off surely misses the learning opportunities from this tragic case. It is not clear that CCDHB has put in place any processes to improve such a culture although they say 'there is a clear expectation that the SMO on duty is contacted if required'. I would hope that this expectation is reinforced on several occasions during orientation and further training of junior staff.

I have no wish to amend my previous report."

Dr Spriggs provided further advice on the responses from individual providers:

"Many thanks for asking me to review the responses to the 'Draft Report' by the Commissioner from Capital and Coast District Health Board, [Dr D], [Dr E], [Dr F] and the expert opinion of Dr Lutz Beckert.

[Dr D]

1. Communication with the Coroner.

When writing my original report in July 2006 I was not aware of the two phone calls made by [Dr D] to the Coroner on 12.10.06 and 18.12.06. It was clear that the Coroner had been contacted by the Registrar and [Dr D] soon after [Mr A's] death. There is some disagreement between [Dr D] and the Coroner about exactly what was said on each occasion, however on 12.10.06 the Coroner was not aware that there was any concern about the management of [Mr A] apart from [Mr A's] frequent disconnection of oxygen, etc. The information given to the Coroner did not cover other concerns about the management of [Mr A] perhaps because neither the Registrar nor [Dr D] were aware of any of those concerns. By the 12.10.06 the post mortem had been conducted but the report on that post mortem was not available to [Dr D]. Clearly the original statement to the Coroner that [Mr A] was admitted 'with moderate to severe asthma treated with appropriate medication' was incorrect. By the time of [Mr A's] death certainly some of the doctors treating

him felt that he had significant infection. There had been a delay in initiating treatment. I think it would have been reasonable for [Dr D] to be aware of those concerns and to have mentioned them to the Coroner on 12.10.06. [Dr D] was also aware of the lack of respiratory follow up despite his request to the Respiratory Registrar for an opinion. This alone should have caused [Dr D] some concern and should have been mentioned to the Coroner even if [Dr D] still believed that the death was due to asthma.

…

2. The diagnosis.
I understand that [Mr A] had severe bronchospasm. There is nothing in the Commissioner's Report to suggest otherwise and whether it was due to 'asthma' or 'chronic obstructive airways disease' is not the issue. [Mr A] needed treatment for the bronchospasm in the form of nebulisers and Prednisone which he received. He also needed controlled oxygen which he could not tolerate. The diagnostic error was the failure to recognise signs of infection. I cannot say whether earlier diagnosis of infection would have altered the outcome however the undoubted fever the night before he was assessed by [Dr D] (temp 38.4°C), the change in sputum colour (see below) and increasing shortness of breath should have alerted [Dr D] to [Mr A's] underlying infection. [Dr D] failed to recognise those signs and treatment with antibiotics was therefore delayed.

3. Communication between medical staff.
I apologise for a misunderstanding with regard to the 'culture' of junior doctors in my initial report. I did not mean to imply that the culture that junior doctors are reticent to seek senior advice is specific to Capital and Coast District Health Board. I believe that it is widespread throughout the country and the failure of the House Officers and Registrars to speak to [Dr D], the Intensivists or the 'On Call Physician' reflects this culture. I do not believe that this is in any sense specific to [Dr D's] Team. The problem was that junior staff did not ring him.

4. Note keeping.
[Dr D] is right in saying that 'the documentation is very poor'. In particular there is no record at all of [Dr D's] second review of [Mr A] at the end of the round. I do not believe that my report implies 'disbelief in fact that I returned to [Mr A] a second time at the end of the round'. There is however no documentation of this and whatever clinical assessment was done there seems to have been no change to the management of [Mr A] and the X-ray was not reviewed. …

5. Referral to Respiratory Services.
I accept that [Dr D] asked [Dr K] (Respiratory Registrar) to review the patient. This did not happen despite [Dr D's] expectations. [Dr D] could reasonably have expected [Dr K] to review the patient, discuss the management with the Respiratory Physician on call and get back to [Dr D] should there have been any concerns.

6. Review of the X-ray.
[Dr D] did not see the X-ray. He says he asked [Dr L] to check the X-ray. The clinical assessment in which he 'did not find any evidence to suggest focal consolidation' in no way excludes pneumonia or any other complication and the X-ray was an important diagnostic test. I continue to believe that [Dr D] should have ensured that the X-ray was reviewed and he accepts that it was his error to assume 'that because I had heard nothing further from [Dr L] or the Respiratory Team that [Mr A] was stable'.

7. Fever.
Even if it is 'not uncommon for asthmatics to have a mild transient fever as part of a severe acute attack' (I think this assertion is in itself debatable), a fever of 38.4°C is not classified as mild. His temperature is recorded in the notes on the same page as [Dr D's] initial clinical assessment. I do not believe that this is a recognised part of an acute asthmatic event.

8. Sputum colour.
I will discuss this further below. [Dr D] states that the 'sputum at the bedside was frothy and mildly discoloured — not purulent'. This is not recorded in the notes though there is a record from the ambulance staff of sputum being green and in the Emergency Department it was yellow. The significance of this is discussed below in my response to [Dr E's] comments.

[Dr D] misquotes me in saying that '[Mr A] absolutely did not have asthma'. My statement was that 'there was absolutely no doubt that [Mr A] was septic' and I stand by this comment.

[Dr E]
1. High temperature.
While accepting there is debate about the definition of fever, the temperature of 37.5°C in this clinical context should be noted and would usually be defined as a mild fever. There was of course an alternative explanation for the mild fever in that he may have had an upper respiratory tract infection. This mild fever alone would not usually be an indication for antibiotic use, however in this clinical context I believe it should not have been ignored.

2. Sputum.
I accept there is debate about the colour of [Mr A's] sputum. The ambulance staff described it as green, [Dr E] as yellow, and [Dr D] as frothy and mildly discoloured. The accepted practice in 2004 as recommended by the Guidelines

quoted in my original report was that 'antibiotics should be used to treat exacerbations of COPD associated with a history of purulent sputum'. The definition of purulent sputum is debatable, however it is now and was in 2004 usually considered to be an increase in volume of and a change in colour of the sputum. I do not believe that it was reasonable to disregard this important sign.

3. Blood tests.

The failure to review the tests performed in the Emergency Department was once again an indication of an inadequate total assessment. I accept [Dr E's] comment that 'I don't believe that I would have changed my management of [Mr A] at that stage, even if the blood tests were seen'.

4. X-ray.

It is the responsibility of the admitting registrar to review the chest X-rays of patients who he admits with acute shortness of breath. The fact that the X-ray had been ordered by Emergency Physician does not absolve [Dr E] of that responsibility and it is not reasonable to suggest that patients should prompt the doctor to have a look at the X-ray as suggested by [Dr E]. If he was not sure that a chest X-ray had been taken, he should have found out. If it had been taken and he had not seen it, he should have clearly handed this over to [Dr V].

5. Handover.

I accept that the quality of handover between medical shift workers in hospitals in New Zealand in 2004 was and remains very poor. In particular, the documentation of such handover is usually absent. This is not the responsibility of [Dr E]. However he did have a responsibility to be clear in his handover to [Dr V] and the details of that handover are not available. It is not reasonable to suggest that just because [Dr S's] handover to [Dr E] was not documented and may (or may not) have been incomplete, [Dr E] was therefore absolved from responsibility to handover appropriately to [Dr V].

6. Diagnosis.

For reasons discussed above and in my original report I believe that most Medical Registrars in [Dr E's] position would have diagnosed a chest infection and started antibiotics. I accept that there is some debate in the literature about the precise indications for the introduction of antibiotics, however [Mr A] was acutely short of breath, had recently admitted to having an upper respiratory tract infection, had a mild (if contentious) fever and was coughing up discoloured sputum. He was also a heavy smoker which probably increases the chance of him having an infective exacerbation in the winter. I believe that most medical registrars would consider withholding antibiotics in this situation inappropriate. Indeed it seems that [Dr S] felt there was likely to be an infection and subsequently Drs [F] and [L] diagnosed pneumonia.

7. Conflict between experts.
Dr Seddon comments that 'the delay in seeing the chest X-ray and starting antibiotics may not have been a significant problem if other systematic failings were not present'. She is indeed correct. However there was a delay in seeing the X-ray and other systematic failings which resulted in a delay in starting antibiotics. Reviewing the X-ray was a basic responsibility of the clerking medical registrar and I support my view that failure to do so would be considered by [Dr E's] peers with 'moderate disapproval'.

8. Coroner's notification.
I have no doubt that [Dr E] followed the CCDHB policy. The problem was that he did not have appropriate facts at his disposal. This is at least in part due to failure of record keeping. As said in my comments with respect to [Dr D's] conduct, it is the responsibility of the consultant to ensure that the Coroner is fully informed. I do not believe that in this regard [Dr E] behaved in a manner that would be different from that of his peers.

[Dr F]

1. Workload.
I absolutely accept that [Dr F] was extremely busy the night of [Mr A's] death. There is uncertainty about what information [Dr F] was given by [Dr L]. [Dr F] was absolutely right to diagnose pneumonia for the reasons he states. I therefore stand by my statement that I am unable to 'make a clear judgement about his personal responsibility for not reviewing [Mr A]'. I have assessed the expert opinion from Dr Lutz Beckert and would concur with his views."

Dr Seddon
Dr Seddon stated:

"**Response to CCDHB comments re [Mr A] (05/11908).**

The letter from Margot Mains (CEO) and Geoff Robinson (CMO) outlines a number of areas where they have already made improvements and I commend them on these actions. These include:

a) The introduction of an admission to discharge planner
b) The introduction of an electronic digital radiology service
c) Increased medical staffing (especially medical registrars)
d) Increased availability of Nicotine Replacement Therapy (NRT).[30]
e) A formalised process to review deaths
f) A High Dependency Unit (HDU).[31] They have also assessed the need for a medical HDU and the business case was approved in June 2006. It is not clear

[30] They note that Mr A refused NRT when it was offered, however it was offered very late in his admission and his decision may have been clouded by his clinical condition at that stage.

> from their letter how many beds this would have and whether it has yet been implemented.

There are two main areas where they take issue with my comments:

1. The need for CCDHB to invest in a MET or ICU outreach to identify and manage the physiologically unstable patient on the general medical and surgical wards.
2. The completeness of CCDHB's internal investigation.

