General Practitioner, Dr C

A Medical Clinic

A Report by the

Health and Disability Commissioner

(Case 05HDC00814)

Health and Disability Commissioner

Parties involved

Ms A	Consumer/Complainant
Ms B	Consumer's mother
Dr C	Provider/General Practitioner
Dr D	General Manager, the medical clinic
Dr E	Medical Director, the medical clinic
Dr F	Emergency Physician, the public hospital

Complaint

On 19 January 2005 the Commissioner received a complaint from Ms B about the services provided to her daughter, Ms A, by Dr C. The following issues were identified for investigation:

The adequacy and appropriateness of care and treatment provided by Dr C to Ms A on 18 January 2005. In particular:

- *Whether Dr C should have arranged an urgent chest X-ray;*
- *Whether Dr C performed an adequate assessment.*

An investigation was commenced on 18 April 2005.

Information reviewed

Information from:

- Dr C
- Ms A
- Ms B
- The District Health Board
- The Medical Clinic

Independent expert advice was obtained from Dr Gerald Young, general practitioner.

Information gathered during investigation

Overview
Ms A attended the medical clinic (the Clinic) with a two-week history of breathing difficulties, and chest pain over the previous 12 hours. She was seen by Dr C, who concluded that she had a chest infection, and arranged for a chest X-ray to be performed. He recommended that Ms A return to see him in two days' time with the result of the X-ray.

On return home, Ms A spoke to her mother, Ms B, who was concerned that her daughter had not received the correct care, as she considered that the peak flow reading was of a level that required treatment. Ms B telephoned the Clinic and spoke to a nurse, and an ambulance was arranged to take her daughter to the public hospital emergency department.

Dr Gerald Young, who provided independent expert advice, was concerned that Ms A had shown symptoms that were indicative of a pulmonary embolism. Dr Young considered that Dr C had failed to adequately assess Ms A, and exclude the possible diagnosis of pulmonary embolus.

The Medical Clinic
Dr D, the General Manager of the medical clinic, stated that general practice is the main service provided, but that the Clinic also provides accident and medical services for casual patients and those without regular general practitioners. The Clinic has X-ray facilities and an in-house pharmacy, and carries out a range of procedures, including care of acute and chronic conditions, such as diabetes, asthma, minor fractures and trauma, heart conditions, minor surgery, and terminal care. The Clinic is currently taking part in the Cornerstone RNZCGP accreditation, and seeking accreditation against accident and medical standards developed by Standards New Zealand through Quality Health New Zealand.

Dr E is the Medical Director of the Clinic, and is responsible for accident and medical services.

Dr C
Dr C has worked as a general practitioner overseas since 1973, and on a yearly basis works as a locum in New Zealand. In January 2005, he was working at the Clinic as a locum. Dr C has since returned to his home overseas.

Chronology
On 18 January 2005 at 11.22am, Ms A, aged 18, went to the Clinic with a two-week history of intermittent shortness of breath, and constant pain in her lower right chest, which had been present over the previous 12 hours. Ms A had given birth three weeks earlier.

Ms A attended the Clinic and was seen by Dr C at 11.30am. Her mother, Ms B, stated:

> "[My daughter] was complaining of lack of breath and severe pain in right hand side lung … she was in extreme pain and had difficulty walking due to shortness of breath

> and was crying when [the doctor] was examining her. … Her condition was so bad her partner had to carry her in and out of bed.
>
> [Dr C] did peak flow [reading] which read 180 … I am asthmatic myself and know anything under 220 is danger zone … she was then asked to get an X-ray and he prescribed Panadol and antibiotics and told her to come back [in two days]."

Dr C provided the following summary of the consultation:

> "1. Assessment. I consulted [Ms A] as usual by taking a history, then did a physical examination followed by a request for special investigations and treatment for her ailment.
>
> 2. I advised her to get a chest X-ray as well as blood tests and to report back in two days time, or earlier, depending on her result and condition after.
>
> 3. I printed a request for an X-ray to be done as soon as possible.
>
> 4. I did not consider [pulmonary embolism], as there were no other signs to make that diagnosis (cyanosis, haemoptysis or DVT [deep vein thrombosis]).
>
> 5. It is my usual practice after 30 years as a GP to get the patient back as soon as the blood tests, X-rays or any other special requests are available."

Following his assessment, Dr C prescribed an antibiotic, Amoxil 500mg, to be taken three times a day, and four-hourly paracetamol. He also wrote out a general X-ray request form, and a blood-test request form for a full blood count, ESR and iron studies, and recorded Ms A's peak flow as 180. Dr C recorded in the medical notes:

> "Needs some tests please and to report back in 2 days for review."

