Osteopath, Mr B

A Report by the

Health and Disability Commissioner

(Case 03HDC09752)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Ms A	Consumer
Mr B	Osteopath, Provider
Dr C	General Practitioner
Dr D	Consultant Neurologist

Complaint

On 30 June 2003 the Commissioner received a complaint from Ms A concerning the services provided to her by Mr B, osteopath. The complaint was summarised as follows:

> "*At a consultation on 20 February 2003 Mr B did not provide osteopathic services to Ms A with reasonable care and skill and, in particular, conducted an inappropriate manipulation and massage of Ms A's neck which resulted in dissection of an artery.*"

An investigation was commenced on 13 August 2003.

Information reviewed

- Information provided by Ms A
- Information provided by Mr B
- Medical records provided by a Public Hospital
- A copy of Ms A's ACC file in relation to this incident
- A copy of relevant medical records provided by Ms A's general practitioner, Dr C
- Information provided by Ms A's neurologist, Dr D

Independent expert advice was obtained from Ms Lorraine Green, osteopath.

Information gathered during investigation

On 17 February 2003 Ms A visited Mr B, registered osteopath, after suffering a bad headache, which she suspected was caused by sleeping on her neck awkwardly. Prior to treatment Ms A was given a consent form, which included the following statement:

> "Registered Practitioners using manual therapy treatment for patients with neck problems are required to explain that there have been some cases of injury to the arteries

of the neck following treatment. This has been known to cause strokes, sometimes with serious neurological (nervous system) changes.

The chances of this happening are extremely remote (approx 1 per one million treatments). Your Osteopath will perform manual tests on you, and requires you to fill in the form below fully to identify if you are susceptible to this risk.

PLEASE ASK QUESTIONS IF YOU REQUIRE FURTHER INFORMATION

I have read the above statement and understand its meaning. I accept the risk mentioned and consent to treatment for myself or the above minor under my care."

This form was signed by Ms A, who also completed her contact details. The rest of the form contains a list of potential risk factors with space for ticks or remarks. No ticks or remarks were made.

During the consultation Ms A complained to Mr B that she was also experiencing problems with her lower back. Ms A made an appointment to have this treated later the same week.

On 20 February 2003 Ms A returned to see Mr B for treatment of her lower back problem. Mr B asked Ms A whether her neck felt better and she said it was still sore.

Mr B explained that prior to providing Ms A with treatment he conducted a number of standard tests for risk factors, including:

- a physical examination
- a cranial nerve screen
- osteopathic tests – range of movement valsava, Kernegs (testing that the patient can straighten a leg), motor strength sensation, compression and distraction
- an Adsons test (palpitation of radial pulses while the patient extends the neck and turns the head to one side)
- blood pressure
- Kleynhams test for vertebral artery syndrome.

Mr B's notes in relation to the pre-treatment tests he performed at the 20 February consultation stated:

"… ROM [range of movement] good – s/tests cervicals BP [blood pressure] 122/75 …"

Mr B advised me that in palpitating Ms A's neck it was apparent that there was a recurrence of a C2/3 right rotation and C5/6 left rotation which he noticed at the first appointment. Mr B said he used a cranial occipital release to loosen the top cervical muscles and muscle energy to relax the neck muscles before manipulation. He then attempted to correct the C5/6 rotation on the left. Mr B said he began by positioning the cervicals for a low velocity side thrust manipulation. During the manipulation Ms A felt a pain in her head which she described as a "loud banging". She told Mr B and he stretched her neck, which stopped the noise. Ms A then attempted to stand up and found that her right side vision had become

blurry and she had pins and needles down her right arm and leg. Mr B recorded that her blood pressure had risen to 135/105.

Mr B recalled that he rang Ms A's general practitioner and then arranged to take her to a Public Hospital Emergency Department. Ms A recalled that prior to this, Mr B offered her a lolly, and took her outside for fresh air and a cup of tea. She said it took half an hour before Mr B arranged for her to be transported to the Emergency Department and that once there she was left by herself despite the fact that she could not walk and had trouble communicating.

After Ms A was taken to the Emergency Department, Mr B recorded the following attachment to his records:

