Registrar, Dr E

Registered Nurse, RN F

Canterbury District Health Board

A Report by the

Health and Disability Commissioner

(Case 14HDC00157)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

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Executive summary

1. Mrs A, aged 80 years, was living independently at home with her husband. She had experienced an adverse reaction to the antibiotic trimethoprim, and wore a MedicAlert bracelet showing this.

2. On 29 Month1[1] 2013, she fell and suffered a fractured neck of femur. She was admitted to a public hospital (Hospital 1) and underwent surgery.

3. On 20 Month2, Mrs A was transferred to another hospital (Hospital 2) for a period of supportive rehabilitation care post surgery, prior to a planned discharge to her home.

4. The admitting house officer, Dr I, took a full medical history of Mrs A. Dr I documented that Mrs A had multiple drug allergies, and rewrote her drug chart. Dr I recorded in the progress notes: "NUMEROUS DRUG ALLERGIES → see chart." Dr I hand wrote orange adverse reaction labels/stickers and stuck one to each page of the drug chart.

5. On 20 Month2, Mrs A was also reviewed by registrar Dr E, who noted that Mrs A's clinical notes stated that she had numerous drug allergies, but the specific drugs and reactions were not documented. Dr E reviewed the drug chart, which included Mrs A's allergies and current medications.

6. Registered Nurse (RN) RN F was allocated to nurse Mrs A on the afternoon of 21 Month2. RN F read Mrs A's full file that afternoon. RN F recalls seeing that Mrs A had an adverse reaction sticker on her drug chart, and that the nursing transfer notes from Hospital 1 noted that Mrs A had allergies.

7. On 22 Month2 at 10.20am, Dr E reviewed Mrs A and noted that she had experienced dysuria (difficulty in passing urine) overnight. A mid-stream urine test was performed. At 5pm Dr E noted that the test results suggested a urinary tract infection and prescribed trimethoprim 1 x 300mg tablet to be given at night for five days. Dr E did not check the orange adverse reaction sticker.

8. On 22 Month2 at 9pm, RN F administered Mrs A her first dose of trimethoprim 300mg.

9. On 23 Month2 at 10am, Mrs A was reviewed by registrar Dr G. He noted that she had been given trimethoprim the previous evening. He also noted that Mrs A's allergy to trimethoprim was written on the orange medication alert sticker on her medication chart.

10. Dr G stopped the trimethoprim and advised the nursing staff to be on the lookout for signs suggesting an allergic reaction.

11. On 24 Month2 at approximately 1.30am, the night nurse noted that Mrs A had peeling on her left inner thigh, like a burn, and that both of her legs had developed blisters.

[1] Relevant dates are referred to as Month1 and Month2 to protect privacy.

Mrs A was readmitted to Hospital 1 with widespread truncal toxic epidermal necrolysis[2] resulting from the allergic reaction to the trimethoprim.

12. On 25 Month2, Mrs A underwent urgent surgery to remove damaged skin and dress her extensive lesions. She was transferred to the Intensive Care Unit (ICU) and placed on a ventilator. For the next three days she was conscious and in severe pain, despite treatment with morphine. On 28 Month2, she was taken to the operating theatre for further skin treatment and dressings. After the operation, it was decided to provide palliative care only. Mrs A died a short time later.

Findings

13. Dr E missed several opportunities to remind herself of Mrs A's allergy status, including reading the notes, reviewing the drug chart, noting the MedicAlert bracelet, and asking Mrs A whether she had any allergies. It was Dr E's responsibility to take the necessary steps to ensure that she prescribed medication to Mrs A that was appropriate for her. By failing to do so, Dr E did not provide services to Mrs A with reasonable care and skill and, accordingly, breached Right 4(1)[3] of the Code of Health and Disability Services Consumers' Rights (the Code).

14. RN F also had a number of opportunities to identify the medication error by reading the clinical records and drug chart, noting the MedicAlert bracelet, and talking with Mrs A. RN F failed to think critically and, instead, trusted that Mrs A would not be charted medication to which she was allergic. RN F failed to provide services with reasonable care and skill and, accordingly, breached Right 4(1) of the Code. Adverse comment is also made about RN F's communication with Mrs A.

15. The staff and the systems existing at Canterbury DHB (CDHB) let Mrs A down. CDHB failed to provide Mrs A with services with reasonable care and skill, and is directly responsible for those failures. Accordingly, CDHB breached Right 4(1) of the Code. Adverse comment is also made about CDHB's suboptimal open disclosure and documentation.

Complaint and investigation

16. The Commissioner received a complaint from Ms B about the services provided to her aunt, Mrs A. The following issues were identified for investigation:

- *The appropriateness of the care provided by Dr E to Mrs A in 2013.*
- *The appropriateness of the care provided by RN F to Mrs A in 2013.*

[2] Toxic epidermal necrolysis (TEN), also known as Lyell's syndrome, is a rare, life-threatening skin condition that is usually caused by a reaction to certain drugs. The disease causes the top layer of skin (the epidermis) to detach from the lower layers of the skin (the dermis), all over the body.
[3] Right 4(1) states: "Every consumer has the right to have services provided with reasonable care and skill."

- *The appropriateness of the care provided by Canterbury District Health Board to Mrs A in 2013.*

17. An investigation was commenced on 12 May 2014.

18. The parties directly involved in the investigation were:

Mr A	Consumer's husband
Ms B	Complainant
Ms C	Consumer's daughter
Ms D	Consumer's daughter
Mr L	Consumer's son
Dr E	Registrar
RN F	Registered nurse
Canterbury District Health Board	Provider

Also mentioned in this report:

Dr I	Admitting house officer
Dr J	House officer
Dr K	On-call registrar

19. Information was also reviewed from:

Dr G
RN H
The Coroner
The New Zealand Police

20. Independent expert advice was obtained from physician and geriatrician Dr David Spriggs (**Appendix A**) and registered nurse Dawn Carey (**Appendix B**).

Information gathered during investigation

Introduction

21. Mrs A, aged 80 years, was living independently at home with her husband. On 29 Month1, she fell and suffered a fractured neck of femur. She was admitted to Hospital 1 and underwent surgery.

22. On 20 Month2, Mrs A was transferred to Hospital 2 for a period of supportive rehabilitation care post surgery, prior to a planned discharge to her home.

23. This report concerns the prescribing and administration of trimethoprim[4] to Mrs A on 22 Month2 at Hospital 2, despite her having a documented adverse drug reaction to

[4] Trimethoprim is an antibiotic used for urinary tract infections.

trimethoprim and co-trimoxazole.[5] Mrs A had an allergic reaction to a single dose of trimethoprim, and developed toxic epidermal necrolysis, which caused her death.[6]

Trimethoprim allergy

24. Mrs A's general practitioner (GP) advised the Coroner that Mrs A had been her patient for 16 years. The GP provided the following history of Mrs A's reactions to trimethoprim.

25. On 16 December 2004, Mrs A was seen by her GP's colleague and prescribed trimethoprim for a urinary tract infection (UTI). She had been treated with that antibiotic previously with no side effects.

26. Mrs A developed an itchy trunk, which persisted for several months after the antibiotics were finished. On 2 March 2005, she took two co-trimoxazole tablets and, within a few hours, developed an urticarial rash.[7] She was advised that she was allergic to co-trimoxazole and should not take that antibiotic or trimethoprim again.

27. On 5 April 2006, Mrs A was seen at the Hospital 1 emergency department for chest pain and a urinary tract infection, and was prescribed trimethoprim. After taking the first tablet, she developed a rash. The rash worsened and, on 9 April 2006, she was admitted to Hospital 1 with a blistering rash that progressed to a significant exfoliation of her skin. Mrs A was hospitalised for 17 days and experienced severe pain. She was seen by a dermatologist, who advised her that she had toxic epidermal necrolysis, and should avoid any form of trimethoprim in the future.

28. Mrs A's GP arranged for Mrs A to obtain a MedicAlert bracelet, which she wore from that time on. The warning on the bracelet stated: "Allergy Co-Trimoxazole & Trimethoprim Angina."

29. Mrs A's family stated that her recovery took several months, and thereafter she was "terrified about the risk of receiving another dose of Trimethoprim".

Admission to Hospital 2

30. Mrs A was admitted to Hospital 2 for postoperative rehabilitation care on 20 Month2. The transfer letter identifies her allergy to trimethoprim. The pre-admission documentation was completed on the patient history form and the daily nursing care form and was dated and signed by the admitting nurse.

31. On 20 Month2 at 2.30pm, the admitting house officer, Dr I, took a full medical history of Mrs A. Dr I stated that she read through the discharge summary provided by the Hospital 1 orthopaedic team, and would also have read through Mrs A's notes.

[5] Co-trimoxazole contains trimethoprim and sulfamethoxazole, and is an antibiotic used to treat infections.
[6] Mrs A's cause of death as determined by the Coroner.
[7] Urticaria, commonly referred to as hives, is a skin rash notable for pale red, raised, itchy bumps.

32. CDHB's Adverse Drug Reaction Identification & Documentation Policy (April 2012) (Adverse Drug Reaction Policy) requires clinical staff to review the patient management system, clinical notes, referral letters and discuss with the patient or patient's family any previous adverse reactions. If a patient has had a previous adverse reaction, the clinical staff must document in the clinical notes each substance, the previous reaction and date (where known). Orange adverse reaction stickers must also be completed and placed on the patient's medication chart and/or fluid prescription chart.

33. Dr I did not document that she specifically asked Mrs A about allergies, but she stated that it was her usual practice to verbally confirm drug allergies with patients when she admits them. Dr I documented that Mrs A had multiple drug allergies, and rewrote her drug chart. Dr I recorded in the progress notes: "NUMEROUS DRUG ALLERGIES → see chart" but did not record Mrs A's allergies in full. Dr I stated that she hand wrote orange adverse reaction labels/stickers and stuck one to each page of the drug chart. She recorded the following on the orange labels/stickers:

"
- Trimethoprim/Co-trimoxazole — toxic epidermal necrolysis
- Warfarin — gastrointestinal bleed
- Diltiazem — ? Rash
- NSAID[8]
- Cilazapril — itch
- Dipyrimadole — headaches
- Simvastatin — nausea/giddiness
- Amoxicillin — swelling of tongue."