Dr C stated:

> "My impression was that [Ms A] may have had a chest infection, and therefore I prescribed [antibiotics and paracetamol] for pain and fever as her temperature on examination was slightly raised. …
>
> As [Ms A] was 3 weeks post-partum, I considered it appropriate to get a CBC + ESR and Iron studies, as well as a chest X-ray to rule out the exact cause of her chest pain, as it sounded like a bronchitis to me. Her peak flow was low … because of pain while breathing, as I didn't make any notes of bronchospasm on consultation. …
>
> I was keen to see the progress of the patient on my treatment, as I requested her to report back in 48 hours time by which time I was sure that the necessary results (X-rays and blood tests) would be back."

In response to the provisional opinion, Dr C stated:

> "I may have slipped by not putting in my notes every negative finding on clinical examination, but in every patient that I examine, I routinely check on the limbs for oedema, circulation, or other possible to DVT and/or pulmonary embolism, … aneurysm or abdominal masses."

Ms A contacted her mother later in the day. Ms B was concerned about the care her daughter had received, particularly because of what she perceived to have been a low peak flow reading. Ms B suffers from asthma herself, and considered a reading of 180 to be very low. She immediately called the Clinic. She spoke to a member of nursing staff, who arranged for an ambulance to take her daughter to hospital.

At the public hospital, Ms A was assessed by the triage nurse at 7.31pm. Her presenting complaint was described as "Abdo[minal] pain". At 8.49pm, Dr F, emergency physician, assessed Ms A. Dr F recorded her as having right upper quadrant abdominal pain and right lower chest pain, which had started the previous day. Following his examination, Dr F prescribed analgesia, and 2.5mg of morphine was given intravenously at 9.05pm with good effect. A further 5mg of morphine was administered at 10.25pm. At Dr F's request, a chest X-ray was performed, and was reported by a radiologist as normal. Ms A's blood tests were broadly normal, apart from a low haemoglobin level of 102g/L (normal haemoglobin is 120-155g/L).

Dr F recorded that Ms A's pain was most likely due to musculoskeletal causes. He prescribed diclofenac 75mg and codeine 30mg for pain, and advised her to return if she had further shortness of breath or abdominal pain. In addition, she was advised to see her general practitioner later in the week.

Internal inquiry

Ms B considered that Dr C should have been more concerned by her daughter's presentation, in particular her peak flow reading. Ms B therefore submitted a complaint to the Clinic. She received a reply from Dr D:

> "I have investigated the issues raised with the doctor concerned and our nurse manager.
>
> As a result our triage and patient assessment procedures have now been reviewed at our latest nurse meeting and all staff have been made aware of the importance of correct procedures.
>
> This case has also been discussed at our monthly doctors meeting/ Peer review.
>
> I apologise on behalf of [the medical clinic] for the situation that occurred at your daughter's visit and assure you that we have reviewed our procedures and assessments so that this situation does not occur again."

Ms B had also complained to the Commissioner on 19 January 2005, the day after her daughter's treatment by Dr C.

Dr D advised the Commissioner:

> "[Dr C] was working as a locum … and a nurse was available, but [Dr C] chose not to seek assistance on this occasion. It is now the norm in general practice that doctors will take their patients from the waiting room and [Dr C] did so on this occasion. However, it is [the medical clinic's] normal mode of practice that the patients are first assessed by a nurse in most cases and this assessment is documented. There was no nurse documentation on this occasion, and I cannot comment on the workload at the time [Ms A] presented, but can state that it was [Dr C's] preference to work unassisted. …
>
> Due to radiographer difficulties at the time, no X-ray service was available on site."

No protocols or guidelines for the management of patients presenting with chest pain were in place at the Clinic in January 2005. Dr D advised that it was expected that a doctor with Dr C's experience would have known how to manage a patient presenting with chest pain, irrespective of formal protocols.

Dr D further stated:

> "The case was discussed fully. …
>
> During this process, it was reemphasised that:
>
> All patients are initially assessed by the A&M [Accident and Medical] nurse.
>
> History and initial observations are taken. The patient is then seen by the doctor. If patients either appear unwell or inform the receptionist that they are suffering from chest pain, [or] shortness of breath, the receptionist is to call the A&M nurse immediately. This nurse carries a portable phone. …
>
> From the information we have, it appears, from the notes, that no staff other than [Dr C] was involved. During [his] time here he preferred to work independently.[1] Our procedures are that the nurses have been instructed to write their initial assessments into the medical notes. …
>
> I note that when further contact was made with [the medical clinic] … that a nurse did make the appropriate assessment and arranged an ambulance and transfer."