Medical Emergency Team or ICU-outreach services.

CCDHB contend that they do have a Medical Emergency Team (MET) with specific criteria for activation. I am not sure where these criteria are kept (some hospitals keep it on the back of the nursing observation chart) as I did not see any in the clinical information that I was sent. CCDHB contend that education for the call-out criteria are part of the CPR annual updates for clinical staff. One of the criteria for activation of MET pertinent to [Mr A's] case, was a respiratory rate of <8 or >35. [Mr A] was noted to have a respiratory rate of 60 at one stage, yet neither the doctor nor the nursing staff appreciated that this satisfied a MET call-out and the Medical Emergency Team was not called. Indeed in their letter Ms Mains and Dr Robinson state that:

> 'In particular, the emphasis on whether a medical emergency team, or a high dependency unit, was available misses the point that staff did not realise the severity of [Mr A's] condition.'

But this is the crux of my submission that had CCDHB a functional MET with continued feedback and education, that this may well have made a difference to [Mr A's] outcome. The fact that nobody seemed to take notice of his deteriorating vital signs, or know what to do if they did, is the systemic failure of CCDHB to provide safe care.

I am a little confused about the comments that my assertion about the evidence for MET teams is not well supported by the evidence. They say that they actually have a MET team, so obviously they thought that the evidence was compelling, however, I will address their points.

Some of the problem with studies in this area is the number of different terms (MET, Rapid Response Team, ICU-outreach) which are often used interchangeably. For clarity I use the definitions outlined in the paper by De Vita et al in the 'Findings of the first consensus conference in medical emergency teams. *Crit Care Medicine* 2006; 34(9): 2463–-2478'.

[31] They state that an HDU does exist, but it is within the confines of the Intensive Care Unit (ICU), and it is not clear whether it functions as an HDU or whether the beds are routinely used as extra ICU beds, which can be the temptation in such cases.

Briefly these are:

- Rapid Response System (RRS) — describes the entire system — including an afferent limb for identifying physiologically unstable patients (both objectively and subjectively).
- Medical Emergency Team — usually physician-led, the team has the following capabilities:
    1. ability to prescribe therapy
    2. advanced airways management skills
    3. capability to establish central venous access
    4. ability to begin an ICU-level of care at the bed-side.
- Rapid Response Team (RRT), also called Patient at Risk Team (PART) — usually nurse-led, an intermediate capability, able to 'ramp' up initial response to unstable patient, but do not have all the capabilities of a MET team. Able to rapidly assess patients, begin basic stabilization and have links with ICU/HDU and MET if care needs to be escalated.
- ICU-outreach (sometimes called Critical Care Outreach) — usually nurse or nurse-practitioner-led. In some institutions they act as a RRT, but with the added responsibility for prospectively identifying and managing high-risk patients (eg ICU discharges).

The other point to make about studies in this area is that the degree of implementation planning and on-going education can be vastly different depending on the study design and duration — and such heterogeneity can affect outcomes and generalisability of those outcomes. This is particularly true when a study incorporates multiple hospitals into its design.

Evidence of Need for Rapid Response System:

The reason that hospitals have felt the need to develop RRTs, METs or ICU-outreach is because of ample evidence that patients are physiologically unstable for many hours prior to an arrest or an unplanned admission to ICU (where they do not do as well as planned ICU admissions).

McQuillan et al specifically investigated the quality of care given to patients prior to their unexpected admission to the Intensive Care Unit (ICU).[32] They prospectively examined 100 consecutive admissions to two Intensive Care Units. The independent assessors agreed that 20 of the 100 patients had been well managed, 54 had received sub-optimal care prior to their intensive care admission and they were unable to agree regarding the management of 26 patients. The authors concluded that the main causes of sub-optimal ward care were failure of organisation, lack of knowledge, failure to appreciate clinical urgency, lack of

[32] McQuillan P, Pilkington S, Allan A, et al. Confidential inquiry into quality of care before admission to intensive care. *BMJ* 1998; 316:1853–8.

supervision, failure to seek advice or organisational problems within the hospital setting.

Buist et al in New South Wales[33] undertook a retrospective review of critical events (the unexpected transfer to ICU from the general wards, or cardiac arrest). 122 such critical events were identified and the investigators examined the nature and duration of clinical instability leading up to the events. The median duration of instability prior to a critical event was 6½ hours although the range was from 0–432 hours. The death rate in these patients was 62%. Each critical event was preceded by a median of two criteria for instability.

In a prospective survey of clinical antecedents to in-hospital cardiac arrest, Schein et al[34] demonstrated that at least 84% of patients who suffered a cardiac arrest had documented deterioration in the 8 hours prior to the event. In this study of 64 in-hospital arrests, just five patients survived to discharge. It is clear that the duration of instability is an important predictor of adverse outcome.

Others to point out that clinical deterioration of patients on general wards is often preceded by physiological deterioration in vital signs over several hours include Franklin,[35] Hillman[36] and Kause.[37]

So there is plenty of evidence that just doing what we have always done is not in the best interests of our patients.

Evidence for efficacy of MET, RRT and ICU-outreach.

Ms Mains and Dr Robinson are right to assert that the evidence of the effectiveness of the above approaches is mixed. A Cochrane collaboration — 'Outreach and Early Warning Systems (EWS) for the prevention of intensive care admission and death of critically ill adult patients on general hospital wards' — was proposed in 2006 and the results are awaited (http://www.thecochranelibrary.com).

However, there have been several individual studies which have looked at the effectiveness of Rapid Response Systems [RRS]. As mentioned above terminology is a problem with the terms used interchangeably.

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[33] Buist MD, Jarmolowski E, Burton PR, Bernard SA, Waxman BP, Anderson J. Recognising clinical instability in hospital patients before cardiac arrest or unplanned admission to intensive care. *Med J Aust*; 1999; 171:22–25.

[34] Schein RMH, Hazday N, Pena M, Ruben BH, Sprung CL. Clinical Antecedents to In-Hospital Cardiopulmonary Arrest. *Chest* 1990; 98:1388–92.

[35] Franklin C, Matthew J. Developing strategies to prevent in-hospital cardiac arrest: analysing responses of physicians and nurses in the hours before the event. *Crit Care Med* 1994; 22:244–7.

[36] Hillman KM, Bristow PJ et al. Duration of life-threatening antecedents prior to intensive care admission. *Intensive Care Medicine* 2002; 28:1629–34.

[37] Kause J, Smith G et al. A comparison of antecedents to cardiac arrests, deaths and emergency intensive care admissions in Australia and New Zealand, and in the United Kingdom — the ACADEMIA study. *Resuscitation* 2004; 62:275–82.

The utility of METs was examined by Buist et al,[38] in a before (adoption of a MET service) and after study. Their results suggest that in clinically unstable patients, early intervention by a medical emergency team significantly reduced the incidence of unexpected cardiac arrests (3.77 per 1000 admissions, down to 2.05) and mortality from such arrests (77% to 55%).

Bellomo et al[39] 2003 — showed that the introduction of a MET team reduced in-hospital cardiac arrest (RR of 0.35), death post arrest, and overall hospital mortality in a tertiary teaching hospital (Melbourne). The study by Priestly et al[40] demonstrated that the introduction of a Critical Care Outreach programme could reduce mortality in general hospital wards. The odds ratio of death in the intervention group was 0.52 (95% CI 0.32–0.85). The study by Pittard[41] also showed the efficacy of an ICU-outreach team on surgical wards. Emergency admission to ICU decreased from 58% to 43%, and these patients had lower mortality (28.6% to 23.5%), and shorter length of stay.

The interpretation by Ms Mains and Dr Robinson of the paper by Bristow et al[42] is not entirely correct. This study showed decreased unexpected ICU admissions at the hospital with a MET compared with the control hospitals, with no increase in cardiac arrest rates. CCDHB interpret this as a negative study as the in-hospital cardiac arrest rate was unchanged, but what the study was saying was that a MET team could safely decrease unplanned ICU admissions without increasing mortality of those patients who remained on the general wards. The study did show a decrease in non-DNR (Do Not Resuscitate) deaths. Other features of this paper which might have contributed to the less than spectacular effect of MET were evidence of significant under-utilisation of the MET team (expected 706 callouts and had only 150) and the fact that there was no staff education associated with the intervention. The introduction of any form of RRS is first and foremost a change management initiative with consequent demand for education, on-going compliance audit and support.

The Institute for Healthcare Improvement (IHI) in 2005 announced an ambitious campaign — the Saving 100,000 Lives campaign — in which 6 evidenced-based quality improvement initiatives were introduced to 3,000 American hospitals. Rapid response teams [RRTs] (MET or ICU-outreach) were one of the six

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[38] Buist MD, Moore GE, Bernard SA et al. Effects of a medical emergency team on reduction of incidence of, and mortality from, unexpected cardiac arrests in hospital: preliminary study. *BMJ* 2002; 324:387–390.
[39] Bellomo R, Goldsmith D, Uchino S et al. A prospective before–and–after trial of a medical emergency team. *MJA* 2003; 179:283–287.
[40] Priestly G, Watson W, Rashidiana A et al. Introducing Critical Care Outreach: a ward randomized trial of phased introduction in a general hospital. *Intensive Care Med* 2004; 30:1398–1404.
[41] Pittard AJ. Out of our reach? Assessing the impact of introducing a critical care outreach service. *Anesthesia* 2003; 58:874–910.
[42] Bristow PJ et al. Rates of in-hospital arrests, deaths and intensive care admission: the effect of a medical emergency team. *Med J Aust*. 2000; 173:236–240.

initiatives. When the results of the campaign were assessed, more than 123,000 lives had been saved by these hospitals.[43] Currently there are 1,500 hospitals affiliated with IHI using RRTs. An example that IHI cite as successful is Ysbyty Glan Clwyd hospital in Wales which demonstrated decreased cardiac arrest calls by 50%.

Ms Mains and Dr Robinson attack one of my original references (Tibballs)[44] as it related to a paediatric population. It is true that it related to the introduction of a MET team in a paediatric hospital, but I was trying to point out the efficacy of a MET approach. I agree that the study did not have statistical power to assess its end-points. I do not think that the comment that 'it is unlikely that any of the paediatric patients in Melbourne Royal Children's were being taken down for a smoke' was particularly helpful, nor indeed relevant to the issue of whether CCDHB needs an effective Rapid Response System.

