A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799

Complaint

The Commissioner received a complaint from Mr A on behalf of his late wife, Mrs B. The complaint was that:

- *Mrs B was admitted to a public hospital in November 1997 for surgery on her knees as a result of a fall. Mrs B, who suffered from partial kidney failure, was required to carry out her own peritoneal dialysis both before and after surgery. She was sometimes assisted by nursing staff who were apparently ignorant of the complicated and sterile procedures involved.*
- *Pethidine injections were administered on a regular basis, despite pethidine not being a preferred drug for renal patients.*
- *The pethidine resulted in Mrs B becoming drowsy and inattentive, and not capable of maintaining high standards of sterility required for carrying out her dialysis.*
- *When Mrs B began to vomit, the family expressed concerns over Mrs B's condition and were told that it would be three to four days before a new house surgeon would be able to assess her condition and progress.*
- *Mrs B was transferred to a Renal Unit with a peritoneal infection and died of respiratory failure on 8 December 1997. The public hospital did not inform the Renal Unit that they had admitted and carried out surgery on one of the unit's renal patients until 26 November 1997, which was well after the infection had occurred.*

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Opinion – Case 97HDC10799, continued

Investigation Process

The complaint was received by the Commissioner on 22 December 1997 and an investigation was undertaken. Information was obtained from:

Mr A	Complainant (Consumer's husband)
Mr C	Consumer's son
Dr D	Chief Medical Officer, the public hospital
Mr E	Orthopaedic Surgeon/Provider, the public hospital
Dr F	House Surgeon/Provider, the public hospital
Mr G	Department of Renal Medicine, the public hospital
Dr H	Renal Physician
Dr I	Orthopaedic House Surgeon
Mrs J	Charge Nurse

Other information contained and considered included Mrs B's medical records, the report of the investigation into Mrs B's death carried out by the public hospital and information provided to a disability services provider. Advice was obtained by the Commissioner from an independent renal specialist.

Information Gathered During Investigation

Mrs B was admitted to the hospital on 15 November 1997 having slipped and injured both knees in a fall. She was seen by the consultant orthopaedic surgeon, Mr E, who arranged surgery for the following morning. Mrs B was in severe pain and was given pethidine to control the pain. Mrs B's surgery was performed on 16 November 1997 and post-operative pain was controlled using pethidine and morphine.

Mrs B had end-stage renal failure, and she had been on Continuous Ambulatory Peritoneal Dialysis (CAPD) for fifteen months. She carried out the CAPD procedures herself four times a day. She was assisted by a District Nurse who visited her at home twice a week and was monitored by the hospital's Renal Unit. While a patient at the hospital Mrs B continued to carry out her own dialysis.

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Information Gathered During Investigation *continued*

On 17 November 1997 Mrs B's medical notes indicate that she suffered from nausea and vomiting and the morphine (suspected to be the problem) was discontinued. By 21 November 1997 the records indicate that Mrs B's behaviour was becoming agitated, uncooperative and confused. By the afternoon of 22 November she was noted to be "*in good frame of mind ... although fed up with bedrest*". Mrs B continued to receive pethidine for pain relief throughout this period.

Further to this, in a discussion held with the Commissioner's office, Dr I stated he was the Orthopaedic House Surgeon when Mrs B was admitted after her 15 November 1997 accident. He stated he saw her on the ward round on 17 and 18 November 1997, two days post operation. He stated his last day at the hospital was 18 November 1997. Dr I stated he remembered Mrs B as Dr D had contacted him when the hospital was doing an internal investigation. Further, he remembered Mrs B required bed rest and pain relief post-operatively; however, she seemed alert, well and her blood tests were fine. He remembers specifically asking Mrs B if she was able to carry on with her CAPD with Mrs B commenting that she was fine to do it with support from the nursing staff, if needed. Dr I stated that any instructions he received from Mr E were written into Mrs B's medical notes; however, he does not remember anything specific being requested.

The hospital's internal investigation report records that on 22 November 1997 Mr C discussed with the acting charge nurse in the afternoon his concerns that his mother's condition had deteriorated: "he felt that she was pale and weaker and confused at times."