In response to the provisional opinion, Dr C has apologised to Ms A:

[1] Dr C advised me that the volume of patients at the Clinic meant he often needed to work alone.

"I am very sorry about my breach of the Code and any other inconvenience that I caused [Ms A] after her consultation with me on the 18th of January 2005. I will appreciate it if you can offer her my sincere apology for this whole matter."

Subsequent events
Ms A was reviewed by her general practitioner, who confirmed in May 2005 that she did not have a pulmonary embolus.

Independent advice to Commissioner

The following expert advice was obtained from Dr Gerald Young, general practitioner, on 7 June 2005:

"I have been asked to provide an opinion to the Commissioner on case number 05/00814.

I declare that I have read and agree to follow the 'Guidelines for Independent Advisors'.

In preparing independent advice on this case to my knowledge I have no personal or professional conflicts of interest.

My qualifications are B.H.B, MB,Ch.B.(Auckland), FRNZCGP. My training included 3 years as a surgical registrar in the Auckland Surgical training programme. I have been in general practice for 16 years. Presently I work in a large medical centre that handles both general practice as well as acute accident and medical problems.

I have been asked to consider the issues as listed below:

'Please comment generally on the assessment performed by [Dr C] on [Ms A] on 18 January 2005, giving reasons for your opinion.

Please comment specifically on the points below:

1. What assessments are appropriate for a general practitioner to perform in excluding a diagnosis of a pulmonary embolus in a patient? Was [Dr C's] assessment appropriate?

2. With what urgency would it have been appropriate for [Dr C] to arrange [Ms A's] chest X-ray? Please give reasons for your view.

3. Please comment on the peak flow reading of 180, as recorded by [Dr C].

4. Please comment on the appropriateness of the drugs prescribed by [Dr C].

5. Please comment on the appropriateness of [Dr C's] discharge advice to [Ms A].'

My opinions and advice to the Commissioner on this case [have] been based on the documents supplied:

1. Letter of complaint (page 1)
2. Letter of notification (page 2 to 4)
3. Response from Medical Centre (page 5 to 14)
4. Response from [Dr C] (page 15 to 16)
5. Clinical notes [from the public hospital] (page 17 to 27)

Additional documents used for reference

1. 'Pulmonary embolus' article in Medical Protection Society Casebook 3 November 2003. (Web base version available online)

2. 'Pulmonary Embolism' Emedicine review article (available online www.emedicine.com commonly used reference site for General Practice)

   Copies [of] both review articles [are] enclosed.

Background

On 18 January 2005, [Ms A] went to her GP, [Dr C], with a two week history of intermittent shortness of breath, and the previous 12 hours with constant pain in her lower right chest. [Ms A] had given birth three weeks earlier.
[Dr C] stated:

> 'I consulted [Ms A] as usual by taking a history, then did a physical exam followed by a request for special investigations and treatment for her ailment. …
>
> I advised her to get a chest X-ray as well as blood tests and to report back in two days time, or earlier, depending on her result and condition after. …
>
> I did not consider [pulmonary embolism] as there were no other signs to make that diagnosis (cyanosis, haemoptysis or DVT). …
>
> It is my usual practice after 30 years as a GP to get the patient back as soon as the blood tests, X-rays or any other special requests are available.'

On examination, [Dr C] recorded:

> 'On exam: tender in rt. Hypoch. ENT=nad, Chest=clear, Peak flow=180. No urinary problems. 4 weeks post-partum. Needs some tests please and to report back in 2 days for review. Temp= 37.8.'

Following his assessment, [Dr C] prescribed Amoxil 500mg, TDS and four hourly paracetamol. He also wrote out a general X-ray request form, and a blood-test request form, requesting full blood count, ESR and iron studies, and asked Ms A to come back in two days for further review.

Having been discharged, [Ms A] contacted her mother, who was concerned over the care her daughter had received. Her mother called the medical centre where [Dr C] worked, speaking to a member of nursing staff, who arranged for an ambulance to take [Ms A] into hospital.

At [the public hospital], [Ms A] was assessed by the triage nurse, […], at 7.31pm with her presenting complaint being described as 'Abdo[minal] pain'.