I agree with Ms Mains and Dr Robinson's comments regarding the MERIT study.[45] The study did not show effectiveness against its primary outcomes, but there are many reasons for this — complexity of MET systems, implementation problems in the different hospitals, and the authors over-estimated the incidence of the primary outcome (death) and therefore were under-powered to show a difference. The fact that the rate of cardiac arrests and unexpected deaths, fell in both the control in intervention groups from baseline may indicate that there was cross-contamination between the hospitals. The MERIT study however was an otherwise well organised study, and the authors' statement that 'even in the MET hospitals that knew they were part of a clinical trial, monitoring, documentation, and response to vital signs were not adequate' has been the impetus for work on clearly defined criteria for identifying abnormal vital signs — see the next section.

Evidence of the utility of Early Warning Scores:

Early Warning Scores are used as the afferent limb of Rapid Response Systems and include physiological parameters to assist staff in identifying physiological instability. Early warning systems were strongly supported in the 'comprehensive critical care report' put together by an expert panel commissioned by the NHS.[46]

Many hospitals in the UK and US are going further than the introduction of a Medical Emergency Team by introducing Early Warning Score (EWS) — criteria embedded within the nursing observation sheet that make it clear what needs to be done if there is unexpected deterioration in the patient's condition. I enclose a copy from a Welsh Hospital (highlighted by the Institute for Healthcare

[43] ihi.org.com.
[44] Tibballs J, Kinney S, et al. Reduction of paediatric in-patient cardiac arrest and death with a medical emergency team: preliminary results. *Archives of Disease in Childhood* 2005; 90:1148–52.
[45] MERIT study investigators. Introduction of a medical emergency team (MET) system: a cluster-randomised controlled trial. *Lancet* 2005; 365:2091–2097.
[46] Department of Health 2000. Comprehensive critical care — a review of adult critical care services. Department of Health. London.

Improvement) as well as the one being implemented at [Counties Manukau DHB]. [Waitemata DHB] has also introduced this approach. What these criteria do is help identify the physiologically unstable patient and direct nurses and junior medical staff as to the best plan of action. If CCDHB had such a system — the [respiratory rate] of 60 breaths/minute would have driven an action — in CMDHB's case a MET call-out would have been activated.

One of the most studied and validated[47] Early Warning Score is the UK Modified Early Warning Score (MEWS), which has been adopted by North Shore Hospital here in New Zealand. The MEWS uses 5 physiological criteria (systolic BP; heart rate; respiratory rate; temperature and an assessment of conscious level — AVPU — A for alert, V for reacting to vocal stimuli, P for reacting to pain and U for unconscious). This score can reliability identify those patients at risk of catastrophic deterioration in real world conditions. In Subbe et al's paper, scores of 5 or more were associated with increased risk of death (OR=5.4, 95% CI 2.8–10.7), ICU admission (OR=10.9, 95 CI 2.2–55.6), and HDU admission (OR=3.3, 95% CI 1.2–9.2). A more recent paper by Quarterman et al[48] shows a significant relationship between trigger scores and patient outcome.

Early Warning Scores have also been shown to be a useful strategy for improving vital sign recording. One of the most important vital signs which predicts cardiac arrest or unexpected transfer to ICU, is the respiratory rate. And yet it is usually poorly observed or recorded. In the paper by McBride et al,[49] the baseline recording level for a respiratory rate (recorded in a 24 hour period) was 29.5%, but this increased after the introduction of MEWS to 91.2%. This is a result pertinent to [Mr A's] case, where his respiratory rate was infrequently recorded.

Conclusion

There is ample evidence that critically ill patients in general medical and surgical wards are quietly deteriorating, sometimes for hours, before they either arrest or something is done. Each DHB puts a lot of effort into resuscitation training for cardiac arrest (which is relatively ineffective at best with survival from cardiac arrest — <10% surviving to hospital discharge — not improving over twenty years), but to date relatively little effort into training staff to identify physiological deterioration early, and into a system to assist in rapid response.

Just what form a Rapid Response System takes is debatable, but whether it is a Medical Emergency Team, a Rapid Response Team, or an ICU-outreach team, or

[47] Subbe CP, Kruger M et al. Validation of a modified Early Warning Score in medical admissions. *Q J Med* 2001; 94:521–526.
[48] Quarterman CPJ, Thomas AN, McKenna M, McNamee R. Use of patient information system to audit the introduction of modified early warning scoring. *Journal of Evaluation in Clinical Practice* 2005; 11(2): 133–138.
[49] McBride J, Knight D, Piper J, Smith GB. Long-term effect of introducing an early warning score on respiratory rate charting on general wards. *Resuscitation* 2005; 65: 41–44.

a combination of these, the studies show that a detailed implementation plan, coupled with continued feedback is important for its success. Such a RRS also works best with an afferent limb using a Early Warning Score to guide staff.

CCDHB claim to have a MET, but it is unclear from their documentation how well it works, how often the team is called, what percentage of patients satisfying the MET criteria get a MET response and what has changed since [Mr A's] death. If CCDHB want to wait until there is perfect evidence of the efficacy of a RRS then they will be waiting a long time. However, there is enough information for them to at least review the efficacy of their MET team, assess and improve the charting of vital signs and their interpretation, and introduce a system to at least identify those patients who are deteriorating on their wards.

I would suggest that Ms Mains and Dr Robinson read the editorial from the 2001 QJM 'The critically ill: following your MEWS'.[50] It opens with a case disturbingly similar to [Mr A's].

CCDHB internal investigation

Ms Mains and Dr Robinson … state that I criticised CCDHB's internal investigation report 'stating that the recommendations section is incomplete'. They suggest that this criticism is unjust as they think that it was directed at the preliminary report which was updated in October 2005. I confess that at this time I cannot recall whether the internal investigation I saw was the preliminary or the final one.

However, I still have some issues with the final report supplied. To my way of thinking it requires a further column — it has a column for proposed completion 'By When' and another to show that the recommended action has been completed 'Date Complete', but there is no column to suggest the result of the action. For instance, under number 1, 'Actions Required' there is a statement — 'audit of observations required and completed planned for October 2005'. It then has a column 'Date complete' which has 'Oct–Dec 2005'. Does this mean that the audit was actually completed then — if so why the 3 month time-frame and what did the audit show and were any recommendations forthcoming?

Further down on the same page is the recommendation to 'implement formal handover of patients (including a weekend plan) by regular medical staff (consultants and house officers) to the on-coming on call medical staff.' The 'Action Required' to ensure that 'all patients have a documented weekend plan in their notes' is a relatively weak action plan: '[CCDHB] will send out a memorandum to all medical staff highlighting the above actions.' The 'Date Complete' column states that this action was completed in October 2005 — but what is it recording — the fact that the memo was sent, or some evidence that it had an effect ie all notes had a weekend plan? So while this report appears

[50] Goldhill DR. The critically ill: following your MEWS. *QJM* 2001; 94:507–510.

relatively detailed, one is still left wondering just how effective the recommendations were.

Ms Mains and Dr Robinson also take me to task for my comment that CCDHB appeared to suffer from business case inertia. They question how I could come up with this comment when I was not supplied with business cases. I made this comment based on the significant time delay between the case being made for improvements (eg, digital radiology, HDU facility) and their completion. The delays are outlined in the internal investigation. While I agree with Ms Mains and Dr Robinson that 'as a public entity we have an ethical and constitutional responsibility to ensure that funds are utilised in an effective manner', there does appear to be considerable delay in CCDHB acquiring what is standard practice in other New Zealand DHBs (eg, digital radiology) and I was wondering whether the overly strict need for detailed business cases was hampering the introduction of innovations to aid quality improvement."

Code of Health and Disability Services Consumers' Rights

The following Rights in the Code of Health and Disability Services Consumers' Rights are applicable to this complaint:

RIGHT 1
Right to be Treated with Respect

(1) Every consumer has the right to be treated with respect.

…

RIGHT 4
Right to Services of an Appropriate Standard

(1) Every consumer has the right to have services provided with reasonable care and skill.

(2) Every consumer has the right to have services provided that comply with legal, professional, ethical, and other relevant standards.

(3) Every consumer has the right to have services provided in a manner consistent with his or her needs.

…

(5) Every consumer has the right to co-operation among providers to ensure quality and continuity of services.

Other relevant standards

Nursing Council of New Zealand statement on Scopes of Practice (18 September 2004):

> "Pursuant to section 11(1) of the Health Practitioners Competence Assurance Act 2003 ('the Act'), the Nursing Council specifies the following scopes of practice. Pursuant to section 12 of the Act the following qualifications are prescribed for each scope of practice.
> …
>
> **Scope of Practice — Enrolled Nurse**
> *Enrolled Nurses practise under the direction of a Registered Nurse or Midwife to implement nursing care for people who have stable and predictable health outcomes in situations that do not call for complex nursing judgement. The responsibilities of Enrolled Nurses include assisting clients with the activities of daily living, recognising the changing needs of clients and performing delegated interventions from the nursing or midwifery care plan.*"

The above statement superseded the Nursing Council's Code of Conduct for Nurses and Midwives (reprinted September 1999):

> "Enrolled nurse means a person whose name appears in the Roll of Nurses. The abbreviation EN may be used.
>
> The Nurses Act 1977 requires direction and supervision of the enrolled nurse to be provided by a registered nurse/midwife or medical practitioner. It is the professional judgement of the registered nurse or midwife or medical practitioner which determines the degree of direction and supervision required for each enrolled nurse. The extent of this supervision depends on the complexity of nursing skills and judgement involved."

Nursing Council's Competencies for the Registered Nurse scope of practice (January 2000):

> "3.7 Determines the level of care required by individual clients and makes appropriate decisions when assigning care, delegating activities and providing direction for nurse assistants/enrolled nurses and others, including health service assistants or family/carers.
>
> …
>
> 4.3 Obtains, documents and communicates relevant client information.
>
> …

4.11 Directs, supervises, monitors and evaluates the nursing care provided by enrolled nurses.

…

5.8 Manages situations to maintain a safe and supportive environment when directing enrolled nurses or delegating activities to others.

