Surgical Registrar

Public Health Service

A Report by the

Health and Disability Commissioner

(Case 01HDC01097)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Miss A	Consumer
Ms B	Complainant/Consumer's mother
Mrs C	Complainant/Consumer's grandmother
Mr D	Consumer's father
A Public Hospital	Provider/Employer
Dr E	Surgical Registrar/Provider
Dr F	Resident Medical Officer
Dr G	General Practitioner

Complaint

On 22 January 2001 the Commissioner received a complaint from Ms B and Mrs C about Dr E. The complaint is summarised as follows:

Dr E did not provide the appropriate standard of health care to Miss A. In particular, he caused Miss A unnecessary distress and pain by failing to diagnose a dislocated elbow joint when she presented at the Accident and Emergency Department of a public hospital on 2 December 2000.

An investigation was commenced on 21 August 2001.

Information reviewed

- Information from the complainants and Mr D
- Information from the Public Hospital
- Information from another Public Hospital
- Information from Dr E
- Information from Dr G, general practitioner
- Independent expert advice from Mike Ardagh, emergency medicine specialist

Names have been removed to protect privacy. Identifying letters are assigned in alphabetical order and bear no relationship to the person's actual name.

Information gathered during investigation

Injury

On Saturday 2 December 2000, at about 8.30pm, Miss A, who was aged two years and nine months, suffered an injury to her left elbow and was taken to Dr G, a general practitioner, by her grandmother, Mrs C, and her father, Mr D.

Mr D, who was caring for Miss A at the time, stated that her injury occurred when he pulled her off the floor by her arm when she resisted having a bath. He then heard a click after which Miss A cried and held her arm.

Dr G told me that Miss A had suffered a similar injury on 11 October 2000 and the joint had been successfully relocated at a public hospital. He said that Miss A appeared to have pulled her elbow again. He attempted unsuccessfully to treat Miss A and referred her to a public hospital for further examination and treatment. He queried in his referral letter whether Miss A had dislocated her elbow at the radial head.

Information provided by the Public Hospital confirmed that when Miss A presented on 11 October 2000 to a public hospital she was diagnosed with a probable pulled elbow. This was reduced with a click and, shortly afterwards, while she was recovering in the waiting room, Miss A was able to play.

Presentation at a public hospital

After the consultation with Dr G, Mr D and Mrs C drove Miss A to a second public hospital where she was seen by the triage nurse at approximately 9.30pm and referred for x-rays at 9.50pm. Mrs C said that Miss A screamed like mad when her arm was positioned for the x-rays. The consultant radiologist later reported the x-rays as indicating that Miss A did not have a fracture or dislocation although he stated that follow-up x-rays might be considered for further evaluation to exclude the possibility of an occult fracture.

At approximately 10.15pm Miss A was seen by Dr F. After she considered the x-rays Dr F recorded that, although there was no fracture and no other deformity or lack of sensation, there was a slight swelling of the left elbow. Dr F further recorded that she tried unsuccessfully to reduce the elbow. Mr D reported that during this procedure Miss A cried in pain and so Dr F stopped. During her consultation with Miss A, Dr F prescribed 250 grams of paracetamol. At 10.30pm Dr F requested Dr E, surgical registrar, to examine Miss A.

Dr E arrived at the Emergency Department from the operating theatre at approximately 10.45pm. He recalled:

> "… I proceeded to review the x-rays done. No fractures or dislocation of the child's left elbow was seen. This was confirmed by a formal report on the x-ray by the specialist radiologist at the [public] Hospital. I then examined the child's left elbow and being satisfied that the child had a full range of movement in her left elbow

> (flexion/extension as well as pronation/supination) and also that there was no neurovascular compromise to the left arm, I prescribed a collar and cuff sling for symptomatic pain and discharged the patient advising the parents to bring the child back to the hospital if the pain is still ongoing."

Dr E said that the sling was declined by the parents and he could not be sure whether the subsequent dislocation of Miss A's left elbow happened because of their failure to comply with his advice to use the collar and cuff sling.

Mr D said that, after the examination, Dr E told them that there was nothing to worry about as Miss A had pulled a muscle in her shoulder or arm. Mrs C recalled that Dr E said that if there had been a dislocation it had got back in and there was now nothing wrong except normal soreness from the accident.