34. On 20 Month2, Mrs A was also reviewed by registrar Dr E (the time is not recorded). Dr E recorded "medications & social Hx [history] as / Hs [house surgeon]". Dr E told the Police that she noted that Mrs A's clinical notes recorded that she had "numerous drug allergies", but the specific drugs and reactions were not documented. She said that she reviewed the drug chart, which included Mrs A's allergies (including her allergy to trimethoprim) and current medications. Dr E was also aware that Mrs A was experiencing symptoms of chest pain. Dr E said that she discussed Mrs A with Dr I, but had no verbal briefing about allergies.

Friday, 22 Month2

Prescription of trimethoprim — Dr E

35. Dr E stated that when she graduated from medical school she worked as a house officer for two years. She commenced work as a medical registrar with CDHB, and stated that she worked at Hospital 2 for eight months.

[8] Non-steroidal anti-inflammatory drugs.

36. On 22 Month2 at 10.20am, Dr E reviewed Mrs A and noted that she had experienced dysuria (difficulty in passing urine) overnight. Dr E noted that Mrs A "look[ed] well". The plan was to perform a mid-stream urine test that day, and Ural[9] sachets were prescribed. Dr E recorded that the weekend house surgeon should follow up on Mrs A's urine culture and sensitivities, and chart an antibiotic as needed. However, at 5pm Dr E noted the test results ("MSU > 1000 WBC-nitrite", which suggested a UTI), and that the plan was to start Mrs A on trimethoprim 1 x 300mg tablet to be given at night for five days.

37. Dr E stated that she advised the house officer, Dr J, that she was going to prescribe trimethoprim for Mrs A's UTI, and asked her to arrange for the weekend house officer to follow up on the culture and sensitivities of the urine test and change the antibiotic if necessary.

38. Dr E advised that her standard practice is to check the orange adverse reaction alert sticker for allergies prior to prescribing any medication. She stated: "I would not prescribe any medication that a patient had a known reaction to." However, Dr E acknowledged that, in this instance, she did not recheck the orange alert sticker.

39. Dr E stated that she did not discuss Mrs A's current medication or drug allergies with her at the time, as that information had been gathered and recorded in the drug chart by Dr I. Dr E stated:

> "I fully acknowledge that I made a grave error in failing to check the orange alert sticker before prescribing [Mrs A] Trimethoprim. I have had no past history of making medical errors and this was the first time that I have made a mistake when treating a patient."

40. Dr E considers that several factors made her vulnerable to omitting her standard check of the orange adverse reaction alert sticker. She stated that these included "chronic background issues" such as a large workload, high patient turnover, and having to provide additional support and supervision to new house officers. She stated that on 22 Month2, the ward was at full capacity with 23 patients.

41. Dr E told HDC:

> "[T]he ward was at times chaotic, confrontational interactions with the charge nurse were a daily occurrence for medical, nursing and clerical staff, and the additional stress caused by this coupled with a ward that was always near capacity, was a significant issue. While I understand that long hours and large patient loads are the environment in which medical practitioners must learn to work in safely, the difficult interpersonal interactions and effect that this had on staff is not part of the expected work environment. I did raise these concerns with senior staff. The physical set up of the ward was also a relevant factor as the office provided for the medical staff was directly off the reception area and had no door. Therefore,

[9] Ural is an effervescent drink that provides relief from the painful burning symptoms of urinary tract infection.

medical staff were constantly interrupted by nurses, allied health staff, patients and family members throughout the day."

42. Dr E also stated that she was fatigued and, at the time she was prescribing trimethoprim to Mrs A, she was focused on more than one task, as she was also double checking that Dr J had completed the handover for the weekend staff. She stated: "This, along with constant interruptions from other staff, while I was prescribing [Mrs A] medication, contributed to me not checking the orange drug alert sticker." Dr E noted that, in retrospect, on a background of fatigue at the end of the day, she needed to adopt an even higher level of vigilance and should not have been prescribing medication while confirming whether Dr J had completed her task or when she was interrupted by other staff. Dr E acknowledged that she made a "grievous error".

Administration of trimethoprim — RN F

43. RN F stated that she has worked as a registered nurse for over 20 years overseas and in New Zealand. She had been an employee of the CDHB for four years and had worked in the rehabilitation ward of Hospital 2 since that time.

44. RN F said that she first met Mrs A when she was allocated to nurse her on the afternoon of 21 Month2. RN F stated: "I recall that I read her full file that afternoon at around 4pm after I had introduced myself to her and my other patients." RN F recalls seeing that Mrs A had an adverse drug reaction sticker on her drug chart, and that the nursing transfer notes from Hospital 1 noted that Mrs A had allergies to warfarin and co-trimoxazole.

45. RN F advised that on 22 Month2 she was again on duty. There were four registered nurses and one enrolled nurse on duty. One of the registered nurses was a new graduate, and the enrolled nurse was a non-transitioned enrolled nurse who could not administer medications.

46. RN F stated that the ward was busier than usual that day because of the high number of very sick patients. She was allocated the care of five patients, and was also responsible for the supervision of the enrolled nurse, who had been allocated a further five patients. As a result, she was responsible for the enrolled nurse's patients' medications and the general well-being of her patients. RN F stated: "The ward was overwhelmed with very unwell patients so there was a lot of pressure."

47. RN F stated that at 9pm she did a medication round for the ten patients whose medication she was responsible for. She said she saw that Mrs A was charted trimethoprim 300mg tablets nightly orally for five days. RN F said: "Although I had noticed the adverse reaction sticker on Mrs A's chart I did not notice the adverse reaction to trimethoprim which is noted on the sticker." RN F stated that normally when a patient is charted a new medication she would check that there were no allergies recorded on the chart, but in her busyness she did not see the adverse reaction written on the adverse reaction sticker, and instead placed too much reliance on the fact that Mrs A would not be charted medications to which she was allergic.

RN F stated that she checked the medications twice — once in the drug room and once at Mrs A's bedside.

48. The Adverse Drug Reaction Policy requires clinical staff involved in the administration of medication to check with the patient (or family) that he or she has no known previous adverse reaction to the medicine prior to each administration. RN F stated that before administering the trimethoprim tablet to Mrs A she "explained to her that she was to commence on a new drug that night. [She] told Mrs A that it was an antibiotic for her urinary tract infection and [she] told her the name of the drug, trimethoprim." RN F said that Mrs A told her that she had had cystitis (a bladder infection) for some time and asked how long it would take to cure it, and RN F replied that she needed to take the medication for five days.

49. At 9pm, RN F administered the first dose of trimethoprim 300mg to Mrs A.

Mr L's account

50. Mrs A's son, Mr L, stated that there was no possibility that Mrs A would have agreed to take trimethoprim if she had been told about it, because her reaction to it in 2006 was sudden and severe, and she spent 17 days in hospital in severe pain and had been told that another dose would be likely to be fatal.

51. Mr L stated that his mother was very aware of what trimethoprim would do, and noted that when nurses had come to give her medication when she was in Hospital 1, Mrs A questioned the nurses straight away, saying: "This isn't trimethoprim is it? I am allergic to it." Mr L stated that it is therefore very hard to believe that his mother knowingly took trimethoprim.

23 Month2, morning shift

52. On 23 Month2, RN H was allocated the care of Mrs A. RN H stated that at handover there were no reports of any problems other than Mrs A's urinary tract infection. RN H told HDC that she checked Mrs A's observations and recorded that her temperature was high (38.5°C [10]) and that she was slightly tachycardic.[11] RN H said that Mrs A also reported feeling unwell, and had sweated during the night. RN H stated that she contacted the weekend registrar and asked him to see Mrs A.

53. At around 10am, Mrs A was reviewed by registrar Dr G. He stated that he familiarised himself with Mrs A's medical history and noted that trimethoprim was the last medication she had been given the previous evening. Dr G also noted that trimethoprim was written on the orange medication alert sticker on Mrs A's medication chart. Dr G told HDC:

> "I spoke to [Mrs A] who informed me that she was allergic to trimethoprim. The allergic reaction had occurred a long-time in the past and she could not remember what the exact reaction was. However, she remembered that her GP had informed

[10] Normal temperature is 36.5–37.5°C.
[11] Her heart rate was higher than normal.

her never to take Trimethoprim again as the allergic reaction could be life threatening."

54. In response to my provisional opinion, Dr G stated:

"My documentation of events is very poor, I have not written in the notes anything about Trimethoprim and the discussion with [Mrs A]. The memory of events on that day is now vague. This has been a valuable lesson for me for the future. My sincere apologies to the family of [Mrs A] that I was inadequate in my communication that day."

55. RN H stated: "As I recall the registrar initially told [Mr and Mrs A] about the problem with trimethoprim being administered the day before for the UTI when [Mrs A] was allergic to it. I think that I had some discussion after that trying to reassure them, telling them that the registrar was on the phone to the consultant working out the treatment options."

Reviews by registrar

56. Dr G recorded in the progress notes that Mrs A's temperature was 39°C and she was "alert" and "clammy".[12] He also recorded that he discussed Mrs A's condition with the [on-call infectious diseases consultant] and then noted: "In view of an Amoxicillin allergy — use Vancomycin.[13]" Trimethoprim was recorded as having been stopped on the drug chart, and "Allergy!" was written alongside it. An incident form was not completed by any staff member.

57. Dr G stated to the Police that he spoke to Mrs A about the administration of trimethoprim, and he advised the nursing staff to be on the lookout for signs suggesting an allergic reaction, including a rash and angioedema.[14] However, he did not record his verbal instructions or management plan in the progress notes. Dr G returned at 4pm to review Mrs A further.

Further assessments — morning shift

58. RN H recorded in the progress notes:

"Registrar on duty charted Vancomycim 1gm to start, had stopped Trimethoprim as [patient] allergic to it […] nil adverse reaction noted. [Patient's] husband visited and was informed by staff about [patient's] condition, had stayed for a few hours and left at lunchtime."