…

6.7 Exercises responsibility in direction of enrolled nurses and in delegation of appropriate activities to health service assistants and client's family/carers.

…

10.6 Ensures that nursing care is assigned and appropriate activities are delegated to those who have the necessary skill, information and education to meet the needs or perform the task effectively and safely."

The Smoke-free Environments Act 1990:

6. Special provisions for certain institutions — [29 Nov 1990 to 9 Dec 2004]

(1) In respect of any hospital or rest home, the written policy on smoking required by section 5 of this Act shall also include a requirement that any patient or resident who is so incapacitated as to be unable to move readily or to be moved readily may be permitted to smoke in an area that is not a permitted smoking area, but the employer shall take all such steps as may be practicable in such a case to ensure that other persons in the vicinity of the incapacitated person will not be affected adversely by the smoke.

Commissioner's Opinion

Summary

Mr A, a 50-year-old man with no previous hospital admissions, was admitted to a major hospital on 23 September 2004 with classical signs of a chest infection. His chest X-ray and blood tests were not reviewed for almost 30 hours, despite an assessment during that time by a senior registrar and a consultant physician. As a consequence, his medical condition was inadequately managed. His condition deteriorated, and within 48 hours he was dead.

Before and after Mr A's chest infection was diagnosed, clinical staff provided a poor standard of care. There was inadequate communication, documentation, and

monitoring of Mr A's condition. Mr A was deprived of the opportunity to benefit from simple interventions that might have saved his life.

During his admission, there were many references in the clinical record to Mr A's agitation and need to smoke. It seems that nursing staff in particular were distracted from noticing his deteriorating clinical state by believing that the cause of his anxiety was nicotine withdrawal, possibly related to his mental health diagnosis, rather than hypoxia, and applied a judgemental approach to his care in relation to his smoking needs. The tragedy of this case is compounded by the fact that during his fatal illness, Mr A was denied the basic respect that ethics and the law require to be accorded to all patients.

Following Mr A's death, the Coroner was not advised of the full facts of Mr A's condition and treatment. The DHB did not initially treat Mr A's death as a reportable event, even though Mr A's death fitted four of the criteria for declaring a reportable event,[51] two of which were mandatory reporting criteria. It took three months before Mr A's death was finally reported, following a meeting with the family on 20 December 2004.

Having been told on the morning of his death that their brother's death would be investigated, Mr A's family contacted the hospital at least twice over the next two months in unsuccessful attempts to find out about his care. His family was simply left in the dark.

The view of my expert advisors — Dr Mary Seddon (systems advice), Dr David Spriggs (medical advice), and Ms Janet Hewson (nursing advice) — is that there were a number of examples of individual and organisational failures. Although some of the failures could, on their own, be viewed as mild, they contributed to the poor standard of care that Mr A received.

The primary focus of my report is on the failure of Capital and Coast District Health Board to provide safe and appropriate care for a very unwell patient. In addition to the clear systems failure, several individual doctors and nurses must accept responsibility for their failure to provide appropriate medical and nursing care.

As Mr A's family have commented, this report "highlights the failure of the various staff members involved in [his] care to perform the most basic tasks required to ensure that an accurate picture of his condition was available and appropriate care could be provided, as well as the numerous contradictions in their statements".

If, as my expert advice suggests, the same fate could befall patients in other New Zealand hospitals, this case should be a wake-up call to all district health boards. It is troubling to note Dr Spriggs' comment (in January 2007) that "the quality of

[51] Inappropriate, insufficient or impaired staff; unacceptable clinical treatment delay; unexpected or sudden death of a mental health consumer; deaths reportable to the Coroner (the latter two were mandatory criteria).

handover between medical shift workers in New Zealand remains very poor". My experience as Commissioner leads me to endorse Dr Seddon's statement:

> "It is unlikely that Wellington Hospital is the only hospital in New Zealand running out-dated systems of care without the required back-up, where clinicians are frustrated by the time delays and 'business-case inertia' that impede improvements in patient care."

That the same tragedy could unfold at another hospital in New Zealand should not obscure the fact that what happened at Wellington Hospital is inexcusable. It is vital that lessons are learnt from this tragic case, and that steps are taken at Wellington Hospital and around the country to ensure that patients receive the competent and co-ordinated care they need and deserve, and that they and their families are treated with compassion.

Opinion: Breach — Dr E

Chest X-ray

The initial responsibility for reviewing an X-ray lies with the doctor who ordered it. However, Mr A was referred for internal medicine review, and by the time the X-ray had been performed, Dr E had assessed Mr A and accepted him for admission to Internal Medicine. In these circumstances, the responsibility to check Mr A's X-ray passed to Dr E.

Although the X-ray was not available at the time of Dr E's first review of Mr A, it was available at his second review. Dr E stated that the reason he did not check the X-ray was because he did not know that the X-ray had already been taken, expecting the X-ray to be done on Mr A's transfer to the ward and reviewed later. Yet he failed to make any record of this as an expected action. On his second review, Dr E should have checked to see whether the X-ray had been taken, which he could have done by simply asking Mr A. Dr E should have reviewed the X-ray before the end of his shift, or ensured that it was checked.

Dr E sought to absolve himself from responsibility to review the chest X-ray of a patient whom he had admitted with acute shortness of breath. I endorse the view of my expert, Dr Spriggs:

> "The fact that the X-ray had been ordered by an emergency physician does not absolve [Dr E] of that responsibility and it is not reasonable to suggest that patients should prompt the doctor to have a look at the X-ray as suggested by [Dr E]. If he was not sure that a chest X-ray had been taken, he should have found out. If it had been taken and he had not seen it, he should have clearly handed this over to [Dr U]."

Blood tests
By the time of Mr A's second review by Dr E, the results of the initial blood tests (taken on Mr A's admission to ED) would have been available for review. Dr E was unaware that these blood tests had been taken, and noted that he had not been told this on handover from Dr S, and that Mr A and his support person did not mention it. Dr E ordered (what he assumed to be) "baseline bloods" to be taken. He stated that the initial results would not have changed his management, a view that my expert endorsed. Nonetheless, as Dr Spriggs observed, "The failure to review the tests performed in the Emergency Department was … again an indication of an inadequate initial assessment."

Chest infection
At the time of Dr E's review, Mr A was very short of breath, and had purulent sputum and a low-grade fever. He had also been previously assessed by Dr S, who considered that Mr A had an infective exacerbation of CORD or asthma. Dr S had noted pneumonia as a possible diagnosis on the X-ray request form.

Dr Spriggs advised that such a presentation would "usually prompt early use of antibiotics". The mild fever alone would not usually be an indication for antibiotic use, but in this clinical context it should not have been ignored. Dr E stated that sputum can be discoloured in asthma, but Dr Spriggs described such a presentation as relatively unusual. Discoloured sputum is a "classical sign of infection within the lungs". Dr Spriggs commented:

> "I do not believe that [Dr E's] reasons for not prescribing antibiotics, ie, [Mr A] only had a 'low grade fever or afebrile' and the fact that yellow sputum is 'not clearly purulent' would be accepted by most Registrars in training. The absence of signs of consolidation on listening to the chest in no way excludes infection in the lungs."

Dr E responded that "discolouration of sputum is a controversial issue", and that he does not recall seeing the ambulance officer's report stating that Mr A was coughing green sputum. However, Mr A had presented with a clinical picture which, in Dr Spriggs' view, would have prompted most medical registrars to diagnose a chest infection and commence antibiotics. It was not reasonable practice for Dr E to disregard this important sign.

Summary
In my view, Dr E failed to provide adequate care to Mr A in a number of areas. He failed to review the X-ray on the afternoon of Mr A's admission or arrange for it to be reviewed, and he did not commence antibiotic treatment in the presence of clear signs of infection. Accordingly, Dr E did not provide services to Mr A with reasonable care and skill, and therefore breached Right 4(1) of the Code.

Opinion: Breach — Dr D

Chest X-ray

Mr A had a chest X-ray performed on the afternoon of his admission to hospital. I conclude that the unreported X-ray travelled with Mr A to ED after it had been taken in the Radiology Department, as there is a sticker on the envelope requesting that the film be returned for reporting. The nurse who admitted Mr A to the ward commented that a chest X-ray had been performed. This supports the inference that the X-ray films were transferred with Mr A to the ward. In addition, CCDHB stated that X-rays travel with the patient to wards from ED.

Dr Spriggs stated that it is "common practice" that a consultant is responsible for checking the X-rays during the post-acute ward round. However, Dr D did not review the chest X-ray. It was not present, and he believes that he asked Dr L (at their meeting on the ward after his second review of Mr A following his ward round) to review the chest X-ray when it became available. Dr L does not recall such a meeting, or that Dr D asked her to review the X-ray when it became available; had he done so, she would have documented the discussion.

When Dr D assessed Mr A, he "did not find any evidence to suggest focal consolidation". However, as noted by Dr Spriggs, this "in no way" excluded pneumonia or any other complication, and the X-ray was an important diagnostic test. Dr D accepts that it was his mistake "to assume that because I had heard nothing further from Dr L or the Respiratory Team, that Mr A was stable", and that "the overall responsibility" lay with him as Mr A's consultant.

Blood tests

Although Dr D stated that it would be his normal practice to review blood tests on the ward round, there is no evidence that the blood test taken on Mr A's admission was reviewed before 5.30pm on 24 September. It is the responsibility of the consultant to check the blood results on the post-acute round.

Diagnosis of chest infection

Dr D's finding was of severe bronchospasm as the prime cause of Mr A's hypoxia, and his priority was urgent relief, hence the need for respiratory specialist review. Dr Spriggs advised that Mr A needed treatment for the bronchospasm in the form of nebulisers and prednisone (which he received), and controlled oxygen (which he could not tolerate). I accept Dr Spriggs' advice that the diagnostic error was the failure to recognise signs of infection. By the time of Dr D's post-acute ward round, there was "absolutely no doubt that Mr A was septic". Mr A had purulent sputum and a raised temperature, and was in respiratory distress. In addition, Dr L had advised Dr D that Mr A's condition had not improved since admission. Dr L's observation is supported by the record of Mr A's respiratory rate, which had changed little from admission to the morning of the ward round.