At 8.49pm, [Dr F], Emergency Physician, assessed [Ms A]. [Dr F] recorded [Ms A] as having right, upper quadrant abdominal pain and right lower chest pain that started the previous day.

Following his examination, [Dr F] prescribed analgesia, with 2.5mg of morphine given intravenously at 9.05pm with good effect. A further 5mg of morphine was administered at 10.25pm.

A chest X-ray was performed which was recorded as normal. The blood tests were broadly normal, apart from a haemoglobin of 102g/L.

[Dr F] recorded that the most likely cause of [Ms A's] pain was musculoskeletal.

Dr F prescribed diclofenac 75mg and codeine 30mg for pain, and she was advised to return if she had further shortness of breath or abdominal pain. She was advised to see her GP, […], later in the week.

Advice on the general question:

Please comment generally on the assessment performed by [Dr C] on [Ms A] on 18 January 2005, giving reasons for your opinion.

From the medical records supplied, the history documents the intermittent shortness of breath for 2 weeks, with constant pain in the lower right [chest] for the last 12 hours prior to being seen. The severity of the pain at the time of the consultation is not documented as to whether it was mild, moderate or severe. The records do not document any further inquiries as to possible cause(s) for the symptoms, such as:

has she had a cold?, has she been coughing?, does she have asthma?, has she had any chest / abdominal trauma?, does she have any calf / leg swelling or pain? There are also no inquiries documented about potentially relevant past history such as previous lung problems, deep venous or other thrombosis, medications that she may be on in particular had she restarted the oral contraceptive pill.

The records do document in the examination section that [Ms A] is 4 weeks post partum and has no urinary problems. Knowing that [Ms A] was 4 weeks post partum should have been another warning flag that pulmonary embolism would need to be ruled out as the post partum period is known as one of the risk factors for venous thrombosis and therefore potentially pulmonary embolism.

The clinical exam is as documented. Not documented is any examination of the calves/legs/groins to exclude swelling or tenderness. It is not clear if a full abdominal exam was performed or if only the upper abdominal area was examined.

No working diagnosis has been recorded but an assumption can be made that [Dr C's] working diagnosis was a possible chest infection, as he prescribed an antibiotic and ordered a chest X-ray. Of note pulmonary embolism was not documented as a possible diagnosis or a diagnosis that had to be excluded.

The overall assessment is not of an acceptable standard as the possibility of pulmonary embolism secondary to venous embolism has not been satisfactorily explored in the history taking or the clinical exam. It is accepted that the clinical exam is often entirely normal with pulmonary embolism therefore it is not a diagnosis that can be ruled out clinically. A clinical history of shortness of breath, right sided chest pain and being 4 weeks post partum, which was recorded, demands that pulmonary embolism is conclusively excluded as a possible diagnosis. Although pulmonary embolism can be easily overlooked as a diagnosis, missing a diagnosis of pulmonary embolism carries an unacceptably high mortality and morbidity risk. Pulmonary embolism is a diagnosis that requires a high index of suspicion and can only be excluded after performing the appropriate investigations.

Advice on the specific questions:

1. **What assessments are appropriate for a general practitioner to perform in excluding a diagnosis of a pulmonary embolus in a patient? Was [Dr C's] assessment appropriate?**
   The assessment is based on the history of the symptoms and in particular if there is another clear explanation for the shortness of breath and chest pain that developed. If there is no clear alternative explanation for the presenting symptoms then pulmonary embolism must be excluded. The clinical exam can only add supporting evidence to the diagnosis of pulmonary embolism, for example a finding of a swollen or painful leg suggesting a deep venous thrombosis. The clinical exam is not able to make or exclude the diagnosis of a pulmonary embolism. The diagnosis of pulmonary embolism can only be made

or excluded with immediate referral for further specific investigations, such as a ventilation perfusion scan, CT angiography or pulmonary angiography.

Dr C's assessment was not appropriate in that the history documented did not include questions about leg swelling and/or pain, thrombogenic medication or past history of thrombosis. There was no documented examination of her lower limb[s] to exclude evidence of venous thrombosis. There was no immediate referral for further definitive investigations.

2. **With what urgency would it have been appropriate for [Dr C] to arrange [Ms A's] chest X-ray? Please give reasons for your view.**
If [Dr C] had access to an X-ray facility onsite then it would be reasonable to do a chest X-ray immediately and review the X-ray findings. A normal chest X-ray does not exclude a diagnosis of pulmonary embolism.

   If there is no onsite X-ray facility then [Ms A] should have been transferred to the nearest facility that is able to perform a definitive investigation to exclude a pulmonary embolism as well as the X-ray.