59. RN H stated that Mrs A's husband arrived while Mrs A was having breakfast. RN H said: "Breakfasts are delivered around 8am. As far as I know once [Mr A] arrived he stayed with his wife for the next few hours, and so they both received the same information."

[12] "Clammy" is used to describe the skin when it is damp or sticky to touch.
[13] An antibiotic used for the treatment of a number of bacterial infections.
[14] Angioedema is swelling that occurs just below the surface of the skin.

60. In response to my provisional opinion, Mr A said that he was not told by anyone about the trimethoprim administration on 23 Month2. Mr A told HDC that he arrived "at about 11am". He said that there was a female nurse with his wife and the nurse was checking his wife for redness and flushing but did not say why she was checking. He said: "I noticed some redness across [Mrs A's] skin but didn't think much of it. It never occurred to me that [Mrs A] could be having an allergic reaction because no-one told me what she'd been given." Mr A said that his wife did not say anything to him about "the nurse's checks and didn't seem worried about the redness".

61. Mr A stated that he has "no doubt whatsoever" that his wife would have told him if she knew she had been given trimethoprim. He said: "She would have been absolutely terrified of what was coming. The fact that she said nothing to me at all about it that day tells me that she didn't know."

62. Mrs A's family told HDC that had they been aware that trimethoprim had been administered, "they would have been vigilant in checking for signs and alerting staff at the earliest opportunity". They also said that they would have stayed with Mrs A to support her emotionally.

63. RN H told HDC that Mrs A had been feeling itchy at the time she was admitted, and had been charted hydrocortisone cream. RN H stated that in the afternoon, Mrs A told her that she was feeling "itchy on her back, inguinal, arms and thigh. She was concerned about it, so I checked the areas and noted some redness but I did not notice any rash or elevation even when I tou[c]hed the skin. As far as I can remember, I informed [Mrs A] that the itchiness could be a reaction to the trimethoprim medication."

64. RN H said that Mr A left about lunchtime, and that she sighted Mrs A's daughter at the end of her shift at 3pm but did not speak to her.

23 Month2, afternoon shift

65. RN F stated that she was again on afternoon shift on 23 Month2 and recorded that Mrs A appeared to be "tired and anxious ++". The reason why Mrs A was anxious is not noted. RN F said that at handover, she was informed that Mrs A was allergic to trimethoprim and that the registrar had ceased this medication and commenced her on vancomycin instead. RN F stated: "I read in her notes that [Mrs A's] husband had been informed of her condition […] I assumed whilst caring for [Mrs A] that shift, that she and her family were already aware that trimethoprim had been administered."

66. RN F told HDC that she would have introduced herself to patients between 3pm and 3.15pm. She said that Mrs A's daughter was present at that time and does not recall anything of particular concern being said to her. RN F said that she returned at 3.30pm to take Mrs A's observations. RN F stated: "I recall that her daughter was still present at this time but do not recall any particular conversation with either [Mrs A] or her daughter except that I would have explained to [Mrs A] that I was completing her recordings."

67. RN F recorded in Mrs A's progress notes: "Husband present most of the afternoon." In contrast, Mrs A's daughter, Ms C, stated that she was with her mother on 23 Month2 from approximately 1.30pm until 4.00pm, after which her father arrived.

68. Ms C said that her mother was complaining of feeling hot and itchy. Ms C stated that she and Mrs A both asked RN F why Mrs A had those symptoms. Ms C said she commented to RN F: "It's like she's had an allergic reaction to something?" Ms C stated that RN F did not respond to their questions and carried on her checks in silence.

69. Ms C said that she spoke with RN F at around 4pm, when she (RN F) was assisting her mother with toileting. Ms C said she heard her mother say to RN F, "Why am I so itchy?" and that RN F "brushed [the question] off and basically ignored the question and asked mum if she had finished".

70. Ms C told HDC that she recalls seeing "[RN F's first name]" printed on RN F's name badge, and that is how she identified that she spoke with RN F. Ms C said that this was the only conversation that she had with RN F.

71. RN F stated that she recalls assisting Mrs A with toileting at around 4pm. RN F stated: "I recall having conversation with [Mrs A] and her daughter at this time, although this was in relation to toileting only." Further, RN F said:

> "During these interactions I do not recall either [Ms C] or [Mrs A] stating that [Mrs A] was feeling hot and itchy. I also do not recall any comment being made 'it's like she had an allergic reaction to something?' I do not recall [Mrs A] at this time asking why she was so itchy. I note that had any concern been raised with me at this time, I would have responded […] and would not deliberately ignore someone."

72. Ms C noted that if Mrs A had been aware that she had been given trimethoprim the night before she would have known exactly what was causing the reaction on the Saturday afternoon, and would have been highly distressed. Mr A stated that he visited Mrs A after 4pm, and at that stage neither he nor his wife were aware of the administration of trimethoprim.

73. RN F told HDC that throughout her stay, Mrs A had been itchy. RN F said that at 5pm Mrs A complained of being itchy, and she applied hydrocortisone cream. RN F said that the itchiness did not raise any particular alarm, as Mrs A had complained of it previously, and it wasn't until later on in the shift when she identified redness between Mrs A's thighs that she became concerned. RN F recorded in the progress notes: "Itchy body and very reddened between thighs. Monitor." She told HDC that she handed over this information to the next shift.

24 Month2

74. At approximately 1.30am, the night nurse noted that when she assisted Mrs A to the toilet there was a peeling on her left inner thigh like a burn, and that both of her legs

had developed blisters. The night nurse telephoned the on-call registrar and the nursing supervisor.

75. At 1.55am Mrs A's blood pressure was normal at 123/82mmHg,[15] and it was noted that she was for urgent transfer to Hospital 1. At 2am the on-call registrar, Dr K, reviewed Mrs A regarding a new rash and blistering. At that stage Mrs A was in pain. Dr K ordered intravenous hydrocortisone 200mg, and intravenous normal saline fluids were increased. Dr K discussed Mrs A's condition with a consultant. Mrs A was readmitted to Hospital 1 with widespread truncal toxic epidermal necrolysis.

76. Mr A stated that he was telephoned at 2.09 am on 24 Month2 and told by staff at Hospital 2 that they were sorry, that Mrs A had been given trimethoprim, and that she was being moved to the public hospital by ambulance. The telephone call is not recorded in Mrs A's clinical notes. Mr A stated that he is sure that nobody at Hospital 2 told Mrs A of the medication error, and that he told her about it when he went to see her at 2.40am at Hospital 1.

Hospital 1

77. On 25 Month2, Mrs A underwent urgent surgery to remove damaged skin and dress her extensive lesions. She was transferred to the intensive care unit (ICU) and placed on a ventilator. Mrs A's family told HDC that for the next three days she was conscious and in severe pain despite treatment with morphine.

78. On 28 Month2, Mrs A was taken to the operating theatre for further skin treatment and dressings. Following the operation, it was decided to provide palliative care only.

79. Sadly, Mrs A died a short time later. Her cause of death was toxic epidermal necrolysis.[16]

MedicAlert bracelet

80. In response to my provisional opinion, CDHB advised that when a patient presents wearing a MedicAlert bracelet "the clinicians and nurses caring for the patient must review the bracelet, discuss with him or her what the MedicAlert bracelet alerts to, and record this important clinical information accurately in the patient's notes".

81. During her admission at Hospital 2, it was not documented that Mrs A was wearing a MedicAlert bracelet. Mrs A's husband, Mr A, her son, Mr L, and daughters Ms C and Ms D stated that they took it in turns to be with Mrs A for the duration of visiting hours throughout her admissions from 29 Month1. All four family members confirmed that Mrs A was wearing her MedicAlert bracelet throughout her admission to Hospital 2.

[15] Normal blood pressure is 120/80mmHg.
[16] Mrs A's cause of death as determined by the Coroner.

82. Despite that, RN F stated:

> "[T]o the best of my recollection [Mrs A] was not wearing a Medic Alert bracelet. If I had seen her wearing one I would have asked her about it and why she wore it. She did have a hospital bracelet which recorded her name and date of birth as well as the name of the consultant whose care she was under and the name of her General Practitioner in full."

83. I also note that prior to Mrs A's surgery on 25 Month2, her MedicAlert bracelet was not recorded as being taped down or removed (her rings were recorded as being taped down). However, Mr A and Mr L stated that they were both present when Mrs A's MedicAlert bracelet was removed because her wrist had swollen on the afternoon of 26 Month2, while Mrs A was in ICU. Mr L recalls that the ICU nurse struggled with the clasp and then removed the bracelet and gave it to Mr A. Mr A told HDC that he helped the nurse take off the MedicAlert bracelet. Mr L also recalls the ICU nurse telling him that MedicAlert bracelets are not normally removed, even in surgery, as they are simply taped down. There is no documentation that records that Mrs A's MedicAlert bracelet was removed.

84. Mrs A's family recall that the MedicAlert bracelet and the hospital admission bracelet were on the same arm, and that the nurses at Hospital 2 and in the Hospital 1 ICU had to keep moving the MedicAlert bracelet to one side when they checked Mrs A's name and date of birth, as it was covering the hospital bracelet.

Open disclosure

85. The CDHB Open Disclosure Policy (27 March 2007) provides:

> "**Acknowledgment**
> All events where a patient/consumer is harmed as a result of a mistake or error must be acknowledged to the patient/consumer and their support person as soon as possible after the event is identified.
>
> **Openness, timeliness and clarity of communication**
> Information about an event that causes harm must be given to the patient/consumer and/or support person in a timely, open and honest manner."

Subsequent events

86. Mr A stated that during the time Mrs A was in ICU he received a telephone call from the Chief Medical Officer for Hospital 2, who confirmed that trimethoprim had been administered to Mrs A in error. He apologised on behalf of the hospital and advised that he would conduct an urgent internal inquiry.

Root Cause Analysis

87. The Root Cause Analysis (RCA) noted that RN F was responsible for the administration of medications for the enrolled nurse's patients as well as her own. The report stated: "The event occurred on a Friday evening at the end of a busy week on a

busy day on a busy ward. Both [Dr E] and [RN F] were making a large number of clinical decisions carrying out multiple clinical tasks in short time-frames."