In my view, Dr L's observation should have prompted Dr D to reconsider the treatment that Mr A had been receiving since his admission. Dr D failed to recognise

the signs of infection, with the result that treatment with antibiotics was delayed. Dr D now accepts, with the benefit of hindsight, that his judgement "may have been incorrect".

Summary
Although there is conflict about what was said between Drs D and L regarding the checking of Mr A's X-ray, what is certain is that Dr D failed to ensure that the X-ray was reviewed. Dr D also failed to review Mr A's blood test results and, despite clear signs of infection and advice from Dr L that Mr A's condition was not improving, Dr D failed to commence treatment for a chest infection. Dr D accepts that the documentation of his assessment was "very poor".

Dr Spriggs summarised his advice on the care provided by Dr D:

> "[Dr D's] clinical care of [Mr A], in particular his failure to ensure that the X-ray was reviewed, the blood tests were seen and the significance of the fever was noted and his failure to oversee the total care of [Mr A] … falls significantly below the standard of care expected of his peers and I believe his peers would view his conduct with moderate disapproval."

Dr D did not fulfil his consultant responsibility in his care for Mr A and breached Right 4(1) of the Code.

Opinion: No breach — Dr F

Management of care
Dr F was the on-call medical registrar on duty on the evening of 24 September. His first knowledge of Mr A came at around 6pm, when Dr L contacted him to advise him of Mr A's deterioration in condition. Despite Dr L's report of Mr A having a respiratory rate of over 60 breaths per minute, and that he had not received treatment for his chest infection since admission, Dr F did not attend Mr A in person or arrange for a review from an intensive care specialist (an intensivist). Dr Seddon and Dr Spriggs commented on the clinical staff's over-reliance on the oxygen saturation level. Dr Seddon advised that the respiratory rate is a "much more sensitive indicator of a patient's physiological state". Although attempts were made to obtain a blood gas sample, they failed because of the discomfort Mr A experienced in providing the sample, and no consideration appears to have been given to using local anaesthetic.

Dr F explained that he did not attend Mr A as both Drs L and N advised that Mr A's current condition was satisfactory. Furthermore, as far as Dr F can recall, Dr L did not inform him that Mr A's respiratory rate was above 60 breaths per minute; had he been told, Dr F "would have attended immediately". Dr F was later contacted by Dr N (at 10pm), to say that she had been unable to obtain an ABG, but that Mr A was "stable" and overall was settling.

Having considered the description of Mr A's condition when he was reviewed by Dr L on the evening of 24 September, Dr Spriggs advised:

> "By the evening of the 24th September it should have been clear that [Mr A] was deteriorating, his respiratory rate had reached more than 60 breaths per minute and he was clearly distressed and confused. Managing [Mr A] on a general ward was inappropriate and if there was no high dependency unit available, intensive care was indicated. It is usual for intensive care specialists to be readily available for consultation in big tertiary hospitals however there is no evidence that they were even contacted and [Dr F] should have made that call even if he had no time to see [Mr A] himself.
>
> …
>
> I do not have enough information on the workload under which [Dr F] was struggling to make a clear judgement about his personal responsibility for not reviewing [Mr A] in the evening of the 24th of September, however, his peers would consider that had he the opportunity to do so, he should have clinically reviewed this patient."

Dr F has provided further evidence of his extremely busy workload that night. I accept the view of his expert advisor, Dr Lutz Beckert (with whom Dr Spriggs concurs) that "[Dr F's] responsibilities and workload placed him in an impossible position", and that he "cannot be accountable for [the] lamentable state of affairs" resulting from "the hospital's inadequate systems and resources".

Had it not been for these extenuating circumstances, Dr F should have either attended Mr A himself or arranged for a review by an intensive care specialist. As Dr Seddon noted, while an experienced doctor on the spot might be able to make the call as to whether Mr A required ICU support, this decision "was outside [Dr L's] experience level". However, Dr F did correctly diagnose pneumonia and recommended the appropriate treatment. I accept that he acted reasonably in difficult circumstances, and did not breach the Code.

Adverse comment — Dr K

Dr K was contacted by Dr D on the morning of 24 September for specialist respiratory medicine advice.

Although he does not recall details of the discussion with Dr D, Dr K interpreted his notes as indicating that the referral was not urgent, and that he intended to review Mr A on the following Monday. Dr D's recollection is that Dr K was to review Mr A later on 24 September. Dr D says there is "no doubt" about his request. The clinical record states that Dr K was to review Mr A, but there is no comment about the

urgency of the referral, or when Dr K was intending to attend. The clinical record simply states: "R/V [review] by [Dr K]".

Dr K stated that, as respiratory registrar, he was often contacted for advice from senior clinicians. Had he been asked for an urgent referral, he would have attended. He regarded the telephone conversation with Dr D as a combination of a simple advice call and a non-urgent consultation request.

From the information available, it is not possible to be certain about the degree of urgency communicated in the discussion between Dr K and Dr D. However, I bring to Dr K's attention Dr Spriggs' advice that Dr K should have attended Mr A with greater urgency. This was another lost opportunity for the chest X-ray to be reviewed. It was also, as Dr D observed, a "step in the chain of failures of communication".

Opinion: Breach — Ms G

Ms G was aware from early in her shift that Mr A was significantly unwell. She claims that she was unable to record a peak flow measurement owing to Mr A's exhaustion. She needed to adjust her management of Mr A's care accordingly for the rest of her shift.

Clinical observations
Ms Hewson advised that two-hourly clinical observations of Mr A's pulse, respiratory rate, and oxygen saturations should have been performed. During her care of Mr A in the afternoon and evening of 24 September, Ms G recorded only one blood pressure and one pulse rate, and oxygen saturations on six occasions, and Mr A's respiratory rate was not recorded at all. Ms G stated that she measured Mr A's pulse and respirations on an hourly basis and "as much as possible given [her] other patients and duties would allow", recording these figures on a sheet that is no longer available. She neglected to transfer these recordings to the main observation sheet because she was so busy.

Ms Hewson advised that Ms G should have recorded Mr A's blood pressure, pulse and respiratory rate before and during the magnesium sulphate infusion administered at 6.15pm on 24 September. Ms G stated that she recorded the pulse and respiration, but that Mr A refused to have his blood pressure recorded. Ms G claims that she recorded these readings on the sheet she carried with her, but she failed to transfer the recordings to the main observation chart.

However, on five occasions during the shift (excluding the 4.50pm recording) Ms G recorded Mr A's oxygen saturation on the observation chart. I do not accept that Ms G would have written one set of observations (the oxygen saturation) on the formal observation chart, and the other observations (of pulse, blood pressure and respiratory

rate) on another sheet — the one in her pocket. In particular, there is a record on the observation chart of Mr A's oxygen saturations at 6.15pm — the time of the commencement of the magnesium sulphate infusion — but no record of the blood pressure, pulse or temperature readings she said she performed.

Ms G stated that Mr A refused to have his oxygen saturation recorded. She did not note this in the clinical record of the time, and there is no record in the internal investigation of any such refusal. Mr A's sisters, who were with him from approximately 6pm to 10pm, recall the nursing staff taking only an oxygen saturation reading. They say that, while they were with their brother, he did not once refuse to have his clinical observations taken.

My medical advisor, Dr Spriggs, commented:

> "In the clinical context of a man in severe respiratory distress who is at times unco-operative and refusing assessment which in itself might indicate worsening respiratory failure, close observation must be attempted."

My nursing advisor, Ms Janet Hewson, stated that if Ms G did perform the clinical observations, her error (an "extreme deviation from the expected standard") was in failing to document on the observation chart the clinical observations she performed.

Although it may be common practice to write the observations on one sheet and then transcribe to the formal observation chart, there is no evidence apart from Ms G's statement that she did any observations except those recorded on the formal observation chart. If she had done the observations, I consider that she would have recorded them all on the same document.

Taking into account all of the evidence, including the statements from Mr A's family and the available documentation, I conclude on the balance of probabilities that Ms G performed only those observations that she recorded on the observation sheet, and that she was not as watchful as she believes. I note that when Dr L reviewed Mr A in the early evening, she found Mr A with a respiratory rate in excess of one breath a second and in need of urgent intervention. Had this been a sudden acute event, I have no doubt that Mr A's visitors, if not Mr A himself, would have raised the alarm. I consider it was likely that Mr A had been in this poor condition for some time, and that Ms G failed to monitor him as she has claimed. I endorse Ms Hewson's statement that "professional vigilance is the essence of caring in nursing".

In response to the provisional opinion, Ms G claimed that Dr L's review was as a result of her actions. I do not accept this claim. Dr L stated that she reviewed Mr A at her own initiative some time after the end of her shift. I consider it likely that, had Ms G requested a medical review, she would have contacted the doctor on duty at that time, Dr N.

Handover to night staff
In the handover between Ms G and the on-coming night staff, Ms G failed to inform Ms H and Ms I that Mr A's condition was not improving, that there was the possible need for review by the intensive care unit, and that there had been an abnormal X-ray for which IV antibiotics had been prescribed. Ms I stated that she was not told what clinical observations were required to be performed. It seems that Ms H and Ms I were unaware of the seriousness of Mr A's condition when they commenced the shift, and planned Mr A's care accordingly. In her response to the provisional opinion, Ms G stated that her handover and documentation "were of a reasonable standard", yet her omissions in the information handed over to nurses Ms I and Ms H contributed to their view that Mr A was less ill than he was. Ms I stated:

> "If I was aware fully at the beginning of the shift of the seriousness of [Mr A's] condition, I would not have accepted the patient."

Ms H stated:

> "If at the beginning of the shift I had been clearly informed about the seriousness of [Mr A's] condition, I would not have allocated him to EN [Ms I]."

I endorse Ms Hewson's observation on the importance of the verbal handover, "to maintain the continuity, safety and quality of patient care".

Summary
I do not accept Ms G's claim that she performed more clinical observations than she recorded. My expert advised that the failure to take the observations was an "extreme deviation" from expected standards, and I endorse Ms Hewson's view. By failing to monitor Mr A's condition adequately, Ms G failed to provide nursing services with reasonable care and skill, and breached Right 4(1) of the Code.