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Information Gathered During Investigation *continued*

In his complaint to the Commissioner Mr A advised that the pethidine injections given to Mrs B resulted in her "*becoming drowsy and inattentive*" and that "*she was still required to perform her own dialysis treatment whilst in this impaired state*". Mr A advised the Commissioner that his son, Mr C:

"[v]oiced his concerns over [Mrs B's] condition when he told a nurse that the dialysis was not working properly due to the pale colour of her face and general condition. She told him that as the house surgeon had just left the hospital it would be three or four days before the new house surgeon would be able to assess her condition and progress. The vomiting continued up until the time she was transferred to the Renal Unit, in a coma, on Friday 28 November 1997."

The hospital's internal investigation report states that the nurse told Mr C that:

"*the house surgeon who had been working on the orthopaedic run had just left, and that a new house surgeon would be taking over the run on Monday. She did not feel it was necessary for the GP to come up, as the house surgeon working over the weekend could be called to see Mrs B if there were any concerns about her condition. She thought he seemed satisfied with that*".

On 23 November 1997 Mrs B was given two suppositories "*as bowels* [have] *not opened for six days. No result*".

On the morning of 24 November 1997, the records describe Mrs B as being very unsettled, angry and agitated. The records state that "*Mrs B appears very angry towards staff. (Just like a wound up spring.) Remains very tense.*" Further suppositories were administered "*with very small, very constipated result*".

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Information Gathered During Investigation *continued*

On 25 November 1997, Mrs B was reviewed by Dr K for her pain relief. Pethidine was continued. On 25 November 1997, the medical records note that Mrs B was "*miserable … not orientated to time, place or person, not responding to questions or following commands at time. Not able to manage CAPD, extremities jerky.*" On 26 November, Mrs B was more agitated, pale and sweaty, and complaining of some lower abdominal pain. Dr K reviewed Mrs B noting that she had "*many complaints this evening … concerned re: dialysis; concerned she is not being weighed; wants sample of dialysate analysed*". On the evening of 26 November, the notes register Mr C's concern regarding his mother's confusion. He also expressed concern regarding Mrs B's renal failure and her ongoing renal status management. He requested a review by a physician.

Mrs B's Community Nursing Service notes indicate that on 27 November 1997 the ward staff spoke with Ms L, District Nurse. The ward staff advised Ms L that due to Mrs B's increased confusion and agitation, her dialysis was not going well. The notes further indicate Ms L discussed with the ward staff what times the dialysis for Mrs B should occur. Ms L also liaised with the CAPD unit regarding Mrs B's condition. They advised that they would contact the ward staff. It was noted that on 27 November 1997 Mrs B's case was discussed "*with Unit Manager of Renal Unit. Pethidine not a good choice for analgesia, should be having morphine … they prefer patients to return to them when they are having problems. Unit Manager will talk to Renal Physician and get back to us.*"

On 26 November 1997, the dialysis bag taken off mid-afternoon was cloudy. The nurse discussed with Mrs B the appropriate action to be taken, and a specimen of the fluid was sent to the laboratory for cell count, gram stain and culture. On 27 November 1997, Dr K recorded the content of a telephone conversation with Mr C during which he expressed concerns regarding his mother's health, her deterioration and the management of her care.

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Opinion – Case 97HDC10799, continued

Information Gathered During Investigation *continued*

Dr K consulted with Dr M, Physician, which resulted in blood cultures, dialysis cultures and a repeat serum electrolyte test being conducted. By 11.00 o'clock on 27 November, the notes recorded Mrs B's decreased level of consciousness accompanied by intermittent twitching and restlessness. On 28 November 1997, Mrs B still had a decreased level of consciousness, and her dialysis bag was blocked and unable to infuse fluid. Dr M and Mr E agreed to transfer Mrs B to the Renal Unit for her dialysis care.

Mrs B was admitted to the Renal Unit, as her Tenckhoff catheter had become blocked. On admission, Mrs B was diagnosed as having pethidine toxicity and gram negative peritonitis. Despite intensive care, Mrs B suffered a cardio-respiratory arrest on 1 December 1997, was transferred to ICU, and died on 8 December 1997.