88. The report stated: "Peaks of workload are known to have greater risk of error due to 'slips' and 'lapses'." The report stated that the staff interviewed had concerns over the skill mix on the afternoon shift, owing to the acuity and complexity of patients, but this was not communicated to the site supervising staff.

89. The RCA, completed on 16 May 2014, noted: "Medic Alert bracelets are not routinely checked as part of the CDHB ADR [Adverse Drug Reaction] policy. The 'definite' adverse drug reaction record used is the 'Adverse Reaction(s) sticker'."

90. The RCA noted that the staff interviewed expressed concern about the work environment on the ward, and that those concerns had been raised with management in the past. The report stated: "Staff felt unable to communicate freely about issues that they believe require attention and leadership regarding day to day operations on the ward."

91. The RCA made a number of recommendations, including:

- To strengthen and review the CDHB systems and processes for diagnosing and documenting of adverse drug reactions with a view to providing accurate information on "past" adverse drug reactions at the point of care.

- That CDHB review the prescribing process and prescribing environment with a view to reducing factors known to be associated with errors, eg, frequent interruptions during a critical safety task.

- To issue a formal reminder to staff of the importance of ensuring that allergy information is appropriately sought and documented correctly and accurately on admission, and that documented information that the patient has with them on admission should be recognised, reviewed and incorporated in the clinical notes.

92. The RCA also recommended that the workloads across the medical wards at Hospital 2 be reviewed, and measures taken to identify and manage workloads likely to result in increased clinical risk. It was further recommended that a formal review of the ward's clinical governance and measures to address the current working environment be undertaken.

Responses to the provisional opinion

93. Responses to my provisional opinion were received from Ms B on behalf of Mrs A's family, CDHB, Dr E, RN F, and RN H. Where appropriate, the responses have been incorporated into the "information gathered" section above or in the section that follows.

94. In response to my provisional opinion, Dr E stated:

> "I accept the findings, recommendations and preliminary conclusions that have been made by the HDC and the opinion of Dr Spriggs, HDC independent expert advisor.
>
> It has been difficult for me to understand how I could have lapsed from my normal practice, and to not carry out my usual checking procedures. I have thought carefully about the steps that I need to take to ensure that such an error does not happen again. As part of my own reflection on this error I am initiating an audit of my prescribing practice which will be supervised by a senior clinician at Canterbury District Health Board.
>
> Prior to this event I had no history of prescribing errors and deeply regret that the first prescribing error that I made as a junior doctor resulted in a tragic outcome. This event has had a devastating effect on me and one that will follow me for the rest of my career. I made a mistake and the catastrophic consequences of that mistake remain at the forefront of my mind.
>
> I accept the recommendations made by the HDC that the MCNZ consider whether a review of my competence is warranted."

95. In response to my provisional opinion, RN F's legal advisor stated: "[RN F] has accepted that she failed to provide services with reasonable care and skill. She makes this acknowledgement maintaining the belief that [Mrs A] was not wearing a medic alert bracelet and therefore its presence or absence does not contribute to the breach finding."

96. In response to my provisional opinion, CDHB stated:

> "We continue to empathise with [Mr A] and his family for the loss of [Mrs A]. We deeply regret that a medication error occurred while [Mrs A] was in our care that that the error had such devastating consequences."

97. CDHB also noted that its RCA report had identified a high workload, high patient turnover and the particularly high needs of the patients on the ward at the time as key factors impacting on how Dr E and RN F cared for Mrs A, and that this was reflected in my provisional opinion. However, following my provisional opinion, CDHB undertook "a more thorough review of the workload, patient turnover and clinical acuities in this case". CDHB found that in the week of these events the pattern of admissions and discharges to and from the ward were typical for a rehabilitation ward at Hospital 2, and that there appeared to be a reasonably typical mix of clinical conditions. There was also a full complement of regular staff on the ward on 22 Month2. However, CDHB also advised that it recognised that patient flow data, summaries of clinical conditions and job descriptions give only limited insight into what it was like for patients and staff on a ward at any time.

98. In response to my provisional opinion, RN H stated:

"As a registered nurse, I am deeply saddened and sorry for [Mrs A] and her family. I believe that in the healthcare setting, we nurses always give almost all our time and attention in providing the best practice and care possible for our patients. From this incident, I have personally reflected on my practice.

As a nurse, it is a basic responsibility to acknowledge the rights of our patients, the right for communication, informed consent, no harm, etc. We also need to be vigilant and sensitive of their needs and complaints so that timely interventions can be given to avoid worsening of situation and most importantly, save life. Patients should be timely explained of our assessments, interventions, and essential things that they have the right to know about their health and condition.

In addition, since we are caring for the older persons, it is essential to work in partnership and communicate with the family members as well so we can gain helpful information on how we can care more for our patients.

I also realised that accurate, and timely intervention and documentation is a must in the healthcare setting. We should at all times, provide accurate information as we document on the patient's notes. Allergies and cautions about our patients should be properly handed over and documented."

Opinion: Dr E

Introduction

99. Dr E was a relatively inexperienced registrar. Dr E had worked at Hospital 2 for about eight months before this incident.

100. Under Right 4(1) of the Code, Mrs A had the right to have services provided with reasonable care and skill. In Mrs A's case there were warnings on her drug chart and on her MedicAlert bracelet that she was allergic to trimethoprim. Mrs A was aware of, and able to express, the risk the drug posed to her. Nonetheless, she was prescribed trimethoprim.

101. I note that from the outset, Dr E has accepted responsibility for her failings. In response to my provisional opinion, she has advised that she accepts my findings.

Prescribing error — Breach

102. On 20 Month2, Mrs A was transferred from Hospital 1 to the rehabilitation unit at Hospital 2. The transfer letter identifies her allergy to trimethoprim. The admission note states: "Numerous drug allergies", with an arrow pointing to "see chart". Orange adverse reaction labels/stickers were attached to each page of the drug chart, which state:

"
- Trimethoprim/Co-trimoxazole — toxic epidermal necrolysis
- Warfarin — gastrointestinal bleed
- Diltiazem — ? Rash

- NSAID[17]
- Cilazapril — itch
- Dipyrimadole — headaches
- Simvastatin — nausea/giddiness
- Amoxicillin — swelling of tongue"

103. I accept the account provided by Mrs A's family members that she was wearing a MedicAlert bracelet throughout the admission at Hospital 2, and that the bracelet stated: "Allergy Co-Trimoxazole & Trimethoprim Angina." However, there is no evidence that Dr E was aware of the MedicAlert bracelet.

104. On 20 Month2, Dr E read Mrs A's clinical notes and noted that they stated that she had "numerous drug allergies", but the specific drugs and reactions were not documented. Dr E said that she reviewed the drug chart, which included Mrs A's current medications and her allergies, including her allergy to trimethoprim.

105. On 22 Month2, Dr E reviewed Mrs A and noted that she had experienced dysuria (difficulty in passing urine) overnight. Dr E stated that Mrs A's preliminary urine results were consistent with a UTI, so she decided to start her on antibiotics and prescribed trimethoprim 1 x 300mg tablet to be given at night for five days.

106. Dr E stated that her standard practice is to check the orange alert sticker for allergies prior to prescribing any medication. However, Dr E acknowledged that, in this instance, she did not do so. Nor did Dr E discuss Mrs A's current medication or drug allergies with her or tell her the drug she intended to prescribe. I have previously noted the importance of doctors reviewing the risk factors and discussing medication with patients.[18] Furthermore, the Medical Council of New Zealand Standards require a doctor to take account of the patient's history, read his or her notes, and have a face-to-face consultation with the patient before prescribing any medication.

107. I accept that Dr E was relatively inexperienced, and note that she has pointed to a number of systemic factors in the ward, in particular the large workload, high patient turnover, and the requirement to support and supervise junior staff, which she says made her vulnerable to omitting her standard check of the orange alert sticker. In my view, despite any such factors that may have contributed to the likelihood of an error, Dr E had a responsibility to provide services with reasonable care and skill to Mrs A. To her credit, she has accepted that she did not do so.

108. My independent expert advisor, general physician and geriatrician Dr David Spriggs, advised me that it is usual practice to check allergies before prescribing antibiotics. This can be done by review of the notes or by asking the patient. Dr Spriggs opined that even if Dr E had been busy and the ward environment not conducive to attentive

[17] Non-steroidal anti-inflammatory drugs.
[18] 10HDC00753 (15 June 2012), 12HDC01062 (30 May 2014), 12HDC00785 (28 March 2014), available at www.hdc.org.nz.

medical care, as she says, Mrs A was taking a large number of drugs and had a number of allergies, and "the prescription of trimethoprim to [Mrs A] by [Dr E] was a severe departure from usual standards".

109. Mrs A had previously had a very serious reaction to trimethoprim resulting in 17 days of hospitalisation and, accordingly, was very aware of the risk of receiving another dose of trimethoprim. Her son, Mr L, stated that while Mrs A was in Hospital 1 she questioned the nurses who were about to administer medication about whether the medication was trimethoprim, and advised that she was allergic to it. Patients need to be provided with relevant information to enable them to be a partner in their own treatment. In my view, before prescribing trimethoprim, Dr E should have discussed the proposed treatment with Mrs A.

110. In my view, Dr E missed several opportunities to remind herself of Mrs A's allergy status, including reading the notes, reviewing the drug chart, noting the MedicAlert bracelet, and asking Mrs A whether she had any allergies. I acknowledge that the ward was busy; however, it was Dr E's responsibility to take the necessary steps to ensure that she prescribed medication to Mrs A that was appropriate for her. By failing to do so, Dr E did not provide services to Mrs A with reasonable care and skill and, accordingly, breached Right 4(1) of the Code.

Opinion: RN F

Introduction

111. RN F is an experienced registered nurse who has worked for over 20 years overseas and in New Zealand. She had worked in the rehabilitation ward of Hospital 2 for four years.

MedicAlert bracelet

112. RN F first met Mrs A on the afternoon of 21 Month2. RN F stated that she read Mrs A's full file and recalls seeing that there were adverse reaction stickers on her medication chart, and that the nursing transfer notes from Hospital 1 noted that Mrs A had allergies to warfarin and co-trimoxazole.