Had Ms G performed an adequate handover to the night staff, Mr A's serious condition would have been appreciated by the night staff; Ms I would not have been assigned Mr A's care; and it is likely that Mr A would have received closer monitoring overnight and the deterioration in his condition would have been noticed. In my view, Ms G's handover to the night staff was inadequate to assure Mr A's safety, and she therefore breached Right 4(5) of the Code.

I also note with concern that, according to Ms C, Ms G was "incredibly rude and disrespectful to us all but particularly [Mr A]". Ms G has made statements that are either contradicted, or not supported, by other evidence. Her response to the provisional opinion gives no indication that she has reflected upon and reviewed her practice.

Adverse comment — Ms H

Enrolled nurse supervision
Ms H was in charge of a very busy ward on the night of 24/25 September, responsible not only for her own patients, but for supervising an enrolled nurse and an agency nurse. This is a lot to ask of any registered nurse. However, although Ms H stated that she was supervising Ms I during the shift, there is no evidence that she actually did this. The CCDHB inquiry concluded that Ms I was "not adequately supervised due to the compromised skill mix".

In response to my provisional opinion, Ms H stated that if at the beginning of the shift she had been clearly informed about the seriousness of Mr A's condition, she would not have allocated him to Ms I. Although I have concluded above that the handover from Ms G was deficient, Ms H *was* aware that Mr A was receiving oxygen, was very short of breath, was agitated, that IV fluids were in place, and that IV antibiotics had been prescribed. Ms H must have been aware of Mr A's poor clinical state, and was therefore required to supervise his care accordingly.

I discuss my view below that CCDHB, rather than Ms H, was responsible for Ms I working outside her scope of practice. However, this does not absolve Ms H from her responsibility to supervise Ms I. Although there were deficiencies in Ms G's handover, Ms H was aware at the beginning of the shift that Ms I required supervision to provide a safe level of care to Mr A.

However, this criticism must be tempered by recognition of Ms H's heavy workload, the inadequate staffing arrangements, the failure of the medical team to state clearly in the medical notes that Mr A required close observation, and the poor handover by Ms G. In these circumstances Ms H did not breach the Code.

Opinion: Breach — Ms I

Clinical observations
Ms I did not perform any clinical observations overnight. She claims that Mr A refused to allow the observations to be measured — not by verbal refusal but by physical resistance (eg, not allowing his arm to be moved). Yet Ms I did not refer to these "refusals" in her clinical record of the time, the incident report she completed in January 2005, or the internal investigation. Furthermore, as noted by Ms Hewson, Mr A's respiratory rate could be observed without Mr A's co-operation. Dr Spriggs commented that the measuring of respiratory rate is "a non-invasive investigation that does not require patient co-operation". Ms Hewson also advised that, if Mr A's hands were hidden from view (which was another reason given by Ms I for not obtaining oxygen saturations), an earlobe or toe could be used rather than a finger. Mr A's friend, Mr R, recalls that no nurse attempted to take Mr A's clinical observations overnight, and that he did not refuse to have his clinical observations taken.

What is certain is that Ms I did not record any clinical observations overnight. A measurement of respiratory rate would have been quick and easy to obtain, and required no co-operation from Mr A.

I accept that Ms I felt "unsupported generally" because of "the busy state of the ward and inadequate staffing", and had not been told at the beginning of the shift how serious Mr A's condition was.

Notwithstanding these extenuating circumstances, Ms I's failure to undertake any clinical observations (in particular, to obtain a respiratory rate) or to document anything about observations of her patient, is inexcusable. In these circumstances, Ms I breached Right 4(1) of the Code.

Adverse comment — Mr Q

Respiratory rate
Mr A's respiratory rate was recorded once during Mr A's admission to the medical ward — at 8am on 24 September by Mr Q. As stated above, Dr Spriggs and Ms Hewson both described this as an observation that is easy to take, requires no cooperation from the patient, and should have been performed.

Mr Q stated that he recorded Mr A's respiratory rate every two hours, yet the respiratory rate was recorded only once during the shift. Mr Q has either provided inaccurate information to my investigation, or failed to adequately record his clinical observations.

Opinion: Breach — Capital and Coast DHB

Overview
During Mr A's admission, a number of staff failed to monitor, record and communicate vital information regarding Mr A's condition. Important clinical information was not reviewed. Medical and nursing handover was poor. Junior medical staff were asked to make decisions beyond their level of competence. There were shortages of medical and nursing staff, and an enrolled nurse was inadequately supervised.

All these factors combined to deprive Mr A of the opportunity to benefit from simple interventions that might have saved his life. I have reviewed the standard of care provided by individuals, but I believe that systemic flaws at Wellington Hospital at the time of Mr A's admission were the most significant cause of the poor standard of care he received.

As stated by the Privy Council in the *Roylance* decision, "The care, treatment and safety of the patient must be the principal concern of everyone engaged in the hospital service."[52] Similar comments were made in *The Report of the Public Inquiry into children's heart surgery at the Bristol Royal Infirmary 1984–1995*:[53]

> "Placing the safety of patients at the centre of the hospital's agenda is *the* crucial first step towards creating and fostering a culture of safety. This means that safety must be *everyone's* concern, not just that of the consultant, or the nurse in charge. … The safety of patients, the safety of their clinical care, is a matter for everyone, from the trust boardroom to the ward assistants. Safety requires leadership from the highest level of management. It requires constant vigilance. It should be considered in everything that the organization does. It is not a short term project but a commitment for 365 days a year. A culture of safety can only really be created when a concern for patients' safety is embedded at every level of the organization."

I endorse the following statement by Professor Giesen:[54]

> "[A] patient in a modern and well-staffed hospital is entitled to expect and rely upon the skill, circumspection and experience of hospital physicians and nurses to detect and treat negative consequences such as … an infection, before crippling injury results. This goal can only be achieved where reasonable care is taken in securing competent personnel and an organization capable of providing and maintaining a safe hospital system."

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[52] *Roylance v General Medical Council* [1999] 3 WLR 541, 559.
[53] Available at: http://www.bristol-inquiry.org.uk.
[54] *International Medical Malpractice Law* (1988) p 61, cited with approval in *Ellis v Wallsend District Hospital* (1988) 17 NSWLR 553, 568 per Kirby P.

A health authority such as a district health board has a "non-delegable duty to establish a proper system of care just as much as it has a duty to engage competent staff and a duty to provide proper and safe equipment and safe premises".[55]

Capital and Coast District Health Board (CCDHB) did not provide a safe healthcare environment for Mr A.[56] It failed to respond adequately to staffing shortages and to have systems in place that delivered an appropriate standard of medical and nursing care. CCDHB failed to ensure that Mr A was treated with dignity and respect during his stay in Wellington Hospital, and provided inadequate guidance to enable staff to manage a patient with a nicotine addiction. By its lack of candour in dealing with Mr A's family after his death, CCDHB also failed to comply with the standard of open disclosure expected of a hospital in such circumstances. Cumulatively, these failures amount to numerous breaches of the Code of Health and Disability Services Consumers' Rights (the Code), which reflect very poorly on the overall management of Capital and Coast District Health Board.

Care planning, communication and co-ordination
Despite being cared for by nurses in ED and a medical ward on a total of five shifts, no care plan was in place to guide Mr A's care. A proper plan would have set out the frequency and type of clinical observations required, and what actions should be taken if the observations altered significantly.

As noted by Ms Hewson, there was a lack of "subjective and objective assessment, decision making for care requirements from those findings, evaluation of care implemented and further planning for the shift".

In its response, CCDHB agreed that it is an expectation and "accepted good practice" that medical staff make a record of the clinical observations required. However, Dr Seddon advised that in this case "there seemed to be no real communication about what to do if Mr A deteriorated, what observations were needed to spot any deterioration, and who to call". In her advice, Dr Seddon sets out six key components to identify and manage a physiologically unstable patient. One of these is:

> "A clear communication of the monitoring instructions that are required for each patient, which includes the parameters to be measured, the acceptable range of values and what to do if that range is exceeded."

I endorse Dr Seddon's advice that CCDHB needs to invest in some form of Medical Emergency Team or ICU outreach to identify and manage the physiologically unstable patient on general medical and surgical wards.

I accept the Board's submission that "as a public entity [it has] an ethical and constitutional responsibility to ensure that funds are utilised in an effective manner". But the Board has an overriding responsibility to keep its patients safe. In September

[55] *Robertson v Nottingham Health Authority* [1997] 8 Med LR 1, 13, per Brooke LJ (CA).
[56] Cf *Wilsher v Essex AHA* [1987] QB 730 (CA) and *Bull v Devon AHA* [1993] 4 Med LR 117 (CA).

2004, CCDHB did not have in place a system that ensured that the clinical information vital for Mr A's well-being was readily available and communicated to clinical staff. This failure contributed directly to the failure of staff to adequately monitor Mr A's condition, and respond appropriately and in a timely manner.

I am also concerned by the lamentable quality of handover and documentation evident in this case. Good handover is essential for the transfer of vital clinical information across shift changes. Documentation of clinical observations and decisions is also fundamental to patient care. Both were notably absent from Mr A's care. CCDHB as an organisation must accept responsibility for the lack of care planning, the ineffective communication, and the discontinuity of care that had such tragic consequences for Mr A. In my opinion, CCDHB breached Rights 4(1) and 4(5) of the Code.

Staffing shortages

Because Dr E was to be on night duty on Friday 24 September 2004, he was not available to attend the post-acute ward round that morning. Dr Spriggs advised that this scenario is not unusual in New Zealand, but "this does not make it acceptable". CCDHB was responsible for Dr E's work schedule. His absence from the post-acute ward round jeopardised the continuity of care for Mr A and other patients admitted by Dr E.

In its response to the provisional opinion, CCDHB not unreasonably submitted that Dr E's absence by itself did not constitute a breach of the Code. CCDHB also advised that additional medical registrars have been employed at Wellington Hospital since 2004; that CCDHB has one of the lowest number of RMO vacancies in DHBs across New Zealand; and that this issue is receiving further attention.

Mr A's case highlights not only a medical staffing shortage (which compromised the medical handover on Friday morning 24 September) but also a nursing shortage on the night of 24/25 September (which hampered essential observations and documentation). I am not satisfied that CCDHB responded adequately to these shortages. Looking at the overall staffing situation, I conclude that CCDHB breached Right 4(5) of the Code.