Mr D stated that during Dr E's examination Miss A was crying and very upset. Mrs C reported that Miss A continuously screamed. Mrs C recalled Dr E suggesting after his examination that Miss A wear a sling and that Mr D told Dr E that he did not want her to wear a sling as this had been tried when she had previously injured her elbow and had not worked. Mrs C stated that Dr E said in response that this was their decision and he had done all he could do; he then left the room. Mr D does not recall Dr E recommending the use of a sling. He said that after Dr E, left the nursing staff tried to fit one but Miss A cried when her arm was moved and she did not want the sling. The nursing staff then suggested that they take the sling home with them. Mr D said he could not recall what the nursing staff told him about the purpose of the sling but he assumed it was to keep Miss A's arm elevated so that it would relieve the pain in her shoulder, which was where he thought staff believed the problem to be.

Mrs C described Dr E's manner to Miss A during the consultation as brisk and said that he made no real attempt to talk to any of them. Mr D described Dr E as appearing to be in a rush and slap happy.

At 10.50pm Miss A was taken home to her grandmother's. Mr D, who stayed overnight, said that the next day (3 December) Miss A would not use her arm and he telephoned her mother, Ms B. Ms B said that when she saw Miss A at her grandmother's Miss A could not move her arm, was crying in pain and was propped up on the couch. Ms B then took Miss A home.

Presentation at a second public hospital

On 4 December 2000 Ms B and Mr D took Miss A to a second public hospital. Ms B described Miss A as comfortable but still not using her arm.

At the public hospital x-rays were taken of Miss A's left shoulder, humerus, forearm, wrist and hand, and showed no fracture. She was seen by a doctor, who recorded his impression that Miss A had a probable pulled elbow. He manipulated her arm and felt a click. Ms B has told me that after Miss A's treatment at the second public hospital on 4 December she

was fine and able to play within 20 minutes. Mr D confirmed that he heard a click and Miss A was able to play within 10 minutes.

Both Mr D and Mrs C told me that Miss A had not suffered any injuries in the period between leaving the first public hospital and her treatment at the second public hospital.

Response to complaint

The Public Hospital, in its response to the complaint, stated that it considered the medical management of Miss A to be appropriate; she was seen by Dr F, an experienced RMO, and Dr E, a registrar. The x-ray taken at the first public hospital did not reveal any dislocation and Miss A may have had a subsequent dislocation caused by her failure to use the sling. In other information, Public Hospital staff informed me that Dr F had attempted a reduction using a recognised technique and that Dr E elicited a full range of movement and was satisfied that the dislocation had been rectified and that the ongoing pain was related to tissue strain. Staff suggested to me that because of the parents' decision not to use the sling, Miss A was denied the opportunity to be relieved of some pain and the possibility of spontaneous reduction.

Independent expert medical advice to the Commissioner

The following independent expert advice was obtained from Mike Ardagh, an emergency medicine specialist:

"…

Medical /Professional Expert Advice

The sequence of events on 2 December 2000 is well described in the documentation I reviewed and are largely undisputed. I will not attempt to restate these, but instead I will proceed directly to answering the questions put to me.

1 What was the nature of [Miss A's] injury when she presented to [a public hospital] on 2 December 2000?

It is clear that [Miss A] had suffered a pulled elbow. This condition is known by other names, including Nursemaid's elbow or subluxation of the radial head. The radius is one of the long bones of the forearm and at the elbow joint it is rounded into a small disc shape, about the size and shape of a small peppermint sweet. A ligament, called the annular or orbicular ligament, forms a sling around the radial head, like a towel draped around someone's neck. Each end of the ligament (or towel) is attached to the ulnar bone which lies beside the radial head. The radial head therefore is free to rotate inside this ligament and this allows us to rotate the forearm, as we do when turning a door knob or a tap. At [Miss A's] age, the radial head is incompletely formed and indeed it cannot be seen on x-rays, as it has not turned to bone yet. Up until the age of five, there is a propensity for the radial head to slip out of the annular ligament when the arm is straight and the hand is pulled. This was exactly the injury that occurred to [Miss A]. As the displacement of the radial head is minimal, and the radial head is not ossified at that age (therefore is not visible on x-ray) x-rays are typically normal. Many practitioners, with a clear history suggesting a radial head subluxation and no other examination findings to suggest an alternative diagnosis, would not bother with x-rays at all.