Internal Investigation

The Commissioner was forwarded a copy of the hospital's internal investigation report from Dr D (parts of which are referred to above). The report looked at each of the issues raised in the complaint sent to the Commissioner.

The report concluded that Mrs B's self medication and carrying out of her CAPD procedures was common practice where a patient is competent to carry out such care. It was believed that maintaining patient independence, and participation in care, is important and that Mrs B both understood and was competent to carry out her CAPD procedures. Where Mrs B was "shaky" a nurse took over and completed the CAPD. The investigation also found that the Renal Unit confirmed that it is appropriate for patients to continue to perform their own CAPD whilst bed-bound, receiving assistance as required, provided they are capable of performing the procedure in a sterile manner.

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Internal Investigation *continued*

The hospital's investigation found that the source of Mrs B's peritonitis was undetermined but given that Mrs B had only one cloudy dialysis bag on 26 November, and no further cloudy bags, Mrs B was not suffering infective peritonitis at that stage. The peritonitis was not connected with Mrs B's orthopaedic problem or the surgery and was very resistant to treatment in the renal unit. The hospital noted that without intra-abdominal surgery it might not have been resolvable even if identified during Mrs B's stay.

The family was also concerned that Mrs B had not had any bowel motions during her stay at the hospital and that insufficient remedial action was taken. The hospital investigation found that regular administration of laxatives and suppositories, and monitoring of the situation on a bowel chart, indicated that the nurses were very aware of the issue and were taking appropriate steps to manage the situation.

The hospital's investigation found that there appeared to be differing opinions on the appropriateness of the use of pethidine in patients with renal failure and that leading texts on the subject put forward slightly different views. The hospital accepted that while the role pethidine played in contributing to Mrs B's deterioration was uncertain, a higher level of awareness of the potential for toxicity in renal patients was required.

In summary, the hospital accepted that documentation in Mrs B's case was largely inadequate. In particular, consistent documentation of Mrs B's CAPD procedures would have better reflected the care she was given and supported the hospital's policy of self-administration. The hospital noted that documentation of the occurrence of the dialysis, and the volumes, would have removed any doubt on the part of the family that it had been done correctly. The hospital accepted that the presence of the cloudy bag on 26 November should have been documented in the clinical notes and the Renal Unit contacted for advice on further management. The hospital also accepted that earlier involvement of a physician could have provided reassurance to the family.

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Opinion – Case 97HDC10799, continued

Internal Investigation *continued*

The hospital noted that the role pethidine may have played in contributing to Mrs B's decreased mental function is difficult to assess, as she did not appear to show the classical symptoms of pethidine toxicity. The hospital accepted that the level of awareness of the potential for problems with narcotics and analgesics in patients with renal failure needs to be improved amongst nursing and medical staff.

The hospital report made a number of recommendations regarding the improvement of documentation, communication with tertiary centres, staff training on CAPD procedures, drug self-administration policy standardisation, education regarding narcotics in renal failure and the importance of family consultation in the development of the nursing care plan.

Independent Advice to Commissioner

The Commissioner also sought and obtained advice from an independent expert, who reviewed Mr A's complaint, the hospital's internal investigation report, responses from the various providers involved in Mrs B's care, the Renal Unit's CAPD manual, Mrs B's medical records, Mrs B's district nursing records and records of interviews conducted by the Commissioner's investigators.

Prescribing of Pethidine as Pain Relief for Mrs B

Pethidine is listed in most text books and pharmacopoeias as contraindicated in chronic and end-stage renal failure cases:

> "*due to the fact that the active metabolite norpethidine requires functional kidneys for elimination. Norpethidine is incapable of being eliminated through dialysis techniques. The consequent increase in this metabolite in patients with chronic renal disease/on dialysis has neurotoxic effects including seizures and delirium*".