Scope of practice

Ms I worked outside her scope of practice by caring for Mr A, a patient who required more complex care than she, as an enrolled nurse, was professionally capable of providing. In particular, the Nursing Council's statement on scope of practice describes a patient of an enrolled nurse as one that has "stable and predictable health outcomes in situations that do not call for complex nursing judgement". Mr A was clearly not such a patient.

CCDHB was aware of the shortage of nursing staff through the duty manager, and further steps should have been taken to resolve this problem.

Following the internal inquiry, CCDHB accepted that Ms I worked outside her scope of practice on the night of 24/25 September. CCDHB advised that as a consequence of this case, enrolled nurses no longer work on night duty.

Being aware that Ward 17 was poorly staffed on the night of 24/25 September, and that an enrolled nurse was caring for Mr A (outside her scope of practice), CCDHB breached Right 4(2) of the Code.

Respect
A core ethical principle in caring for patients is that every patient should be treated with respect. It is recognised as a legal right in the Code's statement that "every consumer has the right to be treated with respect" (Right 1(1)).

Patients who have been admitted to hospital because they are acutely unwell are especially in need of care, comfort and compassion. As well as suffering from their present illness, they are likely to be frightened by the unfamiliar hospital environment and fearful for their future.

It is impossible to verify exactly what was said and done to Mr A during his stay in Wellington Hospital, but I am left with a very clear impression that he was not treated with compassion, nor accorded the basic dignity and respect that is the right of every patient.

CCDHB, as an organisation, is responsible for the attitude that its staff displays to patients. I conclude that in its treatment of Mr A, CCDHB breached Right 1(1) of the Code.

Smoking
Staff appear to have had an inflexible approach to managing Mr A's need to smoke. According to accounts from his visitors, nursing staff displayed a judgemental attitude to smoking that may have led them to think that his agitation was caused by his nicotine addiction and mental health diagnosis, rather than by his worsening clinical condition. I note in particular the recommendation following the internal investigation:

> "Review smoke free policy to consider needs of mental health patients in general inpatient areas."

Dr Seddon advised that patients with low oxygen levels (hypoxia) are known to display anxiety and agitation, which is how the clinical record of the time (in particular Ms G's entry on the evening of 24 September) describes Mr A. Dr Seddon advised:

> "At several points in his care the seriousness of his condition was mistaken, sometimes downplayed as 'anxiety' and his addiction to cigarettes was used to explain a level of non-compliance."

Dr Seddon further advised:

> "Staff imposed their normative anti-smoking values onto [Mr A] when he was not in a position to give up smoking. This contrasts starkly to the hospital management of a patient with a heavy drinking history for which there is a recognised alcohol withdrawal scale."

Nursing staff were clearly under the impression that Mr A was not allowed to smoke on the ward and, in order to satisfy his need for nicotine, he had to spend time outside the ward, away from oxygen and clinical supervision. In response to my provisional opinion, CCDHB stated that although the previous Smoke-free Environments Act may have allowed smoking in these circumstances on the ward, such an arrangement would have contravened CCDHB standard practice, exposed other patients and staff to the adverse effects of passive smoking and been contrary to the policy in most public hospitals in New Zealand at that time.

Section 6(1) of the Smoke-free Environments Act 1990 required hospital policies on smoking to "include a requirement that any patient who is so incapacitated as to be unable to move readily or to be moved readily may be permitted to smoke in an area that is not a permitted smoking area".

Dr Spriggs advised that the failure of the CCDHB smoking policy to provide for those who crave nicotine is a systemic fault that contributed to deficiencies in Mr A's care.

CCDHB failed to provide its services in a manner consistent with Mr A's nicotine addiction and current medical condition, and did not comply with its duty under the Smoke-free legislation. In these circumstances CCDHB breached Rights 4(2) and 4(3) of the Code.

I am also concerned that following the internal investigation, where one of the action points was to look at the smoking policy, no such review appears to have taken place. It is important that CCDHB learns from Mr A's predicament.

Other matters

Internal investigation

On the day of their brother's death, Mr A's sisters were told by a male doctor, probably Dr E, that there would be an investigation into Mr A's care. However, there is no evidence that an investigation was commenced until almost a month after Ms C met with Dr D on 20 December 2004. In January 2005, Ms H and Ms I completed incident forms describing the events of the night of 24/25 September. It appears that, following receipt of these forms, CCDHB formally declared a serious event "as per [the] Reportable Events Policy" (the Policy). CCDHB stated:

> "[T]he reason [Mr A's] death was not considered a reportable event prior to receipt of [Ms C's] letter was that, while [Mr A's] death was unanticipated, the

> staff involved and the Team Leader did not at that time deem his death to be due to errors or omissions in his care."

In the circumstances — where there had been a late diagnosis of a chest infection and a patient had unexpectedly died — I am concerned that Mr A's death was not considered a reportable event. In particular, the Policy specified situations where it would be appropriate to declare a reportable event: inappropriate, insufficient or impaired staff, and where there had been unacceptable clinical treatment delay. Moreover, the Policy stated that it was *mandatory* to declare a reportable event in the circumstances of the unexpected death of a mental health consumer, and with any case that was referred to the Coroner.

In response to the provisional opinion, CCDHB stated that Mr A's death was not considered a reportable event on the basis of advice from the Team Leader of the ward on behalf of the clinical staff involved. CCDHB advised:

> "It does not reflect the view of [CCDHB] and specific education has been given about this error in policy determination.
>
> The issues of insufficient staffing and delay in clinical treatment were not identified at the time of his death by the clinical staff involved. They were identified as part of the internal review held subsequent to the event being recorded."

Dr Seddon advised that although the internal investigation was "quite thorough as to the record of events … it is incomplete in the section on recommendations". Dr Seddon summarised her view of the internal investigation:

> "The internal process seems to be a genuine attempt to investigate this event but it fails to convincingly get at the root causes of the problems, still focuses on individuals, suggests weak actions, and does not document whether these have been carried out or any evidence of their efficacy. It does not therefore inspire confidence that the basic problems in this case have been addressed."

In its response to the provisional opinion, CCDHB disagreed with Dr Seddon's advice. Having reviewed the updated action plan (dated October 2005), Dr Seddon has repeated her concerns about the effectiveness of the recommendations made.

In my opinion, Mr A's death should have been declared a reportable event. It is of concern that, but for the persistence of Mr A's family, it may never have been reported. By failing to do so, a significant opportunity was missed "to learn about system failure, error and in particular, ways to prevent recurrence" (to quote CCDHB's own policy). I am particularly concerned that the internal investigation did not specifically deal with the failure by nursing staff to record Mr A's clinical observations, or with the lack of any plan of care for clinical staff to follow.

Duty of candour
CCDHB responded inadequately to legitimate queries from Mr A's family. CCDHB had a responsibility to Mr A's family to answer their queries. All too often, families are left in the dark after a patient is harmed or dies unexpectedly during a hospital admission. Hospital management and clinicians owe families a duty of candour in such circumstances — to openly discuss and honestly disclose what has happened, and to apologise for any shortcomings in care. The conduct of CCDHB in this case fell woefully short of the standard of open and honest disclosure expected of a hospital in such circumstances.

In response to the provisional opinion (in November 2006), CCDHB stated that it has been "socialising the expectation of open disclosure over the past 12 months" and submitted that HDC's report on the case "may be an impediment in persuading clinicians that open and immediate disclosure is the right course to follow". I find this response singularly unconvincing. As noted by Dr Spriggs:

> "It would seem disingenuous to criticise the HDC for championing such open disclosure by implying that the criticism of staff for failing to achieve such candour is itself an 'impediment in persuading clinicians that open and immediate disclosure is the right course to follow'."

Coroner
I note the Wellington Coroner's statement of his expectation of hospital staff reporting to him or the Police:

> "The expectation is … that they will report fully and frankly. It is the consultant who should report, but often that task is delegated to registrar or house surgeon. … Had a complaint not been made to the Commissioner, I would have decided, upon learning what had gone on, to hold an inquest."

I am concerned that the Coroner may not have been provided with all the relevant information about Mr A's care in a timely manner, to enable him to make an informed decision about whether to hold an inquest.

Medical culture
In referring to the culture of medicine in New Zealand, and not specifically CCDHB, Dr Spriggs has described the reluctance of junior doctors to ask for advice. I endorse his observation that "doctors of all grades be encouraged to seek advice when things are going wrong". It is incumbent on consultants to spell out very clearly their expectations about being contacted by junior doctors; and for registrars to provide similar guidance to house officers. Teamwork is critical within hospitals, and within the medical hierarchy the more senior doctors have particular responsibility for clarifying their expectations, and for welcoming contact and questions from their juniors.

Oxygen prescription
Although oxygen should have been formally prescribed on the medications chart, this did not occur; nor was there a written instruction in the clinical record to state what rate of oxygen should be given. During Mr A's short admission, the amount of oxygen administered varied many times with a lower rate of 2L/min (6.10pm on 24 September) to a higher rate of 8L/min (8am on 23 September), with no recorded instructions or explanations for the variance in rate. In short, the administration of Mr A's oxygen appears to have been haphazard, and followed no set plan.

Asthma guidelines
CCDHB produced the Asthma Management Algorithm. This states that if patients do not respond to initial therapy "blood gas assessment is an essential investigation", and that spirometry is to be performed at initial assessment and during treatment. Spirometry was not performed during Mr A's admission, nor was a sample taken for blood gas analysis.

CCDHB also produced an Asthma Assessment Sheet that was "intended to be primarily a device to standardise asthma treatment in the ED". Although CCDHB stated that there had been "staff education regarding its use" and the sheets are readily available in ED, it confirmed that the sheet is not routinely used "as not all staff know of it and it doubles up on paperwork". Dr Spriggs identified this as a clearly unsatisfactory response. I also endorse Dr Spriggs' view that "it is the duty of all organisations not only to produce such advice, but to make them readily available to clinical staff". It is the organisation's responsibility to ensure that guidelines are readily available and understood, and are followed. In this case that did not occur.

Mr A was in fact suffering from pneumonia, not asthma. Nevertheless, as Dr E had made a diagnosis of asthma, the relevant guidelines should have been followed.