> "Attachment notes for [Ms A]
> Treatment date 20 Feb 2003 as advised by Dr [C]
>
> Account of treatment
>
> [Ms A] arrived at my clinic as arranged on 20.2.03 for her follow up appointment. She appeared in a cheerful and positive manner and carried herself with normal gait and postural movements. She did not appear to be in a distressed situation but rather moved with ease and appeared of natural skin colour not flushed. In conversation she advised me she still had a headache but was no worse than her first consultation. When questioned there were no aggravating or accompanying symptoms nor aggravating or relieving factors to her condition. In her physical examination muscle tonus [tension in body tissue] was not apparent no difference in temp bi laterally. ROM [range of movement] was considered normal with no restriction to the cervical and thoracic region. In palpation of the cervical region a C2,3 RR [right rotation] and C5,6 L [left] rotation was apparent. In questioning there was no evidence of radiating pain to her shoulders head arms or fingers. Her BP [blood pressure] was recorded then at 122/75 then followed by a series of special tests relevant to cervical treatment these included the following:
>
> distraction (neg) Kernigs (neg)
> compression (neg) adsons (neg)
> Valsava (neg) Kleins meins (neg)
> cranial screen (neg)
>
> These along with lack of sensory changes and an unremarkable personal and family health history gave me no reason to suspect that a vertovascular accident may occur.
>
> Treatment at this stage commenced as follows:
>
> Occipital cranial release and trigger point therapy was used to prepare the cervical region. This is used with slight passive active muscle energy to promote movement in the cervical region and was used intensively on the C2,3 RR and C5,6 L rotation. This

was followed with positioning of the neck to allow a low velocity side thrust adjustment to the C2,3 RR this was completed without incident then rechecked with palpation. The cervical area was given time to relax again with trigger point therapy and a cranial release. The positioning of the cervical for the C5,6 L rotation was undertaken this resulted in a noise and pain to Ms [A] an elevated BP to 135/105 and altered vision to right eye arm and leg. Treatment was terminated and Ms [A] made comfortable. I then rang Dr [C] to discuss the situation and arranged for Ms [A] to be taken to A&E at [the Public] Hospital ASAP. Shortly thereafter these notes were taken on the advice of Dr [C]."

Ms A was subsequently found to have suffered a vertebral artery dissection. Ms A has continued to suffer consequences from her injury.

Independent advice to Commissioner

The following expert advice was obtained from Ms Lorraine Green, an independent osteopath:

"Please find the following report as requested providing osteopathic advice to be used in Ms [A's] case.

Professional standards that apply in this case are as follows.

The appropriate pre-treatment assessment would include the following details. A full case history detailing the nature and location of the complaint, any aggravating or relieving factors, any associated symptoms (for example, radiating pain or sensory disturbances into the extremities, dizziness, nausea, vomiting, or visual disturbances), the onset and progression (better, worse or constant) of the complaint, any daily pattern and any previous history of similar complaints.

Questions about the patient's medical history are also important, such as family history of disease and a systemic enquiry including questioning on cardiovascular and respiratory health, history of illness, accidents and surgery, current or long term medication and alcohol/tobacco use. All results should be recorded even if unremarkable.

Following the case history, a physical examination is performed, including observation of posture, active and passive movement testing of the regions involved and palpation of the soft tissue structures (muscles and ligaments). Special tests that apply in this case are checking blood pressure and vertebrobasilar ischaemia/ insufficiency test.

The above information would alert the osteopath to any contraindications to treatment or manipulation. From the above a diagnosis can be formed and appropriate treatment

offered to the patient or they may be referred to another health professional if osteopathic treatment is considered inappropriate.

I believe it is likely that Mr [B] did make an appropriate assessment of Ms [A's] condition, but I have had to make some assumptions based on the information given to me.

Mr [B's] case notes for Ms [A] are not adequate. He does not indicate if he asked further questions pertaining to her complaint. There is no evidence that the typed questions on the patient record have been asked. He comments on special tests and supplies a list of these, but they should be recorded specifically each time they are performed, whether positive or negative, so it is absolutely clear to the reader. However the fact that he states 's/tests cervicals' indicates to me that he did perform the tests as listed and the fact that he felt they were relevant to do shows that he probably asked the case history questions as listed earlier, but I should not have to assume this, it should be clearly documented.

His report is also not specific, he does not actually state the tests were performed on Ms [A] and the details are vague, he needs to detail what the physical examination refers to. I cannot decide if the osteopathic and orthopaedic tests are relevant to this case without details of exactly what tests were done. He states that he conducted the examination systematically, this may be so but his notes and the report do not indicate this.

As a note, the treatment notes for 20/02/03 appear unfinished and I cannot find what 'see attachment' refers to.

I have assumed the tests were performed on Ms [A] and they were negative and hence my opinion is that there was no indication of any predisposing condition for Ms [A] to strokes and thus no contraindications to the course of treatment Mr [B] settled upon.

There have been recorded cases of strokes occurring after upper neck manipulations (as performed by various health professionals) but research indicates the risk to be very low. Recent research 'indicates that for every 100,000 persons under 45 years of age, receiving chiropractic treatment, approximately 1.3 cases of VBA (stroke) attributable to chiropractic would be observed within one week of manipulation.' (1) Please note this is a chiropractic study and as the authors admit there are many flaws and more research is necessary. An extract from the Journal of Bodywork and Movement Therapies states 'while there are potentially serious sequelae from the use of HVLA thrust techniques (manipulation) the risks are low providing the patients are thoroughly assessed and treated by appropriately trained practitioners. With increasing evidence that spinal manipulation produces positive outcomes for acute low back pain and some categories of neck pain and headaches.' (2) This study does not quantify the risk.