   The reason for this is that pulmonary embolism is a diagnosis that should be made as soon as possible and until the diagnosis has been made or excluded the patient should remain under medical care, in case the patient's condition deteriorates which could happen suddenly at any time.

3. **Please comment on the peak flow reading of 180, as recorded by [Dr C].**
This peak flow appears very low for an 18 year old female, however her height has not been documented so how much below the expected normal is not able to be determined. If [Ms A] is taller than 120cm it would be below the expected normal.

   Possible causes for the low reading could have been the chest pain preventing full chest contraction or pulmonary embolism causing lung collapse / infarct. There is no explanation offered in the records for this low peak flow finding and as already stated the exclusion of the possible diagnosis of a pulmonary embolism should have been immediately initiated.

4. **Please comment on the appropriateness of the drugs prescribed by [Dr C].**
It was reasonable to have prescribed Amoxil Capsules 500mg three times daily, as [Dr C's] working diagnosis appeared to be that of a chest infection. This course of action would not have been clinically unreasonable as long as excluding pulmonary embolism paralleled the antibiotic treatment initiated.

   The prescription of paracetamol 500mg tablets, two to be taken 4 hourly for the pain and probably for the mild fever of 37.8 degrees, was not inappropriate. However on the question of whether stronger analgesic should have been prescribed instead of the paracetamol, or as well as the paracetamol, I am unable

to answer specifically. There appears to be a large difference in the pain levels noted in the medical records of [Dr C] and the degree of pain reported in the letter of complaint. The medical records do not directly document the level of pain but inference can be made medically that as recorded the pain levels at the time of the consultation and examination did not appear to be significant. Normally if pain was reported as severe it would probably be documented as such in the records. Also in the examination the amount of tenderness found does not appear to be severe, if significant tenderness were encountered it would probably be documented, for example as 'tender +++' or similar notation. The records do not document any guarding in the right hypochondrium which would have leant further support to the pain being severe. Therefore the prescription of paracetamol appears to have been acceptable at the time [Ms A] was consulted.

I accept that the pain may have got much worse after the consultation with [Dr C]. The pain was severe by the time [Ms A] was seen at the hospital emergency department as morphine was required. There is no documentation available for me to determine the time that elapsed between the consultation with [Dr C] and the time that morphine was deemed to be required and given at 9.05pm later that evening.

5. **Please comment on the appropriateness of [Dr C's] discharge advice to [Ms A].**
The discharge advice given by [Dr C] to [Ms A] is inappropriate and irrelevant in the context of the management, as Ms A should not have been discharged home but transferred as soon as possible for investigations to exclude pulmonary embolism.

Summary

The standard of medical care provided to [Ms A] by [Dr C] falls below an acceptable standard by a moderate degree because the actual diagnosis remains uncertain. If [Ms A] did indeed have a pulmonary embolism then the lack of standard of care would be further toward the severe end of the scale.

Pulmonary embolism is a potentially life threatening condition that can be missed but that can not be a reason for failing to exclude this diagnosis. In [Ms A's] case, known to be 3-4 weeks post partum, presenting with a history of shortness of breath and right sided chest pain, provides more than enough clinical evidence to need to rule out a pulmonary embolism.

Additional Comments

Comment needs to be made that the diagnosis of pulmonary embolism has still not been conclusively excluded.

> … [Ms A] was seen in the emergency department of [a public hospital] and a chest X-ray was done, which was normal, and pulmonary embolism was even listed in the records as one of the potential differential diagnosis but excluded based on the clinical exam and normal chest X-ray. It is not acceptable practice to exclude a pulmonary embolism based on the clinical exam and a normal chest X-ray.
>
> The findings documented from the emergency department, with no clear cause for a diagnosis of 'musculoskeletal pain' that required a total of 7.5mg of morphine to control the pain, did not justify the dismissal of any further definitive investigations to exclude pulmonary embolism, in my view.
>
> In my opinion it would be advisable for this case to be reviewed by [the public hospital's] emergency department to ascertain whether the protocols within the department have been followed."

Further advice

Further advice was requested from Dr Young on 20 July 2005 and he was asked to comment on the following additional issues:

1. The relative importance of an accident and medical centre having a protocol, or guidelines, for the management of chest pain.

2. [Dr D's] statement that "a doctor with [Dr C's] stated experience should have known how to manage [Ms A's] presentation".