When the radial head is subluxed, the child is reluctant to use the arm and in particular, is reluctant to have the elbow fully straightened or supinated (rotated so that the palm faces upwards).

There are two common and accepted forms of management of a pulled elbow. The first is to reduce it by supinating and flexing the arm and this may result in a click, which can be felt or heard, and in the prompt resolution of the child's discomfort. However reduction of a pulled elbow is not always that obvious as the child may continue to be uncomfortable, perhaps contributed to by repeat manipulations, and they may still favour the arm due

to persisting discomfort or for fear of more pain being inflicted. A full range of movement of the elbow is reassuring that the radial head is likely to be reduced.

If reduction is uncertain, or was unable to be achieved, then the second treatment option is employed, which is to leave the arm alone and the majority will spontaneously reduce within 48 hours. Many would rest the arm in a sling at this point, and I will discuss this further below.

2 Was [Dr E's] examination of [Miss A] of an appropriate standard?

I cannot answer this question conclusively as I have read one account that it was rushed through and I have read [Dr E's] account where he described being able to move the elbow with a full range of movement. Clearly communication with both the parents, other caregivers and the child is of great importance in such encounters. Reduction of a pulled elbow does cause brief distress for the child. If the reduction is simple and successful, then the brief distress is considered to be relatively trivial. If the reduction is unsuccessful or if there is persisting discomfort and fear, then the brief distress struggles to appear to be justified. Clear explanations of what was happening and why, and reassurance to all concerned may have helped to put the attempts at reduction into perspective. When [Miss A] continued to be distressed, the rationale of ongoing treatment in a sling may also have been more palatable if it was clearly explained, with justification, that this is a legitimate treatment option.

3 Was [Dr E's] diagnosis and treatment reasonable in view of [Miss A's] presenting symptoms, the results of his examination and other information which was available?

The diagnosis of a pulled elbow was reasonable, and an attempt to reduce it was appropriate. If [Miss A] did in fact have a full range of movement of the elbow, with full supination and full extension, then [Dr E] may have been right that the pulled elbow had been reduced.

However, I have some doubt as to whether [Miss A] would have had a full range of movement at this time. Even if the radial head had slipped back into the annular ligament appropriately, it was clear that [Miss A] had persisting discomfort and that she was distressed. As a consequence she may have resisted a full range of movement, even if a full range of movement was technically possible.

Two other points are worth making. First, the x-ray was probably not entirely normal. Although the bones were exactly where they should be with no sign of any fractures, the x-ray did suggest a small elbow joint effusion.

In other words, there was some swelling in the joint. This finding is non-specific and can occur with any injury to the joint, but it does suggest three things. Firstly, [Miss A] had a sore elbow. Secondly, this discomfort and reluctance to move the elbow would have persisted even if the radial head had been reduced to its normal position, and thirdly, reduction of the radial head may have been made more difficult by the fact that there was swelling on the elbow joint.

X-rays were repeated two days later at [a second public hospital], but unfortunately I only received one view of the elbow joint. On this view, it is impossible to tell whether there is still any elbow joint effusion.

The second point is that it is very hard to say whether the radial head had been reduced or not. Subsequently, it is impossible to say whether the reduction at [a second public hospital] two days later, was a reduction of the same pulled elbow, perhaps made easier by two days of rest and the resolution of some of the swelling, or whether the radial head had subluxed again in the interim. In terms of these deliberations, whether the radial head had been reduced or not in [the first public hospital] is not of much importance. By the time [Dr E] had finished with [Miss A], [Miss A] had had three attempts to reduce the radial head and she had persisting discomfort. It would have been inappropriate to continue these attempts at that time.

4 Was it appropriate for [Dr E] to recommend that [Miss A] wear a collar and cuff sling?

Were there any other appropriate treatment options available for [Dr E] after the use of the collar and cuff sling was declined?

As discussed above, it was appropriate at this time for [Dr E] to desist with further attempts to reduce [Miss A's] pulled elbow. [Dr E] appeared to conclude that [Miss A's] pulled elbow was already reduced, but whether this was true or not, reverting to resting the arm in a sling is the appropriate next step in treatment.