113. RN F stated that to the best of her recollection, Mrs A was not wearing a MedicAlert bracelet and, if she had seen the bracelet, she would have asked her about it and why she wore it. However, Mrs A's family recall that she was wearing the MedicAlert bracelet on the same wrist as her hospital bracelet during her admission. Mr L recalls that in the afternoon on 26 Month2, Mrs A's MedicAlert bracelet had to be removed because her wrist was swollen. He recalls that the ICU nurse struggled with the clasp and then removed the bracelet and gave it to Mr A. In my view, I find it more likely than not that Mrs A was wearing a MedicAlert bracelet on the same wrist as her hospital bracelet during her admission.

Medication administration error — Breach

114. On 22 Month2, RN F was again on duty. She stated that at 9pm she did a medication round for the 10 patients for whom she was responsible. She said she noted that Mrs A was charted one trimethoprim 300mg tablet nightly for five days. RN F said that normally when a patient is charted a new medication she would check on the drug chart that there were no allergies, but in this case although she saw the adverse reaction sticker she did not notice the adverse reaction written on the sticker, and instead placed too much reliance on the fact that Mrs A would not be charted medication to which she was allergic.

115. RN F said that she checked Mrs A's medications twice, once in the drug room and once at her bedside and that, before administering the trimethoprim tablet to Mrs A, she told her the name of the drug. However, I accept the evidence of Mrs A's family that Mrs A would not have agreed to take trimethoprim had she been aware of the name of the drug she was being administered.

116. My expert nursing advisor, Dawn Carey, advised that safe medication administration is a core competency that all nurses are deemed to have achieved upon registration. She stated:

> "As such and regardless of the patient outcome, a medication error such as this one is a departure from the expected standards of nursing care […] While I acknowledge that clinical workload contributed to this error occurring I do not consider it to mitigate the severity of the departure."

117. In my view, RN F's failures were individual clinical failures. However, as discussed below, there were systemic factors, in particular the working environment, at CDHB that directly contributed to those failures.

118. In my view, RN F, an experienced nurse, had a number of opportunities to identify the medication error by reading the clinical records and drug chart, noting the MedicAlert bracelet, and talking with Mrs A. She failed to do so, and I accept RN Carey's advice that this was a severe departure from accepted standards in relation to safe medication administration. I am also concerned that RN F failed to think critically and, instead, placed too much reliance on the fact that Mrs A would not be charted medication to which she was allergic. In my view, RN F failed to provide services with reasonable care and skill and, accordingly, breached Right 4(1) of the Code.

Communication

119. RN F was on duty on the afternoon shift of 23 Month2. From approximately 1.30pm–4pm Ms C was with her mother. Ms C told HDC that both she and Mrs A asked RN F why Mrs A had symptoms of being hot and itchy, and that Ms C commented that it appeared that her mother had had an allergic reaction. Ms C also said that Mrs A asked, "Why am I so itchy?" and that RN F basically ignored the question.

120. RN F stated that she recalls having a conversation with Mrs A and her daughter, but that it was in relation to toileting only. Further, RN F said:

> "During these interactions I do not recall either [Ms C] or [Mrs A] stating that [Mrs A] was feeling hot and itchy. I also do not recall any comment being made 'it's like she had an allergic reaction to something?'. I do not recall [Mrs A] at this time asking why she was so itchy. I note that had any concern been raised with me at this time, I would have responded […] and would not deliberately ignore someone."

121. Mrs A had complained of being itchy since her admission to Hospital 2 on 20 Month2. She was prescribed hydrocortisone cream, which the nursing staff had been applying as required. RN H told HDC that Mrs A had complained of being itchy in the afternoon (before 3pm) on 23 Month2.

122. Due to the conflicting accounts, I am unable to make a finding as to exactly what was said to Mrs A and what she asked RN F. However, I consider it more likely than not that there was some discussion between RN F and Mrs A about how she (Mrs A) was feeling, and clearly some miscommunication. RN F should reflect on the way she communicates with patients and their families.

Opinion: Canterbury District Health Board

Introduction

123. A hospital should have effective systems in place, and ensure that its staff are aware of the systems and adequately trained and supported to comply with them. In this case, CDHB failed to ensure that services were safe for patients and clinicians.

Systems and culture — Breach

124. Mrs A was admitted to Hospital 2 on 20 Month2. During her admission two staff made serious medication errors. On 22 Month2, Dr E prescribed trimethoprim despite the record in the notes and the orange adverse drug reaction alert stickers that she had previously seen on the drug chart. The second error occurred when RN F administered trimethoprim despite having previously seen that Mrs A had adverse reaction stickers on her drug chart, and without checking whether she had allergies.

125. RN F stated that the ward was busier than usual because of the high number of very sick patients, and noted that she was responsible for supervising the enrolled nurse. CDHB also noted that its RCA report had identified a high workload, high patient turnover and the particularly high needs of the patients on the ward at the time as key factors impacting on how Dr E and RN F cared for Mrs A.

126. However, CDHB said in its response to my provisional opinion that it has since undertaken a more thorough review of the workload, patient turnover, and clinical acuities in this case. The review found that in the week of these events the pattern of admissions and discharges to and from the ward were typical for a rehabilitation ward at Hospital 2, and that there appeared to be a reasonably typical mix of clinical conditions. There was also a full complement of regular staff on the ward on 22

Month2. However, CDHB also advised that it recognised that patient flow data, summaries of clinical conditions and job descriptions give only limited insight into what it was like for patients and staff on a ward at any time.

127. Dr E has admitted her responsibility for the error, but noted the factors that made her vulnerable to making such a mistake. She pointed out issues such as the large workload, high patient turnover, and the requirement to support and supervise house officers. Dr E stated that the ward was at times chaotic, and that confrontational interactions with the charge nurse were a daily occurrence. She stated that she raised her concerns with senior staff.

128. In addition, Dr E stated that the physical set-up of the ward was a factor, as the office provided for the medical staff was directly off the reception area and had no door. As a result, the medical staff were constantly interrupted by the nurses, allied health staff, patients and family members. Dr E stated that at the time she was prescribing trimethoprim to Mrs A she was also double checking that the house officer had completed the handover for the weekend staff.

129. The staff and the systems existing at CDHB let Mrs A down, as is discussed below. Although I consider that the failures of Dr E and RN F were individual clinical failures, I consider that there are systemic failures that directly contributed to those failures.

130. This is not the first time that I have raised concerns about the systems and culture in the ward.[19] I am particularly concerned that staff indicated during the RCA following this event that there was a culture in the ward in which concerns raised were not acted upon, and staff felt unable to communicate freely about issues regarding the day-to-day operations on the ward. Dr E said:

> "While I understand that long hours and large patient loads are the environment in which medical practitioners must learn to work in safely, the difficult interpersonal interactions and effect that this had on staff is not part of the expected work environment."

131. CDHB noted in its RCA that the staff interviewed had concerns over the skill mix on the afternoon shift owing to the acuity and complexity of patients, but this was not communicated to the supervising staff. The RCA noted that the staff expressed concern about the work environment on the ward, and that those concerns had been raised with the management in the past. The report stated: "Staff felt unable to communicate freely about issues that they believe require attention and leadership regarding day to day operations on the ward."

132. Dr Spriggs advised me that there were several systemic issues in the ward in that the work load was high, there were concerns about staffing levels and skill mix, and the environment was confrontational. He stated:

[19] Opinion 11HDC01101 (19 May 2014), available at www.hdc.org.nz.

> "It is in such an environment that major errors occur and I note that from the Root Cause Analysis, the responsibility for reviewing this is with the Director of Nursing. I would hope that this is not considered to be purely a nursing issue but is a larger governance issue including medical staff, allied health and clerical staff."

133. Dr Spriggs noted: "The contribution of the work environment must not be underestimated as these errors are not made by bad doctors and nurses but by systems that fail to support the prescribers and dispensers." Dr Spriggs also noted the need to have an established process for liaison with patients and families when severe adverse events occur. He considered that the quality of care provided by CDHB to Mrs A with regard to the administration of trimethoprim was poor, and that this was a severe departure from usual standards.

134. Overall, I consider that the services CDHB provided to Mrs A were seriously below standard. In my opinion, CDHB failed to provide services to Mrs A with reasonable care and skill and, accordingly, breached Right 4(1) of the Code.

Open disclosure — Adverse comment

135. Under Right 6 of the Code, every consumer has the right to the information that a reasonable consumer, in that consumer's circumstances, would expect to receive. This includes the right to be informed about any adverse event. My Office has published "Guidance on Open Disclosure Policies",[20] which states that a disclosure should include acknowledgement of the incident, an explanation of what happened, how it happened, why it happened and, where appropriate, what actions have been taken to prevent it happening again. In addition, the CDHB open disclosure policy requires that information about an event that causes harm must be given to the patient/consumer and/or support person in a timely, open and honest manner.

136. The guidance states that disclosure should be made in a timely manner, usually within 24 hours of the event occurring, or of the harm or error being recognised. Accordingly, CDHB had a duty to inform Mrs A and Mr A (with Mrs A's consent) promptly about the medication administration error.

137. Dr G discovered the medication administration error on the morning of 23 Month2. He told the Police and HDC that he spoke to Mrs A about the administration of trimethoprim. Dr G did not record in Mrs A's progress notes that he informed her of the error.

138. RN H recorded in the progress notes that Mrs A's husband visited and was informed by staff about Mrs A's condition. RN H stated: "As I recall the registrar initially told [Mr and Mrs A] about the problem with trimethoprim being administered the day before for the UTI when Mrs A was allergic to it. I think that I had some discussion after that trying to reassure them, telling them that the registrar was on the phone to the consultant working out the treatment options."

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20 http://www.hdc.org.nz/media/18328/guidance%20on%20open%20disclosure%20policies%20dec%2009.pdf

139. In contrast, Ms C told HDC that if Mrs A had been aware that she had been given trimethoprim she would have known exactly what was causing the reaction on the Saturday afternoon (23 Month2), and would have been highly distressed. I note that RN F recorded that afternoon that Mrs A was "Tired and anxious ++".