3. The adequacy and appropriateness of oversight arrangements provided to [Dr C].

4. Any other aspects of the care provided to [Ms A] that warrant additional comment.

Dr Young responded as follows:

> "Additional advice requested:
>
> 1. The relative importance of a medical centre (that provides an accident and medical service) having a protocol, or guidelines, for the management of chest pain.
>
>   The value of a chest pain protocol or guideline is to make all the staff aware of the importance not to miss this potentially very serious (possibly fatal) clinical problem [pulmonary embolism] and to clearly document the standard of care that the practice expects to deliver, and is expected to deliver. Missed pulmonary embolism is second only to missed myocardial infarction as causes of misdiagnosis leading to deaths in primary care.
>
>   The usefulness of a guideline or protocol is increased in an accident and medical setting because often the patient is completely unknown, or only partially known, to the clinic. In this situation there is no in-depth past history to assist in making the

correct diagnosis or to satisfactorily eliminate a potentially serious diagnosis. Accident and Medical clinics also tend to have more part time and locum doctors working (as was the case with [Dr C]) so written guidelines help these doctors to comply with standards of care expected to be delivered from the facility. Also if the clinic promotes itself to the public as being competent to handle acute accident and medical problems, which [the medical clinic] does, then this increases the chances that patients will preferentially present to the Clinic with potentially more severe medical problems. Patients have been led to believe that the Clinic is probably more able and better equipped to deal with these types of problems rather than waiting for their own general practitioner. This appears to have been the case with [Ms A] who went to the Clinic as opposed to her own GP.

A protocol or guideline acts as a clinical tool to be used to help ensure all the steps and procedures that should be done, are done in a consistent and timely manner, for all patients with chest pain so as to minimise the risk of missing potentially serious diagnoses, such as a pulmonary embolism. For problems such as pulmonary embolism which are seen infrequently, having documented protocols or guidelines available allows members of the team to assist each other to ensure all the steps and / or procedures have indeed been completed.

[Dr D] stated that there were no protocols or guidelines in place on 18th January, the date that [Ms A] was seen. I would strongly recommend that one be developed or adopted, if not done so already.

The 'Reception Guideline for Triage Responsibilities' and the 'Standing Order for the Registered Nurse to Administer Medication' that were enclosed with [Dr D's] reply are not complete enough to be a stand alone chest pain protocol or guideline, although they could be included as part of a chest pain protocol.

2. That 'a doctor with [Dr C's] stated experience should have known how to manage [Ms A's] presentation'.

   I largely agree with this statement from [Dr D]. Knowing the clinical requirements to confirm or exclude the diagnosis of pulmonary embolism would be an expected standard of knowledge of care for any general practitioner, whether they worked in general practice or in an accident and medical centre. All doctors working in general practice and in accident and medical centres should be vigilant not to miss the diagnosis of pulmonary embolism. As stated in my initial report [Dr C] did not meet this expected standard of clinical care.

   However quality of clinical care delivered to a patient is not just confined to the care delivered by the attending doctor. Quality of care is a systemic issue for the entire clinic or practice. This is the rationale for accreditation of practices and clinics against an external standard.

Because there were no protocols or guidelines in place at the Clinic, the assessment procedures used by [Dr C] varied from the stated 'normal mode of practice' of patients being assessed by a nurse first. I note that with the new 'Reception Guideline for Triage Responsibilities' that if a patient now presents with chest pain, then a triage nurse would assess the patient first.

Whether the outcome would have been any different with the use of a protocol is unknown, however guidelines and protocols may have helped to ensure that all steps were taken and in an appropriate time frame. Ultimately the clinical decision would still have rested with [Dr C], as often the basic investigations are normal (the investigations done later at the A&E department were not diagnostic) or show few signs in pulmonary embolism. Therefore [Dr C] would still have been the one that would have to decide whether the symptoms and clinical findings could have been satisfactorily explained by an alternate diagnosis which would have reasonably excluded a diagnosis of pulmonary embolism. In this case [Dr C] appears to have decided the symptoms and findings could be explained by a respiratory infection. As stated in my original report I did not believe that this diagnosis could be accepted without more specific investigations to exclude the diagnosis of a pulmonary embolism.

To summarise, guidelines can aid clinical management and improve quality of service but in the case of suspected pulmonary embolism, where the findings can be nonspecific, the clinical management decisions will be determined by the attending doctor.