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A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Independent Advice to Commissioner *continued*

However, the most common pharmacopoeia available to junior doctors in New Zealand hospitals is the *New Ethicals Catalogue* which does not list the problems associated with use of pethidine in patients with renal impairment. Patients with impaired renal function ought to be provided with a list of medications they should avoid, and all hospitals should have available a standard evidence-based formulary "*which sets out those drugs which should not be used in particular conditions or which might cause adverse interactions with other prescribed and required drugs*".

Consultation and Documentation
There was a lack of appropriate consultation between nursing staff and both junior and senior medical staff, and a lack of appropriate documentation.

The CAPD patient manual produced by the hospital Renal Unit provides no guidelines relating to the management of patients requiring hospital admission for problems unrelated to their dialysis.

The advisor concluded that "*careful review of the supplied notes indicates that no consultation was undertaken between* [the hospital] *clinicians and the renal team … until 28 November just prior to her transfer to* [the Renal Unit]*"*.

> "*No record of CAPD exchanges, including bag checks, heating procedures, the actual exchange procedures, the weight of the bags post-procedure or any fluid issues were found in the notes. No mention could also be found on a regular daily basis describing Mrs B's tenckhoff catheter exit site.*
>
> *There is no written record of any plans by Mr E to provide for ongoing review and management of Mrs B's complex medical problems by a suitably knowledgeable medical practitioner or by the renal unit … even when Mrs B's son expressed concern with regard to his mother's condition, there was no evidence that this was given any degree of urgency with regard to contacting the appropriate medical opinion.*"

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A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Independent Advice to Commissioner *continued*

A careful review should be made of the quality of staff communication within the hospital. Protocols and procedures need to be developed which stress the importance of this communication, the appropriate handover of clinical information from nursing caregivers to medical practitioners and between medical practitioners.

Risks

There are dangers associated with infection in any patient receiving CAPD.

> "*If appropriate strategies including knowledge of potential adverse problems, communication between responsible clinical staff and surveillance measures had been undertaken at* [the hospital], *more attention would have been paid to the type and use of narcotics, the need for stool softeners and gentle laxatives and review of bowel habits. If all of this had been performed in a more stringent way, given the high risk in* [Mrs B's] *case of developing severe constipation, it is possible that the subsequent events leading to her death might have been prevented*."

While the level and standard of care provided to Mrs B for the management of her acute injuries (to her knees) was within the perimeters required by current practice, the care and management of her total health needs, *"specifically the management of her complex metabolic condition and CAPD treatment and the risk of that management, fell below the requisite standard of care. It is also likely that this contributed to her ultimate demise"*.

A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Response to Provisional Opinion

In response to my provisional opinion, Mr E advised that on 17, 18 and 19 November 1997 he requested his house surgeon to transfer Mrs B to the care of the medical team. Mr E further stated that he checked with the charge nurse to ensure the transfer had been arranged.

Dr I was the Orthopaedic House Surgeon when Mrs B was admitted after her 15 November 1997 accident. He advised the Commissioner that he saw Mrs B on his ward rounds on 17 and 18 November 1997, two days post operation and that his last day at the hospital was 18 November 1997. Dr I remembered Mrs B as Dr D had contacted him when the hospital was doing an internal investigation. Dr I recalled that Mrs B required bed rest and pain relief post-operatively but she seemed alert, well and her blood tests were fine. Dr I remembered specifically asking Mrs B if she was able to carry on with her CAPD, with Mrs B commenting that she was fine to do it with support from the nursing staff, if needed. Dr I stated that any instructions he received from Mr E were written into Mrs B's medical notes; however, he does not remember anything specific being requested.

Mrs J was the Orthopaedic Charge Nurse on Mrs B's ward, working Monday to Friday during the day shift. She advised the Commissioner that she met Mrs B on 17 November 1997, the Monday after Mrs B's operation. Mrs J stated that it was difficult to remember specific details; however, she recalled that Mrs B was uncomfortable and in pain after her operation. She further stated she remembered Mr E discussing Mrs B's CAPD with the house surgeon and requesting the house surgeon to check with the medical physician that the CAPD was being done correctly. Mrs J stated she thought that discussion had taken place as discussions were held with Mrs B, and the medical and nursing teams to ensure Mrs B's CAPD was done correctly. Mrs J further stated that all instructions from the medical team were usually written up in the patient medical notes.