140. Mr A stated that on 23 Month2 he visited Mrs A at 11am for about one hour and again from 4pm. He said at that stage, neither he nor his wife were aware of the administration of trimethoprim. He stated that he was told at 2.09am the following morning when he was telephoned by staff at Hospital 2.

141. I acknowledge that there are conflicting accounts about whether or not Mrs A and/or Mr A were informed of the medication administration error. Although RN H contemporaneously recorded in the progress notes that Mrs A's husband had been informed by staff of Mrs A's condition, she did not record what Mr A was told by the staff or who told him. I am not critical of RN H's documentation, but wish to highlight the lack of definitive evidence I have to confirm that Mr A was informed by a staff member that trimethoprim had been given to Mrs A. RN H's recall of the events also lacks certainty.

142. I have considered whether or not I can make a finding as to whether Mrs A was informed about the medication administration error. Dr G said that he told Mrs A about the administration of trimethoprim. I note that Mrs A's family state that had Mrs A known she had been given trimethoprim, she would have told them and would have been highly distressed. Mrs A was noted as being "anxious ++" during the afternoon shift on 23 Month2, but the reason for her being anxious is not noted. Sadly, as Mrs A died, I am unable to determine exactly what was said to her after the error was identified, and what she understood from that information.

Documentation — Adverse comment

143. On 23 Month2, Dr G reviewed Mrs A at 10am and identified that she had been administered trimethoprim, to which she had a known allergy. In relation to the trimethoprim, he discussed Mrs A's condition with the on-call infectious diseases consultant and then noted: "In view of an Amoxicillin allergy — use Vancomycin." Trimethoprim was recorded as having been stopped on the drug chart, and "Allergy!" was written alongside it. An incident form was not completed by Dr G or the nursing staff.

144. Dr G stated to the Police that he advised the nursing staff to be on the lookout for signs suggesting an allergic reaction, including a rash and angioedema. However, he did not record his instructions or management plan in the progress notes. In response to my provisional opinion, Dr G acknowledged that his documentation of the events is very poor.

145. As I have stated previously, it is essential that teams consistently communicate well with one another to ensure that a safe and seamless service is provided to the patient. It is also essential that clear communication is accompanied by accurate

documentation.[21] In my view, although Dr G may have taken appropriate action, he should have recorded his verbal instructions to the nursing staff in Mrs A's progress notes, to ensure that all subsequent staff received the same information. However, it does appear that RN H and RN F were aware of the incident and the symptoms to watch for.

146. I am also critical that none of the staff completed an incident report form once the administration of trimethoprim had been identified.

Recommendations

147. In my provisional opinion, I proposed the following recommendations in relation to CDHB:

a) Report on its involvement to date in the Health Quality & Safety Commission's National Medication Safety Programme.

b) Develop a policy requiring the routine checking of MedicAlert bracelets.

c) Report back on the recommendations outlined in the RCA, in particular its review of the workloads at Hospital 2 and the measures it has instituted to identify and manage clinical risk and its review of the working environment and clinical governance of the ward.

d) Develop a process by which all staff are empowered to raise concerns about issues relating to patient safety, and the concerns are responded to and acted upon.

e) Develop process to ensure that clinicians prescribing and administering medication are not interrupted or otherwise exposed to factors associated with increased errors.

f) Review its RCA process in light of my expert's comments.

g) Review its policies and training on open disclosure.

148. In response to my provisional opinion, CDHB advised in relation to recommendation a):

- It is an active participant in the Health Quality & Safety Commission's National Medication Safety Programme. It stated that it is a longstanding member of the Medicines Safety Expert Advisory Committee of the Health Quality & Safety Commission. CDHB also stated that this is a small component of its medication safety programme.
- It has an active medication safety committee, integrated into medicines governance as a subcommittee of the Medicines Advisory Committee. CDHB

[21] Hill, A., "Consumer-centered Care — Seamless Service Needed". *NZ Doctor*, 24 August 2011 (available from www.hdc.org.nz).

stated that it is the only DHB in the country with a Department of Clinical Pharmacology with physicians specialised in safe and effective use of medicines active in DHB activities.

- It employs a medicines reconciliation process. CDHB advised that currently this is paper-based, but that there is work in progress evaluating the use of software as an alternative.

149. In response to my provisional opinion, CDHB advised in relation to recommendation b):

- There is, at present, no policy that specifically covers MedicAlert bracelets, but it is a "standard source of clinical information". CDHB advised that it will take up this matter.

150. In response to my provisional opinion, CDHB advised in relation to recommendation c):

- CDHB provided HDC with a progress report dated 19 January 2015 on the implementation of the RCA recommendations.
- It undertook "a more thorough review of the workload, patient turnover and clinical acuities in this case". CDHB found that in the week of these events the pattern of admissions and discharges to and from the ward was typical for a rehabilitation ward, and there appeared to be a reasonably typical mix of clinical conditions. There was also a full complement of regular staff on the ward on 22 Month2.
- CDHB advised: "We regret that staff felt unable to communicate freely about issues regarding day-to-day operations on the ward which they believed required attention and leadership. We appreciate that because of the personal nature of the concerns about the culture on the ward, which largely focused on the Charge Nurse Manager (CNM) at the time, it would not have been easy to speak up."
- It is not aware that any member of staff on the ward raised concerns with management about general workload or issues of clinical risk, with the exception of Dr E, who was provided with extra support by the allocation of a second house surgeon from 11 to 22 Month2.
- In August 2014, Older Person's Health Specialist Services leaders initiated a series of small group meetings independently facilitated by Workplace Support to give all the ward staff an opportunity to discuss their current work environment. CDHB provided HDC with a copy of the summary report from Workplace Support.

151. In response to my provisional opinion, CDHB advised in relation to recommendation d):

- Staff are given the opportunity to share any concerns at the daily ward rounds and weekly interdisciplinary meetings. All wards have regular staff meetings, which

are documented, and the documentation is accessible to staff who are unable to attend.

- "Status at a glance" boards are now being utilised to increase visibility about the patient's mobility plan and expected date of discharge.
- As part of the Releasing Time to Care programme (see paragraph 152 below), CDHB displays "Knowing how we are doing" boards, which show audit results and make the incidence of errors visible.
- Staff are provided with access to Workplace Support personnel.

152. In response to my provisional opinion, CDHB advised in relation to recommendation e):

- It has introduced MedChart, which is a computer program for electronic prescribing and administration, which replaces paper medication charts. One of its functions is to alert a clinical user when he or she initiates a prescription for a drug to which the patient has a documented adverse drug reaction. MedChart can also alert a prescriber when that prescriber initiates a prescription before the patient's adverse drug reaction status is completed. CDHB advised that all documented adverse drug reactions in MedChart will remain in the patient's MedChart profile beyond any admission.
- The Director of Nursing is looking to introduce the wearing of medication vests, so that staff have protected medication administration time.
- A "Releasing Time to Care" programme is being implemented. CDHB explained that this is a programme developed by the United Kingdom National Health Service, which aims to improve the quality of patient care by helping frontline staff to spend more time with patients, thereby improving patient safety and ward efficiency.

153. In response to my provisional opinion, CDHB advised in relation to recommendations f) and g):

- It will consider Dr Spriggs' feedback as part of its broader review of its RCA and open disclosure policies, which it is undertaking as a result of the introduction of a new electronic risk and incident management system (Safety 1st).

154. I recommend that CDHB report back to me on the above recommendations, outlining its progress and the additional steps taken to implement those recommendations, within three months of the date of this report.

155. In response to the recommendations in my provisional opinion, RN F provided a written apology for forwarding to Mrs A's family.

156. I recommend that Dr E and CDHB each provide Mrs A's family with a written apology. The apologies are to be sent to HDC within three weeks of the date of this report being issued, for forwarding to Mrs A's family.

157. I recommend that the Nursing Council of New Zealand consider whether a review of RN F's competence is warranted.

158. I recommend that the Medical Council of New Zealand consider whether a review of Dr E's competence is warranted.

Follow-up actions

159.
- A copy of this report will be provided to the Coroner and the New Zealand Police.
- A copy of this report with details identifying the parties removed, except CDHB and the experts who advised on this case, will be sent to the Medical Council of New Zealand, and it will be advised of Dr E's name.
- A copy of this report with details identifying the parties removed, except CDHB and the experts who advised on this case, will be sent to the Nursing Council of New Zealand, and it will be advised of RN F's name.
- A copy of this report with details identifying the parties removed, except CDHB and the experts who advised on this case, will be provided to the Health Quality & Safety Commission, and The Centre for Adverse Reactions Monitoring, and will be placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.

Appendix A — Independent clinical advice to the Commissioner

The following expert advice was obtained from a general physician and geriatrician, David Spriggs MBChB, FRCP (Lond), FRACP, MD:

> "I have been asked to advise the Commissioner on the care received by [Mrs A] from the time of her admission to [Hospital 2] on 20 [Month2] 13 until her transfer to [Hospital 1] on 24 [Month2] 13.
>
> I practise as a General Physician and Geriatrician at Auckland District Health Board and am vocationally registered for Internal Medicine. I have been a Fellow of the Royal Australasian College of Physicians since 1993. I have no conflict of interest in regard to this case and have read and understand the Commissioner's guidelines for independent assessors.
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> …
>
> I have been asked to specifically comment on:
>
> - the adequacy of CDHB's policies;
> - the changes implemented by CDHB;
> - the changes recommended in the CDHB's Root Cause Analysis Report;
> - any aspects of the care provided by CDHB and/or [Dr E] that you consider warrant additional comment;
> - any recommendations for improvement of care
>
> **Background:**
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> In 2006 [Mrs A] had an adverse reaction to trimethoprim which caused Toxic Epidermal Necrolysis (TEN). This is a skin reaction to drugs and is a severe systemic response which is life threatening. It is a clear indication to avoid such drugs in the future. TEN will recur when the patient is exposed to the offending drug in the future. [Mrs A] subsequently obtained a medical alert bracelet identifying her allergy to trimethoprim and another drug called cotrimoxazole of which Trimethoprim is a constituent.
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> On 29 [Month1] 13 [Mrs A] tripped over and fractured her left hip. The timing of the ambulance report is difficult to read, however the ambulance staff identified the allergy to trimethoprim and cotrimoxazole. [Mrs A] was admitted to the acute orthopaedic department where again the allergy was noted along with some other allergies to Diltiazem and warfarin. The admission notes also identified the presence of ischaemic heart disease and atrial fibrillation, and the admission medication list is clearly identified. This identifies seven different tablets. On the 01 [Month2] 13 [Mrs A] underwent an orthopaedic procedure to repair the hip and two days after this she had some chest pain which probably represented a further myocardial infarct. On 15 [Month2] 13 it was noticed that [Mrs A's] white cell count was increasing, an MSU was performed. I have not seen the result of this, however, on 16 [Month2] she was started on Norfloxacin presumably as treatment

for a urinary tract infection. The drug sheets on the orthopaedic ward identify a number of adverse reactions specifically including the skin reaction to trimethoprim. There are in total 8 different drugs to which [Mrs A] reacted adversely. Some of these reactions are side effects of drugs such as gastrointestinal bleeding with warfarin and some of them are allergies such as the toxic epidermal necrolysis with trimethoprim and swelling of the tongue with amoxicillin.