3. Were the oversight arrangements provided to [Dr C] adequate and appropriate?

   The oversight arrangements provided to [Dr C] are adequate and appropriate. Both [Drs D and E] are Fellows of the RNZCGP and vocationally registered. [The medical clinic] has not attained Level 2 Accident and Medical status (but are working towards it) so a vocationally registered accident and medical practitioner is not a requirement. [Dr E] is working toward his AMPA fellowship and this is desirable for any clinic that wishes to promote its provision of accident and medical services.

   I also note in the original reply to the HDC Office that peer review meetings were carried out in the Clinic.

4. As a general comment I accept that it is unknown if [Ms A] had a pulmonary embolism or not however the clinical presentation of symptoms and signs warranted the diagnosis of pulmonary embolism to be positively excluded. This case serves as a reminder to us all in primary care, in particular those working in accident and medical clinics, to be vigilant for atypical presentations of chest pain, and to adopt clinical management pathways of caution and safety before dismissing potentially serious differential diagnosis."

Response to provisional opinion

Accident and Medical Clinic
Dr D supplied a copy of the document 'Guidelines for Chest Pain', which has been introduced at the medical clinic since Ms A's assessment on 18 January 2005. Dr D stated:

> "We accept that we did not have a chest pain management protocol in place at the time. And the doctors working in our centre should have a chest pain management protocol available to them … However absence of such a protocol does not demonstrate a breach if we can demonstrate that we have procedures or processes in place that were reasonably practicable to prevent [Dr C's] act or omission.
>
> These are:
>
> 1. Collegial support – Other GPs were working at the clinic at the time and [Dr C] had the option of seeking advice. Appropriate guidance and collegial support was readily available, on site.
>
> 2. That as soon as another member of our team was contacted, appropriate management was instituted i.e. transfer to hospital via ambulance. Indicating that our systems are in place and work.
>
> 3. [The Clinic] meets Medical Council standards for oversight – Dr Young comments that the 'oversight arrangements provided to [Dr C] are adequate and appropriate'."

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: Breach — Dr C

Introduction
Ms A was entitled to have accident and medical services provided with reasonable care and skill. Dr C was required to perform an appropriate assessment of Ms A's condition and initiate appropriate treatment. Ms B's greatest concern, when making her complaint about the care provided to her daughter, was that the peak flow reading recorded by Dr C was sufficiently low to have warranted further action. My independent expert, Dr Gerald Young, considered Ms A's overall clinical presentation, and emphasised the importance of an adequate clinical examination and assessment in a patient presenting with chest pain.

I consider that Dr C did not satisfactorily discharge his duty when he saw Ms A on 18 January 2005, as he failed to exclude the possibility of a pulmonary embolism, a diagnosis that needed to be ruled out given Ms A's clinical presentation. For the reasons given below, I am of the opinion that Dr C breached Right 4(1) of the Code of Health and Disability Services Consumers' Rights (the Code).

Assessment
There is no record of an examination by Dr C to show that he assessed whether a deep vein thrombosis was present. He made no record of possible causes of Ms A's symptoms, the severity of her pain, any previous lung problems, any previous deep vein thromboses, and whether she was on the oral contraceptive pill. There is no reference to any clinical examination of Ms A's calves, legs or groin, which could have indicated signs of thrombosis through swelling or tenderness.

Dr C stated that he did not consider a pulmonary embolism in Ms A's case as there were "no other signs to make that diagnosis". He described the absent signs as cyanosis, haemoptysis and deep vein thrombosis. However, I consider that Ms A's presenting symptoms (of shortness of breath and right-sided chest pain three weeks after giving birth) required Dr C to specifically exclude a pulmonary embolism. Dr Young stated that such a presentation "demands" that Dr C should have conclusively excluded pulmonary embolism as a possible diagnosis, and I accept Dr Young's advice.

Dr Young provided a summary of his view of Dr C's assessment of Ms A:

> "The overall assessment is not of an acceptable standard as the possibility of pulmonary embolism secondary to venous embolism has not been satisfactorily explored in the history taking or the clinical exam. … Although pulmonary embolism can be easily overlooked as a diagnosis, missing a diagnosis of pulmonary embolism carries an unacceptably high mortality and morbidity risk. Pulmonary embolism is a diagnosis that requires a high index of suspicion and can only be excluded after performing the appropriate investigations."

Chest X-ray
Dr C stated that he "printed a request for an X-ray to be done as soon as possible". His note in Ms A's clinical record does not indicate that there was any urgency in the need to obtain

an X-ray ("needs some tests please and to report back in 2 days for review"), and therefore I believe that Ms A was not informed of any urgency in the need for her to get the X-ray – indeed, she went home after her consultation. I also note Dr Young's advice that Ms A should have been transferred to hospital immediately so that an X-ray could be taken, together with necessary investigations to determine the cause of the pain.