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A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Response to Provisional Opinion *continued*

Mrs B's medical notes, prior to 27 November 1997, do not note any specific instructions regarding discussions being held with the medical team.

Mr E further responded to my provisional opinion stating:

"*A number of factors contributed to these circumstances:*

1. [Mrs B], *a patient on dialysis, was unlucky to suffer a rare combination of injuries;*
2. *The treatment of her injuries masked intra-abdominal pathology which subsequently developed independent of the two known conditions for which she was being managed;*
3. *Her care coincided with the change-over of house surgeons, my house surgeon being on leave and my not knowing that my house surgeon was on leave;*
4. *My instructions apparently not being acted on and my not being aware of this because of a reassurance given.*

[Mrs B's] *death is an immense tragedy from which lessons must be taken. I have expressed concern to the hospital regarding the level of junior staff cover over this time. Since this event, I have also developed a system of not relying on verbal reassurances but insisting on checking the paperwork to ensure that instructions have been carried out. I follow this system even when the reassurances are given by a responsible doctor or, as was the case for* [Mrs B], *by a senior nurse.*

I am truly sorry that [Mrs B] *died. I am happy to apologise in writing, not because I am required to by the Health and Disability Commissioner, but because that is an appropriate thing to do. I have already apologised to* [Mrs B's] *son during a lengthy meeting with him – recording in writing what I said is an appropriate step to take.*"

A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Code of Health and Disability Services Consumers' Rights

RIGHT 4
Right to Services of an Appropriate Standard

…

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

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

…

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

Opinion: No Breach Dr F

Rights 4(2) and 4(3)

In my opinion Dr F did not breach Rights 4(2) and 4(3) of the Code in prescribing pethidine for Mrs B's pain relief.

While pethidine was not an appropriate choice of analgesia to use in Mrs B's case as it requires functional kidneys for elimination, in Dr F's letter to the Commissioner she advised that the drug information books she had been using (the hospital's Health Preferred Medicines List 1997 and the New Ethicals Guide) *"gave no indication that the use of pethidine was contra indicated in patients with renal failure"*.

Therefore, in my opinion, Dr F received inadequate guidance from the texts available to her with regard to this issue and in the circumstances made a competent decision based on available information.

A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Opinion
Breach
Mr E

Rights 4(3) and 4(5)

In my opinion, Mr E breached Rights 4(3) and 4(5) of the Code.

Mr E was the senior specialist responsible for the ongoing management of Mrs B's care. While Mr E competently addressed Mrs B's acute orthopaedic injuries and her ongoing care in relation to those injuries, he took no steps regarding the treatment of her other medical problems.

My advisor stated:

> "[Mr E] *has a duty of care to refer* [Mrs B] *to another medical practitioner in situations where he lacks the necessary specialist information, training and competencies to manage either new or existing medical problems. In* [Mrs B's] *case,* [Mr E] *owed* [Mrs B] *a duty of care to appropriately refer her to another medical practitioner, or team of practitioners, with the necessary knowledge and skills to manage her complex medical problems. He failed to do this in a timely manner, not doing so until the very end of her stay in* [the hospital]."

Mr E advised the Commissioner he had *"verbally requested contact"* with the physician he believed was managing Mrs B's medical care. However, there is no evidence in Mrs B's medical notes to confirm this occurred. Further, there is no evidence, in the medical notes, that Mr E followed up to find out who was managing Mrs B's medical care, or why she remained on the surgical ward undertaking her own dialysis. Mr E continued to take responsibility only for Mrs B's orthopaedic needs until he was finally contacted by the house surgeon to say that Mrs B was unwell. At this point Mr E suggested contacting Dr M and Mrs B was eventually transferred to the Renal Unit.

Mr E's failure to ensure overall management of Mrs B's needs, and to co-operate with other providers at the hospital as demanded by Right 4(5), led to a deterioration in Mrs B's condition as a result of her chronic renal problems.