On 20 [Month2] 13 [Mrs A] was discharged from orthopaedics and transferred to the rehabilitation unit at [Hospital 2]. The transfer letter clearly identifies the allergy to trimethoprim. On admission the urine infection from the 16 [Month2] 13 had been identified and I think there was a conscious decision to discontinue the Norfloxacin. The admission note states 'numerous drug allergies' and then an arrow pointing to the right 'see chart'. The medication list on transfer included 14 different entries. [Mrs A] was reviewed by [the consultant] on 21 [Month2] 13. The rehabilitation in the ward continued until 22 [Month2] 13 when [Mrs A] complained of 'dysuria' overnight. The registrar [Dr E] assessed her and asked for an MSU to identify the presence or otherwise of a urine infection. She states 'weekend house surgeon chase culture and sensitivities — chart antibiotics as needed'. The physiotherapy note confirms that [Mrs A] was 'feeling miserable with cystitis'. At 1700hrs on the evening of 22 [Month2] 13 [Dr E] notes the MSU was positive. Her plan was 'given symptomatic start trimethoprim'. This drug is recorded as being administered at 2100 hrs. Once again the drug prescription form clearly identifies the adverse reaction to the trimethoprim. At 2150hrs on 23 [Month2] 13 the weekend registrar [Dr G] was asked to see [Mrs A] as she was feverish. He noted the stated allergy to trimethoprim and stopped this drug and prescribed vancomycin. By 0200hrs 24 [Month2] 13 [Mrs A's] skin had already started to blister and she was transferred back to the Intensive Care Unit where she died [a short time later]. The case was referred to the Coroner. There is no reason to believe an earlier identification of the allergic response or earlier treatment would have made any significant difference to the outcome. There is no 'antidote' and the data in support of the steroids are not very strong although they are commonly given.

In her report to the Commissioner of 03/06/14 [Dr E] acknowledges her error in prescribing trimethoprim and she is also aware of the consequences of this error with respect to [Mrs A] and her family. She has found this error 'completely devastating'. She states that this was 'an unintentional mistake'. She feels that a contributor to the error include the failure to clearly document the allergies on the admission clerking notes to [Hospital 2] from 20 [Month2]. In her statement to the Police from 7/4/14, [Dr E] again states that she had noted in the clinical notes the comment about 'numerous drug allergies' and she goes on to state that she reviewed the drug chart on which the specifics of those allergies were clearly stated on the orange sticker. She also feels she was 'considerably fatigued'. She was supervising a house officer, working long hours and multitasking. She also states that '[The ward] was well known as the busiest Older Persons Health ward at CDHB, with the reputation for being a difficult working environment. The ward

was at times chaotic, confrontational interactions with the charge nurse were a daily occurrence for medical, nursing and clerical staff, and the additional stress caused by this coupled with a ward that was always near capacity was significant issue'.

While it is not my role to comment on the performance of [RN F], she confirms that the ward was busy.

Of significance, neither [Dr E] nor [RN F] recall the presence of a medic alert bracelet. [Mrs A's] family believe that she was wearing a medic alert bracelet during this admission, the bracelet stating 'allergy cotrimoxazole and Trimethoprim angina'.

I have not seen any documentation from the DHB about their communication with the Family following this incident. I note that [the Chief Medical Officer] made two phone calls to [Mr A]. These are not recorded. Subsequent communication with the family up to the beginning of the following year does not seem to have occurred. There is a note from 26 [Month2] 13 saying that [Dr E] 'expressed a wish to meet with the family if that was thought helpful'. It seems that [the consultant concerned] was going to discuss with [the customer services manager] 'to work out the best way forward'. There is no follow up on this in the notes. [Ms B] in her letter says that they were given [a contact person] who was contacted by the family, but the DHB had not got back to the family by that date.

I note that the 'end-of-run report' which is a summative report on the performance of [Dr E] was completed by [a medical professional] before this incident on 13 [Month2] 13. [The report] states that [Dr E] prescribes at 'above expected level' at this stage in her career. I am not aware that this has been amended.

The internal enquiry at Canterbury DHB followed the methodology of a Root Cause Analysis. I note that no senior medical staff from the department were interviewed. This enquiry identified that the ward was busy with 22 patients, two discharges and two admissions. The nursing staff levels are described but not the medical staffing. There is no statement on the acuity of the patients at the time. They identify issues with the ward environment particularly concerns over 'skill mix on the afternoon shift'. Staff also 'express concern about the work environment on [the ward]. These concerns had been raised with management in the past. Staff felt unable to communicate freely about issues they believe require attention and leadership regarding day to day operations on the ward'. This is not further explained.

The review also identified some patient factors including the high number of tablets which was 'not unusual for patients admitted to [Hospital 2]' and the large number of stated adverse reactions. They also acknowledge that the admission note from the house officer stated 'numerous drug allergies'. There were however various other places where the adverse drug reaction was 'correctly documented in other key places in the clinical record'. They state that 'medic alert bracelets are

not routinely checked as part of CDHB ADR policy'. The review acknowledges that both the doctor and the registered nurse were busy.

Subsequent recommendations include:

1. 'Strengthen and review the CDHB systems and processes for diagnosing and documenting adverse drug reactions …'
2. Reviewing 'the prescribing process and prescribing environment'
3. A formal reminder for staff to ensure that allergy information is appropriately sought and documented.
4. A review of workloads across the medical wards at [Hospital 2]
5. 'A formal review of [the ward's] clinical governance'.

Although the responsibility for these recommendations is various, most of it seems to rest with the Older Peoples Health Service rather than the organisation at large. No follow up report is available.

Opinion:

This prescribing error has had a fatal consequence for [Mrs A] and enormous anguish and suffering for her family. The effect on [Dr E] has been devastating. I acknowledge her frankness and honesty in her response to the Commissioner.

CDHB's Polices:
These are standard and the only specific modification would be to include a statement about the importance of Medic Alert Bracelets. The Root Cause Analysis has identified this omission.

Changes implemented by CDHB:
No changes have yet been implemented however, CDHB has identified the following that need to be addressed.

a) Documentation of adverse drug reactions
b) Prescribing process and environment
c) Identification of and documentation of Allergies
d) Workload factors
e) Governance factors on [the ward]

I would hope that any changes that are suggested are applied not only to [Hospital 2] but to the whole DHB.

I acknowledge that there is a major difficulty in providing a safe level of medical and nursing staff in an environment of relative reduction in resource and increasing demand. I note that the issues of workload and governance have been raised before.

The lack of Senior Geriatrician consultation during the Root Cause analysis is unusual and I would hope that they are involved in the development of new policies and guidelines.

It seems that communication with the family after this event was poor, although I do acknowledge that I may not have been provided with some documentation. The DHB needs to review their policies and practices in this regard. It would be expected that the family be offered a meeting with senior nursing and medical staff and the assistance of an advocate if requested (this does not have to include the doctor or nurse personally involved unless that is thought to be useful). Open disclosure at such a meeting is essential. A nominated contact person, who responds to further enquiry from the family and facilitates the communication of the follow up events and actions is required.

Care provided by [Dr E]:

[Dr E's] clinical notes and her response to the HDC reflect a doctor who is personally committed to the care of her patients. It is clear that despite numerous statements in the notes and on the drug sheets describing the allergic reaction to trimethoprim, [Dr E] did not notice these when she prescribed trimethoprim on the 22 [Month2] 13. There was no indication that [Dr E] asked [Mrs A] if she was allergic to such tablets before prescribing them.

It is usual practice before prescribing antibiotics to check allergies. This can be done by review of the notes or asking the patient. [Dr E] acknowledges that she failed in this. While I acknowledge that a) she was busy at the end of a week, b) [Mrs A] was taking many drugs (although not an excessive number in a geriatric ward) c) [Mrs A] had lots of allergies and d) the ward environment was not conducive to attentive medical care, the prescription of Trimethoprim to [Mrs A] by [Dr E] was a **severe departure** from usual standards. While there is disagreement about the presence or otherwise of the medic alert bracelet, this detail does not alter my assessment.

I note that, during the investigation of this event, [Dr E] has behaved professionally and with compassion.

Care provided by CDHB:

There are several systemic issues some of which have been identified in the Root Cause Analysis. It would appear that there have been previous concerns noted about the environment and governance of [the ward]. The workload was high, there were concerns about staffing levels and skill mix and [Dr E] describes the environment as 'confrontational'. It is in just such an environment that major errors occur and I note that, from the Root Cause Analysis, the responsibility for reviewing this is with the Director of Nursing. I would hope that this is not considered to be purely a nursing issue but is a larger governance issue including medical staff, allied health and clerical staff.

Irrespective of the presence or absence of the medic alert bracelet in [Mrs A's] case, such aids to safe prescribing should be routinely checked and the DHB policy needs to be changed.

While the notes are limited in this regard, the view of the family is that the DHB has failed in its duty to communicate freely and honestly. I would hope that the Root Cause Analysis or some other review reflects the need to have an established process for liaison with patients and families when severe adverse events occur.