Given Ms A's presenting condition, I do not believe that Dr C arranged for the chest X-ray to be performed with sufficient urgency.

Response to provisional opinion
Dr C stated in response to my provisional opinion that he routinely checked for signs of DVT or pulmonary embolism, but he had failed to write the negative findings in Ms A's clinical record. However, Ms A's presentation demanded the exclusion of a pulmonary embolism, and the appropriate investigations needed to be performed urgently. I consider that irrespective of whether Dr C performed the clinical examination as he recalls, the assessment he performed was still inadequate, and he failed to manage Ms A appropriately.

Summary
Ms A presented with recognisable signs of a possible pulmonary embolism, and I am guided by Dr Young's emphatic statement that her clinical presentation *demanded* the exclusion of a pulmonary embolism through an adequate assessment, followed by appropriate referral for treatment, including an immediate chest X-ray.

Dr Young stated that the medical care provided by Dr C fell below an acceptable standard to a moderate degree had Ms A's diagnosis not been a pulmonary embolism, and a severe degree had the diagnosis been confirmed as a pulmonary embolism. However, in reaching my decision, it is the appropriateness of the care provided, and not the eventual diagnosis, that is of relevance. I accept Dr Young's advice that with such a presentation, Ms A needed to be treated as though she had a pulmonary embolism until proven otherwise.

As Dr C's assessment was inadequate, and the further investigations he ordered were insufficiently urgent, he failed to provide services to Ms A with reasonable care and skill, and therefore breached Right 4(1) of the Code.

Opinion: Breach — The Medical Clinic

Vicarious liability
Employers are responsible under section 72(2) of the Health and Disability Commissioner Act 1994 for ensuring that employees comply with the Code. Under section 72(5) it is a defence for an employing authority to prove that it took such steps as were reasonably practicable to prevent the employee's act or omission that breached the Code.

The medical clinic advertises that it is able to provide "care of acute and chronic conditions such as … heart conditions". Staff who provide clinical care at the Clinic should have available to them a chest pain management protocol, to guide them in the provision of services.

Dr D stated that he expected a doctor of Dr C's experience to be able to manage a patient with chest pain. Dr Young's view is that guidelines aid clinical management decisions, but when a pulmonary embolism is suspected the "clinical management decisions will be determined by the attending doctor", because Dr C was responsible for his clinical decisions. Nonetheless, the Clinic also had a responsibility as an employer to provide appropriate guidance to its staff.

Dr Young stated that it would be appropriate for the Clinic to have a chest pain management protocol, which would indicate the need for further assessment (for example, in a hospital emergency department) in certain cases of unexplained chest pain. This was all the more important because Dr C was a locum who works for most of his time in another country.

While the medical clinic are not responsible for Dr C's individual choices regarding Ms A's management, it was the Clinic's responsibility as his employer to ensure that appropriate systems and policies were in place and accessible to all its staff.

In response to the provisional opinion, Dr D, General Manager of the medical clinic, stated that he believed that the procedures in place at the time were adequate to prevent Dr C's act or omission. Dr D specifically mentioned the collegial support of other doctors working in the Clinic at the time; that an ambulance was called once Ms A's mother telephoned the Clinic with her concerns (indicating that the procedures worked); and that the oversight arrangements met New Zealand Medical Council standards. Although I commend the Clinic in now having guidelines for the management of chest pain, I am not convinced that adequate procedures were in place at the time of Ms A's assessment. I believe that having collegial support and appropriate oversight are insufficient. Dr Young described the importance of a chest pain management protocol:

> "A protocol or guideline acts as a clinical tool to be used to help ensure all the steps and procedures that should be done, are done in a consistent and timely manner, for all patients with chest pain so as to minimise the risk of missing potentially serious diagnoses, such as a pulmonary embolism. For problems such as pulmonary embolism which are seen infrequently, having documented protocols or guidelines available allows members of the team to assist each other to ensure all the steps and / or procedures have indeed been completed."

In my opinion, the absence of such a policy makes the medical clinic vicariously liable for Dr C's breach of the Code.

Follow-up actions

- A copy of my final report will be sent to the Medical Council of New Zealand.

- A copy of my final report, with details identifying the parties removed, will be sent to the Royal New Zealand College of General Practitioners and the New Zealand Accident and Medical Practitioners Association, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.