There is some evidence to suggest that resting a pulled elbow in a sling after it has been reduced will decrease the chance of it subluxing again. However, the evidence for this is not strong and it is appreciated that pre-school children will often attempt to dispose of a sling at their earliest possible convenience.

As a consequence of the lack of certainty that a sling is essential and the pragmatics of attempting to immobilise a child's limb, it is appropriate not to insist on use of the sling.

For a radial head subluxation of this type, and the natural history of spontaneous resolution of all symptoms within 48 hours, it would have been inappropriate to offer any other treatment options at this stage.

5 In his response to the complaint, [Dr E] states that '*I cannot however be sure if the subsequent relocation of this child's left elbow done by the doctor at [the second public hospital] was due to the fact that the child's left elbow re-dislocated because of failure to comply with medical advice ie wearing a collar and cuff sling*'. Please comment.

Like [Dr E], I cannot be sure whether the reduction of [Miss A's] pulled elbow at [a second public hospital] was the reduction of a second subluxation, or whether it had never been reduced in [the first public hospital]. Given the persistence of [Miss A's] symptoms through these two days, I suspect the pulled elbow was not reduced on 2 December 2000, but this is of no particular importance to these deliberations.

After three attempts to reduce [Miss A's] pulled elbow (one by her GP and two at [a public hospital]), persisting discomfort and distress being suffered by [Miss A], and a thought that it may have in fact gone back in, it was appropriate at this point to stop further attempts and rest the arm.

6 Was any other action warranted by [Dr E]?

I will make some general comments below which are relevant to this question.

7 General
Are there any other aspects of this complaint, which you consider warrant either:

- **Further exploration by the investigation officer?**
- **Additional comment?**

I have suggested that the diagnosis and the management of [Miss A's] pulled elbow by the staff at [a public hospital] on 2 December 2000 were generally of an appropriate standard. It was unfortunate that [Miss A's] pulled elbow could not be reduced promptly and with good resolution of her symptoms, but this does not mean that care was substandard.

However, I suspect that [Miss A's] parents and grandmother would still be unhappy with the service they received despite the reassurance that the management was on an appropriate standard. [Miss A] appeared to be put through pain which was unnecessary, she had persisting discomfort that was perceived to be a failure of treatment, and they felt the need to go to an

alternative hospital to try and get things right. Clearly the staff, and in particular [Dr E], were busy and [Miss A's] injury was a relatively minor one in the scheme of things. However, this minor injury has caused considerable distress to [Miss A] and her family, now I suspect it is causing distress to [a public health service] and some of the individuals involved in [Miss A's] care, and it is generating a large amount of work to respond adequately to the complaints received. All of this may have been avoided by some simple and clear communication at the time.

An explanation of what was happening and why, that manipulation causing brief discomfort was a necessary and appropriate thing to try, apologies and other common courtesies when the discomfort persisted, a clear explanation as to why rest and a sling was the appropriate next step in management, and the provision of a genuine invitation to return if symptoms had not settled within 48 hours, with explanations as to why such a return might be necessary – these, I suspect, would have avoided this unnecessary anguish. Further more, I consider that the attempts, in some of the submissions, to blame the caregivers because they declined the sling, to be unhelpful.

Summary

[Miss A] presented with symptoms suggesting a dislocated elbow which can be difficult to diagnose in a child so young. Initially, attempts were made, unsuccessfully, to reduce the elbow by both [Dr G] at his surgery and later by [Dr F] and [Dr E] at [a public hospital] on 2 December 2000. [Miss A] remained in distress and the decision was made to make no further attempt to reduce the elbow but to offer the accompanying grandparent and father a sling in order to treat the injury conservatively over the next 48 hours as in such period the majority of such type of injuries will spontaneously reduce. [Miss A] remained in pain during such period and was later taken to [a second public hospital] two days later where the elbow responded to reduction thereby relieving [Miss A] from any further pain or discomfort. [Miss A] has not since suffered any further re-occurrence of the injury.

In my professional opinion, [Dr E] provided [Miss A] with assessment and treatment which meets the appropriate standard of health care expected of a clinician in such circumstances."