I note that other recommendations from the Root Cause Analysis are limited to the Older Peoples Health Service. This is not appropriate as many of the recommendations are applicable across the whole DHB.

I believe the quality of care provided by Canterbury DHB to [Mrs A] with regard to the administration of Trimethoprim was poor and that this was a **severe departure** from usual standards.

Additional comment:
It is expected that, in the near future, our prescribing will become electronic/computerised. One of the advantages of such a system is that there will be the ability to electronically stop doctors prescribing drugs that are absolutely contra-indicated as in this case. I hope that such systems will prevent such prescribing errors in the future. In the meantime, we have to depend on the current systems within hospitals and in the community to prevent such prescribing errors.

I hope that the Commissioner's report will be widely disseminated and discussed, as was the fatal prescribing error at Palmerston North Hospital in 2002 (03HDC14692). In that report there were significant failings in regard to the medical and nursing staff reviewing the drug list and failing to notice, over a period of four days, discrepancies that should have been picked up. Sadly, in the case of [Mrs A], such a failure by a single doctor and nurse has resulted in a fatal outcome. The contribution of the work environment must not be underestimated as these errors are not made by bad doctors and nurses but by systems that fail to support the prescribers and dispensers.

Should you wish for any further advice please do not hesitate to contact me.

Yours sincerely

David Spriggs, MBChB, FRCP(Lond), FRACP, MD
General Physician and Geriatrician
General Medicine
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On 6 May 2015, Dr Spriggs provided the following further expert advice:

"1) I do not think that [Dr G's] decision to wait and see once the error was identified was unreasonable. There was nothing more to be done as there is no antidote or emergency treatment. There is no reason to believe that washing out the stomach or administering any agent that might reduce the amount of trimethoprim absorbed would have been useful. Sadly the die was cast.

2) The evidence that steroids are useful at all in this condition is contentious. Most doctors use this group of drugs out of desperation more than conviction. Early high dose hydrocortisone was not indicated. Intravenous saline would not have mitigated the response. The reason for giving this drug is to replace fluid losses which are excessive once the skin breaks down. Administration before the blistering has become extensive would not help."

Appendix B — Independent nursing advice to the Commissioner:

The following expert advice was obtained from registered nurse Dawn Carey:

"1. Thank you for the request that I provide clinical advice in relation to the complaint from [Ms B] about the care provided to her late aunt, [Mrs A] whilst she was an in-patient at [Hospital 2]. In preparing the advice on this case to the best of my knowledge I have no personal or professional conflict of interest. I have read and agree to follow the Commissioner's Guidelines for Independent Advisors.

2. I have reviewed the documentation on file: complaint and additional correspondence from [Ms B]; responses from CDHB including [Mrs A's] clinical file from [Hospital 2] and [Hospital 1], Root Cause Analysis (RCA) report, various Policy and Protocol documents (as detailed in provider response 30 June 2014), health practitioner statements, 2012 and 2013 appraisal documents for [RN F]; statement and response from [RN F] (29 May 2014); correspondence from GP [Dr S] [Mrs A's] GP to [the Coroner].

3. **Background**
[Mrs A] had numerous drug allergies. In 2006, [Mrs A] had an adverse reaction to Trimethoprim (Toxic Epidermal Necrolysis). This was documented in her records. [Mrs A] subsequently obtained a Medic Alert bracelet identifying her allergy to Trimethoprim and Co-trimoxazole.

[Mrs A] was 80 years of age when she was admitted to [Hospital 1] on 29 [Month1] following a fall at her home. She underwent surgery for a neck of femur fracture of her leg.

On 20 [Month2], [Mrs A] was transferred to [Hospital 2] for post-surgery rehabilitation. At the time of admission [Mrs A's] medication allergies were documented on orange drug alert stickers, which were placed on each page of her medication charts. It is unclear whether or not [Mrs A] was wearing her Medic Alert bracelet.

On Friday 22 [Month2], [Mrs A] complained of dysuria and a mid stream urine sample was obtained. At 5pm a medical review noted that she remained symptomatic and that the initial results indicated a urinary tract infection (UTI). A course of oral Trimethoprim was prescribed. The orange drug alert stickers were not checked by the prescriber on this occasion.

[RN F], a registered nurse, administered the first (and only) dose of Trimethoprim at 9pm on 22 [Month2]. [RN F] told HDC that she recalls seeing the orange drug alert sticker but in her haste did not read it sufficiently. She said that she placed too much reliance on the doctor not prescribing a drug that was contraindicated.

The following morning [Mrs A] was noted to be febrile and a medical review was sought. During this review, the allergy was identified and Trimethoprim was discontinued.

[Mrs A] developed Toxic Epidermal Necrolysis, which necessitated an emergent transfer to [Hospital 1], surgical debridement and intensive care therapies. [Mrs A died a short time later.]

4. As the Nursing Advisor, I have been asked to review the nursing care provided to [Mrs A] in relation to her being administered oral Trimethoprim on 22 [Month2].

5. **[RN F]**
[RN F] reports that [Mrs A's] allergic reaction and subsequent death had a profound effect on her. She accepts responsibility for failing to check the Adverse Reactions sticker thoroughly and accepts responsibility for the shortcomings in the care she provided to [Mrs A]. [RN F] reports changes to her nursing practice and having a more heightened awareness of the need to be vigilant and thorough during medication rounds. She explains that there were circumstances — unusually high acuity and insufficient skill mix — that impacted on her nursing practice on 22 [Month2] and caused her to place too much reliance on the Doctor not prescribing a medication that was contraindicated.

6. **CDHB responses and RCA findings**
CDHB report that the initial review process was quickly escalated to RCA investigation. The RCA investigation found that:

(i) The practitioners involved did not have a clear picture of [Mrs A's] past drug history and identified adverse reaction to Trimethoprim.
(ii) Relevant CDHB Policies were not adhered to.
(iii) Peak workload for both medical and nursing contributed to this medication error.
(iv) Concerns had been previously raised about the work environment on [the ward].

CDHB report that a number of recommendations have been made which include

(i) To strengthen and review CDHB systems and processes for diagnosing and documenting adverse drug reactions with a view to providing accurate information on 'past' drug reactions at the point of care.
(ii) That the CDHB reviews the prescribing process and prescribing environment with the view to reduce the factors known to be associated with errors e.g. frequent interruptions during a critical safety task.
(iii) To review and update the inpatient pre-admission process to ensure the staff have clear guidelines to follow when admitting a patient to the ward. The policy is to be audited regularly.

7. **Review of clinical records**
(i) [Mrs A] was transferred to [the ward] on 20 [Month2]. Accompanying nursing transfer (TNNC) documentation reports [Mrs A] being allergic

to Warfarin and Co-trimoxazole. Initial nursing assessments completed on [the ward] included Nutrition Screening, Pressure Injury, and Falls Risk.

(ii) [RN F] was the RN allocated to [Mrs A] on the afternoon/evening shift on 21 and 22 [Month2].

(iii) [Mrs A's] admission assessment — Patient History — is dated as being completed on 22 [Month2] at 3pm. As noted in the RCA the allergy section is left blank on this form.

(iv) [Mrs A] has two completed Drug Treatment Sheets (DTS). Both have the required patient identification label and 'Adverse reaction' (AR) stickers attached. The AR stickers record that Trimethoprim and Co-trimoxazole are associated with Toxic Epidermal Necrolysis as a reaction. The documentation is clear and legible.

(v) At 9pm on 22 [Month2], [RN F] administered the following medications to [Mrs A]

Paracetamol 1gramme orally (PO)

Ural sachet PO

Trimethoprim 300miligrammes (mgs) PO

Codeine Phosphate 30mgs PO

Docusate/Senna 2 tablets PO

Simvastatin 20mgs PO

Zopiclone 3.75mgs PO [there appears to be a documentation error, where *21 ([Month2])* is recorded].

(vi) 22 [Month2] clinical notes entry reports [Mrs A] as being *commenced on Trimethoprim this evening… passing urine frequently…* This is also documented in the nursing care plan.

8. **Comments:**

(i) I do not consider the failure to note [Mrs A's] medication allergies on the nursing admission sheet (TNNC) to demonstrate a departure from nursing standards. In my experience there are variances in design templates of such documents. In my opinion, medication allergies need to be recorded in the most relevant place, which is on the medication charts. This was done in this case.

(ii) Without any wish to cause further distress to [the family] I can find no clinical documentation that notes the presence or removal of [Mrs A's] Medic Alert bracelet. I note that the CDHB Perioperative Care Plan — 1 [Month2] — records [Mrs A's] rings being present and taped for surgery. I also note a nursing entry reporting the removal of [Mrs A's] rings on 25 Month2.

9. **Clinical advice**

Within the relevant literature medication errors are unfortunately commonplace.

Research has identified factors such as high workload, distraction, task overload, and lack of concentrated focus, as known contributory issues[1]. As is evidenced in this case the consequences of practice slips and lapses can be devastating. Whilst research highlights the common nature of medication errors, they cannot ever be deemed an acceptable part of practice. Safe medication administration is a core competency that all nurses are deemed to have achieved upon registration. As such and regardless of the patient outcome, a medication error such as this one is a departure from the expected standards of nursing care. Whilst the person administering or dispensing the medication is usually the last practitioner in the 'chain', I am strongly of the opinion that responsibility or accountability does not increase incrementally. Also if we only focus on the individual practice involved we miss the opportunities to strengthen the systems that contribute and facilitate preventable errors as occurred in this case. I acknowledge that CDHB are committed to reviewing the relevant systems. I agree that this is appropriate and necessary.

Whilst I acknowledge that clinical workload contributed to this error occurring; I do not consider it to mitigate the severity of the departure. As a RN peer, I consider the practice of [RN F] to have severely departed from the expected standard of nursing care in relation to safe medication administration.

Dawn Carey (RN PG Dip)
Nursing Advisor
Health and Disability Commissioner"

[1] Keers, R.N., Williams, S.D., Cooke, J., and Ashcroft, D.M., "Causes of medication administration errors in hospitals: A systematic review of quantitative and qualitative evidence", *Drug Safety* (2013) 36, 1045–1067.