Recommendations

- Dr D and Ms G to apologise to Mr A's family for their breaches of the Code.

- Dr D, Dr E, Dr F, Dr K, Ms G, Ms H, Ms I and Mr Q to review their practice in light of my report.

- CCDHB to advise the Commissioner by **30 June 2007** what steps have been taken to implement the recommendations of its internal inquiry into Mr A's care (see Appendix 1).

The outcomes of the following reviews and audits are to be advised to the Commissioner by **30 June 2007**:

- CCDHB to review the management of patients who require treatment in hospital, but are addicted to nicotine (in accordance with the current Smoke-free Environments Act 1990).

- CCDHB to review its systems of care for physiologically unstable patients at Wellington Hospital in light of Dr Seddon's advice, and to report what actions are to be taken to improve the quality of care for such patients.

Referral to Director of Proceedings

Having found that a number of providers breached the Code of Health and Disability Services Consumers' Rights, I am required to consider whether any of the providers should be referred to the Director of Proceedings to decide whether further proceedings are warranted.

I have noted above my significant concerns about Ms G's and Ms I's care for Mr A, although the latter nurse was working relatively unsupported, outside her scope of practice. However, I have concluded that it would be unfair to single out any individual from the cast of nurses and doctors who cared for Mr A at Wellington Hospital. To do so would also detract from the main message of corporate responsibility for the deficiencies in Mr A's care.

As my report makes clear, systems flaws at Wellington Hospital were the most significant cause of the poor care Mr A received. If any provider is to be singled out for further proceedings, it should be Capital and Coast District Health Board.

Pursuant to section 44(2) and (3) of the Health and Disability Commissioner Act 1994, I am required to consider three factors: (a) the wishes of the complainant; (b) any comments made by the provider; and (c) the need to ensure that appropriate proceedings are instituted in any case where the public interest (whether for reasons of public health or public safety or for any other reason) so requires.

The complainant, Ms B, supports a referral of CCDHB to the Director of Proceedings. CCDHB acknowledges its shortcomings in caring for Mr A, but submits that "progress since this incident is such that referral to the Director of Proceedings is unwarranted".

The key issue for my determination is the public interest. All too often, the public of New Zealand is told that failings in the health service (or other public/private services) are attributable to "the system". Within the health sector over recent years, there has been a strong emphasis on the need to avoid "naming, blaming, and shaming", in the interests of building a safer healthcare system for the community as a whole. This report is consistent with that approach, in shielding individual clinicians from public identification.

However, a healthcare organisation such as a district health board does not have a personal privacy interest. It must expect to be publicly identified where there are serious shortcomings in its systems. Education and quality improvement are laudable

goals, but there must also be accountability for systems failures. The buck must stop somewhere.

The question remains, what is the appropriate form of accountability for CCDHB in this case? Public identification in a Commissioner's Opinion that criticises a district health board's systems and finds it in breach of the Code will in most cases suffice as a means of accountability. There are, however, some cases where the accumulation of errors is so egregious that something more is required. I consider that this is such a case.

I have concluded that there is a public interest in Capital and Coast District Health Board being referred to the Director of Proceedings. Accordingly, I will refer Capital and Coast District Health Board to the Director of Proceedings in accordance with section 45(2)(f) of the Health and Disability Commissioner Act 1994, for the purpose of deciding whether any proceedings should be taken.

Follow-up actions

- A copy of this report will be sent to the Medical Council and to the Nursing Council, with a recommendation that the Council consider whether a review of the competence of Ms G and/or Ms I is warranted.

- A copy of this report will be sent to the Minister of Health, the Director-General of Health, the Royal Australasian College of Physicians, and the Wellington Coroner.

- A copy of this report, with details identifying the parties removed (other than Wellington Hospital and Capital and Coast District Health Board) will be sent to all District Health Boards, Quality Health New Zealand, the Mental Health Commission, the New Zealand Nurses Organisation, the New Zealand Medical Association, the Resident Doctors Association, the Association of Salaried Medical Specialists, and the National Health Epidemiology and Quality Assurance Advisory Committee, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Addendum

The Director of Proceedings entered into discussions with the DHB and the family of Mr A. An agreement was reached, the terms of which are confidential. Taking this into account, along with the ongoing commitment by the DHB to implement changes

as a result of the events, the Director of Proceedings decided to issue no proceedings against the DHB.

Appendix 1

Findings and recommendations from the CCDHB inquiry into Mr A's care:

Findings

1. There was a failure to appreciate the seriousness of [Mr A's] asthma and pneumonia despite several clinical features being evident, eg:
    - lack of improvement despite multiple bronchodilator treatments
    - need for ongoing oxygen to maintain saturations symptoms and signs suggestive of pneumonia (including fever, productive cough with purulent sputum, shortness of breath).

2. There was a lack of appreciation of the severity of [Mr A's] symptoms and this resulted in inadequate assessment of his condition on the ward by medical and nursing staff. Reliance upon oxygen saturations provided an incomplete measure regarding the severity of [Mr A's] illness.

3. There was a significant delay in review of [Mr A's] CXR — this resulted in a delay in diagnosis of pneumonia with consequent delay in initiation of IV antibiotic therapy. The CXR was not reviewed in ED, upon admission to the ward nor during the ward round the following day. The review team have been unable to determine why this delay occurred. The CXR would normally have accompanied the patient to the ward and should have then been available.

4. There was a delay in the prescription of nicotine patches. The admitting nurse's notes identify the need for these to be prescribed the following morning. However, they were not prescribed until the following evening and were only available at [8pm] 24 Sept 04. At this point [Mr A] refused the patches.

5. Mr A insisted on being taken for a cigarette resulting in severe hypoxia due to disconnection of oxygen therapy to go outside. [Mr A] was required to go outside the [building] to smoke.

6. The frequency and type of observations required were not specified. There was a lack of consistent documentation of observations by clinical staff.

7. The senior RN on duty that night had responsibility for supervising both an EN and an agency nurse as well as taking overall responsibility for the care of 25 patients.

8. The EN was given primary responsibility for the care of [Mr A] as well as a number of other patients. The understanding was that the EN would approach the senior RN if there was a problem. The EN was working outside her scope of practice and was not adequately supervised due to the compromised skill mix. The skill mix was due to a delay in communication regarding a senior RN being off sick on night duty.

9. The Internal Medicine medical cover appears (in this case) to have been inadequate, especially in light of the 'out of hours/on-call' workloads and responsibilities. In particular:
    - Workloads of Medical Registrars and House Surgeons are high and this may have resulted in difficulties/failures to reassess investigate and re-evaluate [Mr A].
    - The medical registrar did not attend the post acute ward round as he was not rostered on during the day due to the requirement to undertake nights.
    - It is difficult to provide adequate coverage to all internal Medicine patients with large 60+ numbers of patients and the long ward round.

10. The Consultant was not called and neither did he initiate any communication regarding [Mr A] following the completion of the ward round on the 24th September.

11. The standardised asthma assessment/treatment sheet (which is accessed via the ED electronic record system and is used in ED) was not completed. ED staff stated it is not routinely used as not all staff know about it and it doubles up on paperwork. There is no such standardised asthma sheet available on the wards.

12. There [were] significant discrepancies in one of the interviewee's account of events. The review team has recorded events as represented by the majority of those interviewed.

13. [Mr A's] mental health history did not impact on the care he received.

14. The family stated there was a lack of communication and empathy by nursing and medical staff.

GENERAL FINDINGS AND RECOMMENDATIONS FROM THE REPORTABLE EVENT (SERIOUS/SENTINEL) REVIEW

RECOMMENDATIONS

1. COMMUNICATION

- Frequency and type of routine observations to be based on medical or nursing assessment and clearly prescribed by either:
    - — the RN in the care plan on the integrated patient assessment and to be communicated at each nursing handover
    - — the medical staff in the progress notes
- Clarify process of staff calling in sick to ward 17 including the need to inform the nurse in charge/coordinator of the ward
- Implement formal handover of patients (including a weekend plan) by regular medical staff (consultants and house officers) to the on coming on-call medical staff

- Staff (medical and nursing) attend communication skills workshop

2. EQUIPMENT

- Nil

3. KNOWLEDGE/SKILLS/COMPETENCE

- Education of medical and nursing staff re management of patients with severe respiratory illness (COPD, Asthma) to be conducted with implementation of an appropriate protocol (see Policies)
- Education of medical staff re need for timely X-ray review
- Nursing skill mix on high duty in an acute medical ward should be a minimum of 1:8 Nurse to Patient ratio
- Reinforce education re EN supervision and RN responsibilities in relation to this supervision including appropriate allocation of patients to all nursing staff and include in nursing orientation to internal medicine
- Review and agree after hours consultant responsibilities. Establish system to ensure adequate senior cover is provided after hours by all consultants.

4. WORK ENVIROMENT/SCHEDULING

- Review and confirm responsibility and expectations for review of X-rays. CCDHB consider provision and resourcing of a high dependency unit at Wellington Hospital
- Review after hours medical staffing levels. It is recommended that there are at least two medical registrars and two medical house surgeons rostered on-call after hours, with a pair allocated to the ED to admit incoming patients and a pair allocated to the ward/consulting duties ie, to look after admitted patients on the ward.
- Review and agree after hours and weekend consultant responsibilities. Establish system to ensure adequate senior cover is provided in the weekends by all consultants.

5. POLICIES/PROCEDURES/GUIDELINES

- Develop a protocol for management of patients with severe respiratory illness (COPD, Asthma) including:
  - standardised assessment, treatment and investigation including assessment of need for ICU or other higher level of care
  - Flow sheet (peak flow oxygen saturation and other observations) to ensure regular recordings in standard format.
- Investigate options to integrate paper-based asthma assessment protocols and forms into the ED Information System (ED clinical records).

6. PATIENT FACTORS

- Need for prescription of nicotine patches for all smokers to be assessed on admission
- Nicotine patches to be standard stock item on all inpatient wards

7. *SAFETY MECHANISMS*

- Nil

8. *INCIDENTAL FINDINGS RECOMMENDATION*

- Review smoke free policy to consider needs of mental health patients in general inpatient areas
- Compliance with requirements for prescription of oxygen to be audited in Medical Services
- The CCDHB prescription of oxygen policy to be reviewed and updated.