As discussed earlier, if Mr [B] asked the appropriate questions and performed the appropriate tests and they were negative (it is stated that he only records negative results

I assume this actually means he only records positive results and not the negative ones), then appropriate precautions were taken in Ms [A's] assessment.

With regard to Mr [B's] skill in performing the osteopathic techniques, I cannot comment. I do not know what osteopathic training he has undertaken.[1] It would be impossible for anyone to comment on the skill of the procedures performed unless they were in the treatment room at the time of the incident.

In conclusion I think that it is likely that Mr [B] treated Ms [A] with reasonable care and skill. However his case history notes (and the report) are inadequate, they do not provide enough clear information on his examination process. My decision is largely based on my assumptions and not from the case history. Provided the test results were negative, the treatment was appropriate and Mr [B] could not have predicted the outcome.

I hope this report has answered all your questions, please contact me if further information is required.

Lorraine Green D.O. (U.K).
Registered Osteopath

References:

1 Extract from Rothwell DM, Bondy SJ, Williams JL. Chiropractic and stroke: a population based case-control study. Stroke 2001; 32(5): 1054-60.
2 Gibbons P, Tehan P. Journal of Bodywork and Movement Therapies, 2001; 5: 110-119."

Further independent advice to Commissioner

The Commissioner did not receive the attachment to Mr B's notes of 20 February 2003 until after the release of his provisional opinion, and the attachment was not seen by Ms Green when she supplied her initial advice. Once received, the attachment was forwarded to Ms Green, who was asked to review her advice in light of the new information. Ms Green provided the following supplementary advice:

"Thank you for providing further information in this case, in the form of the attachment to the case notes of 20th February.

I hope the following report answers the additional questions asked.

[1] Mr [B] is a registered osteopath and was trained through the New Zealand College of Osteopathy.

1. 'Was it appropriate for Mr. [B] to manipulate Ms [A's] neck on 20th February 2003, given that she had experienced no improvement after the consultation of 17 February?'
Yes. Ms [A] did not report any adverse reaction to the earlier manipulation, nor any symptoms to alert Mr. [B] to the possibility of a stroke. Mr. [B's] examination of Ms [A] revealed no contraindications to manipulation, therefore manipulation was appropriate.

Occasionally symptoms do not improve initially after a first treatment and it is normal practice to perform a similar treatment subject to the examination findings.

2. 'Should Mr.[B] have realized that Ms [A] suffered a stroke?'

Mr. [B's] actions immediately following the incident (the positioning of Ms [A's] neck for a manipulation resulting in the noise and onset of symptoms) indicate that he was aware that her new symptoms were probably indicative of a stroke, in that he rechecked her blood pressure, called her GP and arranged for her to go to A & E for further investigation.

3. 'Did Mr. [B] respond appropriately to Ms [A's] symptoms of noise, pain and altered vision?'

As alluded to above, upon the onset of these symptoms Mr. [B] ceased treatment, checked Ms [A's] blood pressure again and called her GP and ultimately arranged for her to go to A & E, so I believe his response was appropriate.

I would like to add, though that at the time of writing my initial report I was unaware that Ms [A] had been left to wait at A & E by herself. This must have been a very worrying time for her and I feel it would have been appropriate for someone to have sat with her until she was either seen by the medical team or her husband arrived.

4. 'Mr. [B] has forwarded an attachment to his notes of 2003. This had not been previously provided to the Commissioner. Can you please review your advice of 12/12/03 in light of this new information and advise me if anything contained in the attachment causes you to alter your opinion of;
a) the standard of care provided to Ms [A] and/or
b) the standard of Mr. [B's] notes of the consultation'

The attachment to the notes of 20th February confirm that my assumptions were correct, and that Mr. [B] did ask the appropriate questions and perform the appropriate examinations/tests relevant to Ms [A's] case. They show he treated her with reasonable care and that there were no contraindications to his course of treatment.

Obviously these attachment notes provided more detail than originally seen and while I do not feel it necessary to provide this degree of detail in the normal note taking of

each treatment, I see no reason why some of this information should not be recorded as a matter of course at each treatment. In particular the tests performed and the results to provide clarification to the reader.

I think that this case illustrates perfectly why it is necessary to detail all examinations and their results at every treatment. It would have made this process easier perhaps for all concerned by leaving no doubt as to the practitioner's skill and competence."