Code of Health and Disability Services Consumers' Rights

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

RIGHT 4

Right to Services of an Appropriate Standard

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

Opinion: No Breach – Dr E

Right 4(1)

In my opinion Dr E did not breach Right 4(1) of the Code in his treatment of Miss A at a public hospital on 2 December 2000.

I accept that it is not possible conclusively to determine the state of Miss A's elbow after her presentation to a public hospital. However, after careful consideration of all the evidence, I consider it more probable than not that her elbow remained dislocated and that she presented with the same injury to a second public hospital on 4 December 2000. This view is supported by the following facts:

- Miss A presented to the first public hospital with a pulled elbow. This is supported by my expert advisor who said it is clear that she was suffering from this at the presentation.

- Dr F, who saw Miss A shortly before Dr E, recorded she had been unsuccessful in relocating her elbow joint.

- Contrary to the view of my expert advisor, I consider that although Dr E examined Miss A's elbow, he did not attempt to reduce the joint, as he believed that it had already been relocated. This is consistent with his statement (in response to the complaint) that his review of the x-rays did not show a dislocation and Mrs C's statement that Dr E said that if there had been a dislocation it had gone back in and there was now nothing wrong except normal soreness from the accident. It is also consistent with the statements made by the Public Hospital that Dr E was able to elicit a full range of movement and was satisfied at the time of its reduction.

- Both Mr D and Mrs C have told me that Miss A did not suffer any more injuries in the brief period between the hospital presentations. It is clear that Miss A's physical activity was limited by her pain and discomfort which, despite some improvement, was ongoing and continued to concern her family.

- Information provided by the second Public Hospital, that when Miss A presented on 11 October 2000 to another public hospital with a probable pulled elbow it was reduced with a click and shortly afterwards Miss A was able to play; and the evidence of Ms B and Mr D that Miss A was also able to play shortly after her treatment at that hospital on 4 December 2000.

Mrs C responded to my provisional opinion on behalf of herself, Ms B and Mr C. She stated that Dr E did not provide the appropriate standard of care to Miss A on the following grounds:

- Miss A's dislocation was detected and successfully treated at a second public hospital on 11 October and 4 December 2000.

- My expert advisor stated that x-rays will not usually detect a dislocation in young children.

- My expert advisor expressed doubt that Dr E was able to elicit a full range of movement of Miss A's elbow because her pain increased and therefore she would have resisted the examination.

The Public Hospital and Dr E responded to my provisional opinion and their comments have been considered, where relevant. Dr E submitted an apology to the family for their distress.

Although Dr E did not detect that Miss A's elbow was dislocated, I consider that his treatment was of an appropriate standard, for the following reasons:

- After reviewing the x-rays, Dr E did consider whether Miss A might have a dislocated elbow and examined her accordingly.

- Dr E's decision not to attempt any further treatment of Miss A's arm (a decision probably prompted by his belief that her elbow had already been successfully relocated) was appropriate in light of Miss A's pain and discomfort and the fact that most dislocations will spontaneously reduce in 48 hours.

- I consider it probable that Dr E did not elicit a full range of movement of Miss A's elbow because she was in considerable pain and her elbow remained pulled. However, my expert advisor also commented that it is not always obvious when a reduction has been successful as a child can continue to feel discomfort and be reluctant to move the elbow due to repeated manipulations. Therefore I consider it reasonable that Dr E thought Miss A's ongoing pain may have been due to his examination and the previous examinations by Dr G and Dr F or was normal soreness from her injury. I accept that Miss A's pulled elbow was successfully examined and treated on two other occasions. This does not mean that the services provided by Dr E at a public hospital were substandard.

- Dr E recommended that Miss A use a sling for symptomatic pain relief. I accept the comments of my expert advisor that a sling is the next appropriate step in treatment whether the elbow joint has been reduced or not.

- Dr E told Mrs C and Mr D to return if Miss A's pain was ongoing.

In these circumstances I consider that Dr E did not breach Right 4(1) of the Code in his treatment of Miss A on 2 December 2000 at a public hospital.

Opinion: No Breach – Public Hospital

Because Dr E did not breach Right 4(1) of the Code it follows that his former employer, a public health service, is not vicariously liable for his actions.