A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Opinion: Breach Public Hospital

Right 4(5)

The public hospital, as the employing authority of Mr E and Dr F, is liable for their actions or omissions under Section 72 of the Health and Disability Commissioner Act 1994. The hospital has not provided evidence that it took such steps as were reasonably practicable to prevent a breach of the Code.

The hospital carried out its own internal investigation into Mrs B's death. The report reached a number of conclusions, which are discussed above. In my opinion the hospital did not ensure that the necessary procedures and protocols were in place to manage Mrs B's overall care. There were no systems in place to check upon the medication Mrs B was prescribed, nor were there any procedures for co-operation between surgical and medical providers to ensure that Mrs B got the appropriate care she needed for her chronic renal problems in addition to her orthopaedic injuries. Further, failure to contact the Renal Unit and to ensure that Mrs B's CAPD exchanges were managed with the required degree of skill, contributed to Mrs B's deterioration. Communication between providers within the hospital was poor and documentation is not complete.

In my view the standard of care that Mrs B received while a patient at the hospital was not consistent with her overall health needs, and the lack of co-operation between providers within the hospital, and between the hospital and the Renal Unit, had a significant impact on the standard of care received by Mrs B.

A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Actions: Mr E

I recommend that Mr E take the following actions:

- Ensure that orthopaedic patients with other coexisting medical conditions are referred to a competent provider who can manage the consultation, and continue to co-ordinate with that provider to ensure that his patient's overall health management is appropriately managed.

- Communicate effectively with other providers within the hospital and with other health services, and document his actions to ensure patients are receiving the quality and continuity of services required.

- Send Mrs B's family a written apology for breaching Rights 4(3) and 4(5) of the Code. This apology is to be sent to the Commissioner, who will forward it on.

Actions: Public Hospital

I recommend that the public hospital take the following actions:

- Implement the recommendations and conclusions from the internal investigation carried out at the hospital. In particular, it is crucial that nursing staff are provided further training on CAPD procedures, and that systems are developed for managing surgical patients who have specialised medical conditions, such as end-stage renal failure, so that appropriate care can be given.

- Revise its self-administration policy and document significant clinical events such as CAPD exchanges.

- Develop a Standard Documentation Policy for all staff outlining what should be documented in patient medical notes.

- Audit patient medical notes regularly to ensure all staff are documenting significant clinical events within the policy.

- Ensure all medical and nursing staff are given sufficient information about the use of analgesics in patients with end-stage renal failure.

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A Public Hospital / Dr F / Mr E

Opinion – Case 97HDC10799, continued

Actions *continued*

- Review its internal systems of communication between surgical and medical providers to ensure that the highest standard of overall care is provided to surgical patients with coexisting medical conditions.

- Apologise in writing to Mrs B's family for breaching the Code. This apology is to be sent to the Commissioner within one month and will be forwarded to the family.

Actions: Adis International

Adis International, the New Zealand publisher of the *New Ethicals Catalogue* will be sent a copy of this opinion. I suggest Adis International ensures that information related to known drug interactions and toxicity in patients with organ function failure, such as kidney and liver disease, be included in this publication. Specifically, it should be asked to address the deficiency with regard to chronic renal dysfunction being a contraindication to the use of pethidine for pain relief.

Actions: Renal Unit

A copy of this opinion will be sent to the Renal Unit, with the suggestion that the CAPD patient handbook be updated to more explicitly define the level of care required for a patient such as Mrs B, outlining appropriate care protocols and in particular stipulating a list of medications that patients should avoid and the reasons for avoiding them. I also suggest that the hospital's Renal Unit consider designing and revising its protocol specifying when other health providers ought to contact the Renal Unit when a renal patient comes under their care. These protocols will improve risk management and should ensure a greater degree of co-operation between providers.

Other Actions

A copy of this opinion will be sent to the Medical Council of New Zealand, the Nursing Council of New Zealand, the Coroner, the hospital's Renal Unit, Adis International Limited, the Ministry of Health and the Crown Company Monitoring Advisory Unit.