Code of Health and Disability Services Consumers' Rights

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

RIGHT 4
Right to Services of an Appropriate Standard

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

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

Other relevant standards

New Zealand Osteopathic Association Inc *Code of Ethics*

"***Commitment to quality and ongoing training***

We will demonstrate our commitment to quality and best possible practice by:

…

- *Keeping proper and accurate records of all patient treatments.*"

Opinion: No breach – Mr B

Assessment
My advisor, Ms Green, stated that an appropriate pre-treatment assessment for a patient presenting with Ms A's symptoms should include:

- a full case history detailing the nature and location of the complaint, any aggravating or relieving factors, any associated symptoms, the onset and progression of the complaint, and any daily pattern and any previous history of similar complaints
- family history of disease and a systemic enquiry including questioning on cardiovascular and respiratory health
- history of illness, accidents and surgery
- current or long-term medication and alcohol/tobacco use
- a physical examination, including observation of posture, active and passive movement testing of the regions involved, and palpation of the soft tissue structures (muscles and ligaments).
- blood pressure
- a vertebrobasilar ischaemia/ insufficiency test.

This information alerts the osteopath to any contraindications to treatment or manipulation. Although Mr B's notes of his pre-treatment assessment are unclear (see below), it appears that his assessment of Ms A's condition did comply with these requirements.

Neck manipulation
A stroke (vertebrobasilar accident) occurring after a neck manipulation is a recognised but rare complication of the procedure. Although the exact degree of risk is hard to quantify, studies suggest that it is in the range of one case per 20,000 to one case per million procedures.[2] The study referred to by my advisor suggested a figure of 1.3 strokes per 100,000 neck manipulations. In certain situations a patient may present a higher risk because of the presence of certain contraindicating conditions such as sudden onset of headache, visual or speech disturbances, and neurological symptoms such as one-sided sensory changes and weakness in arms or legs.

In this case Ms A does not appear to have presented with any symptoms to suggest that a neck manipulation was contraindicated, and there was nothing to suggest that she was at greater risk of stroke.

In respect of Ms A's complaint that Mr B manipulated her neck causing vertebral artery dissection, my advisor stated that although the neck manipulation is likely to have caused Ms A's stroke, there was nothing to indicate that the technique used by Mr B was performed incorrectly.

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[2] Vickers, A. and Zollman, C., "The Manipulative Therapies: Osteopathy and Chiropractic", British Medical Journal, Vol. 319, No. 7218, 30 October 1999, pp.1176-1179.

Conclusion
Stroke is a recognised risk of neck manipulation. Steps can be taken to minimise (but not eliminate) the risk, and Mr B advised me that he took such steps, although they are not well documented in his notes. Ms Green advised me that if Mr B took the steps he says he did – to examine Ms A's history for risk factors and to conduct a physical examination – then he provided treatment with reasonable care and skill. I accept that Mr B appropriately reviewed Ms A's history and did perform the appropriate physical tests before commencing treatment. In these circumstances, although Ms A suffered a serious and distressing adverse outcome, Mr B took the appropriate steps to minimise the risk of harm and therefore did not breach Right 4(1) of the Code.

Other comments

Record-keeping
It is important to keep comprehensive records for future reference and to assist other providers involved in a patient's care, and for a provider's own protection in the event of a complaint. The importance of good record-keeping is recognised in ethical and legal standards.

The *Code of Ethics* of the New Zealand Osteopathic Association, the professional body of which Mr B is a member, states: "We will demonstrate our commitment to quality and best possible practice by … keeping proper and accurate records of all patient treatments." Right 4(2) of the Code of Health and Disability Services Consumers' Rights requires providers to comply with professional and ethical standards.

An attachment to Mr B's notes of Ms A's consultation records the pre-assessment tests he performed. In his notes Mr B recorded that he performed "s/tests cervicals", but did not detail what the tests included. Presumably it was not Mr B's usual practice to document this information. In addition to his notes and the attachment, Mr B provided me with a list of the tests he performs as part of his standard practice, and advised that he only records specific tests when they demonstrate a positive test result (ie, when a risk is identified). I note that the list provided by Mr B includes tick-boxes next to each test. Appending the list to his notes for each patient and completing the tick-boxes as part of his standard practice would seem a straightforward task.

I also note that the tick-boxes on Ms A's consent form were not filled in. Mr B may well have discussed each risk factor with Ms A before asking her to sign the form and been assured that her history was free of risk factors, but he should have ensured that this was documented correctly. Ms Green advised me that all results should be recorded, even if unremarkable.

After-care
In response to my provisional opinion Ms A advised me that Mr B left her alone in the Public Hospital Emergency Department after the accident. I concur with my advisor's view that this would have been a very worrying time for her, and that it would have been considerate for someone to have sat with her until she was seen by the medical team or a family member arrived. If Mr B was not able to remain with Ms A, it would have been appropriate for him to have asked a staff member or colleague to stay with her.

Follow-up actions

- A copy of this report will be sent to the New Zealand Register of Osteopaths.
- A copy of this report, with details identifying the parties removed, will be sent to the New Zealand Osteopathic Association, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.