Other Comments

Communication
I note my expert advisor's following comment in relation to Miss A's treatment at a public hospital on 2 December 2000 that:

> "… An explanation of what was happening and why, that manipulation causing brief discomfort was a necessary and appropriate thing to try, apologies and other common courtesies when the discomfort persisted, a clear explanation as to why rest and a sling was the appropriate next step in management, and the provision of a genuine invitation to return if symptoms had not settled within 48 hours, with explanations as to why such a return might be necessary – these, I suspect, would have avoided this unnecessary anguish …"

I also note the information given by Mr D and Mrs C about Dr E's abrupt and uninformative manner at Miss A's presentation on 2 December 2000. In response to my provisional opinion Mrs C again raised a concern about Dr E's failure to communicate with them satisfactorily.

In response to my provisional opinion Dr E said that when he saw Miss A he was between operations and, although he did not have unlimited time, he felt that he was not abrupt and uninformative.

However, I accept the comments of my expert advisor and the information provided by the family about Dr E's manner. In my opinion Dr E did not intend to be abrupt or uninformative but he clearly was in a hurry. My view is supported by Dr E's admission that he had limited time and Mr D's statement that he appeared to be in a rush.

Nonetheless, the family were naturally worried about Miss A's pain and discomfort and needed reassurance about the nature of her symptoms and prognosis. They also needed to feel comfortable about asking Dr E for relevant information. Although I accept that Dr E was busy, his behaviour caused additional anguish and stress for Mr D and Mrs C. It is not surprising that they had a negative view of the treatment Miss A received at a public hospital, particularly as her symptoms persisted afterwards.

I think it likely that if Dr E's communication with the family had been satisfactory a complaint would not have been made. I hope that this investigation will aid Dr E in his future practice by highlighting the importance of communicating effectively with patients so that they have sufficient information on which to base their expectations of treatment.

I note that in his response to my provisional opinion, Dr E apologised to the family for any added stress they felt during his examination of Miss A. In its response to my provisional opinion, the Public Hospital noted that the importance of communicating effectively with patients so that they have sufficient information on which to base their expectations is pertinent to all medical staff. The Board advised me that it will present my final opinion to medical staff at a peer review session.

X-rays

I wish to draw the attention of the Public Hospital to the following comment made my expert advisor concerning the x-rays taken at the public hospital:

> "… At [Miss A's] age, the radial head is incompletely formed and indeed it cannot be seen on x-rays, as it has not turned to bone yet. Up until the age of five, there is a propensity for the radial head to slip out of the annular ligament when the arm is straight and the hand is pulled. This was exactly the injury that occurred to [Miss A]. As the displacement of the radial head is minimal, and the radial head is not ossified at that age (therefore is not visible on x-ray) x-rays are typically normal. Many practitioners, with a clear history suggesting a radial head subluxation and no other examination findings to suggest an alternative diagnosis, would not bother with x-rays at all …"

Mrs C also raised concern about this in her response to my provisional opinion. The x-rays were partly relied upon by Dr E in his assessment of whether Miss A's elbow had been relocated and were later reported by the consultant radiologist at the public hospital as indicating there was no dislocation. As noted above by my expert advisor, an x-ray may not detect dislocations in children of Miss A's age.

Sling

I wish to draw the attention of the Public Hospital and Dr E to the following comments made my expert advisor concerning the sling recommended by Dr E:

> "… There is some evidence to suggest that resting a pulled elbow in a sling after it has been reduced will decrease the chance of it subluxing again. However, the evidence for this is not strong and it is appreciated that pre-school children will often attempt to dispose of a sling a their earliest possible convenience.
>
> As a consequence of the lack of certainty that a sling is essential and the pragmatics of attempting to immobilise a child's limb, it is appropriate not to insist on the use of a sling.
>
> …
>
> Furthermore, I consider that the attempts in some of the submissions, to blame the caregivers because they declined to use the sling, to be unhelpful …"

I also wish to draw the attention of the Public Hospital and Dr E to the following comments made by Mrs C in relation to the sling:

> "… We agree completely with the medical expert's statement that attempts to blame us (the caregivers) [are] unhelpful … "

Actions

- A copy of this opinion will be sent to the Medical Council of New Zealand.
- A copy of this opinion, with identifying features removed, will be sent to the Australasian College for Emergency Medicine (New Zealand Faculty), and placed on the Health and Disability Commissioner's website, www.hdc.org.nz, for educational purposes.