Public Hospital

Dr B

A Report by the

Health and Disability Commissioner

(Case 02HDC05308)

Health and Disability Commissioner
Te Toihau Hauora, Hauātanga

Parties involved

Master A	Consumer
Ms A	Complainant (Master A's mother)
Dr B	Provider, Consultant Physician, Public Hospital
Dr C	Paediatrician, Public Hospital
Dr D	Paediatrician, Public Hospital
Ms E	Registered Nurse, Public Hospital
Dr F	Flight Retrieval Service Doctor and General Practitioner
Dr G	Flight Retrieval Service Co-ordinator
Dr H	Locum General Surgeon, Public Hospital
Dr I	Anaesthetist, Public Hospital
Dr J	Anaesthetist, Public Hospital
Dr K	Consultant Physician, Public Hospital
Dr L	Paediatrician, Children's Hospital
Ms M	Customer Services Manager, second Public Hospital

Complaint

On 26 April 2002 the Commissioner received a complaint from the Coroner about the services provided to Master A by a Public Hospital. The Coroner asked the Commissioner to determine whether Master A received services with reasonable care and skill.

An investigation was commenced on 23 July 2002. The terms of the investigation were initially notified as follows:

In late June 2002, staff at a Public Hospital did not provide services with reasonable care and skill to Master A. In particular staff did not:

- *adequately assess Master A;*
- *undertake appropriate tests;*
- *respond appropriately or urgently to Master A's deteriorating condition;*
- *initially diagnose meningitis;*
- *co-operate with other health providers involved in Master A's care;*
- *know how to operate equipment in ICU.*

In late June 2002, staff at the Public Hospital did not adequately communicate with Ms A, Master A's mother. In particular, staff did not inform her of her son's condition or diagnosis.

On 2 December 2002 the investigation was extended to include Dr B. He was notified as follows:

From 26 June 2001, Dr B did not provide services of an appropriate standard to Master A. In particular he did not:

- *make adequate initial and ongoing assessments of Master A's condition;*
- *undertake appropriate tests;*
- *respond appropriately or urgently to Master A's deteriorating condition;*
- *co-ordinate Master A's medical care.*

From 26 June 2001, Dr B did not adequately communicate with or fully inform Ms A, Master A's mother. In particular, he did not inform her of her son's condition or diagnosis.

Information reviewed

- Letter from the Coroner, referring the case of Master A to the Health and Disability Commissioner, dated 22 April 2002
- Note of conversation between HDC Senior Investigator and Ms A, dated 17 July 2002
- Report of Coroner's inquest including sworn statements forwarded to the Health and Disability Commissioner, dated 31 July 2002
- Responses to investigation notification from the Risk and Quality Manager, the Public Hospital, dated 23 August 2002 and 18 November 2002
- Public Hospital Inter-Facilities Transfer of Patient Procedure and Public Hospital Paediatric Services protocol March 2001, sent by the Public Hospital, dated 21 November 2002
- Response to investigation notification from Dr B, physician, the Public Hospital, dated 16 December 2002
- Statement from Ms A, obtained by Police for Coroner and forwarded by the Coroner under separate cover, dated 24 December 2002
- Statement from Ms E, registered nurse, obtained by Police for Coroner
- Report from Dr C, paediatrician, prepared for the Coroner and included in the Coroner's report
- Post mortem report from a forensic pathologist, dated 29 June 2001 and included in the Coroner's report
- Copy of the Public Hospital's clinical records for Master A's admission 26/27 June 2001
- Letter from Ms M, second Public Hospital, dated 7 January 2003, and copy of Flight Retrieval Team clinical records for attendance to Master A, 27 June 2001
- Note of conversation between Ms M and HDC Investigation Officer, in relation to helicopter retrieval service and records, dated 8 January 2003

Clarification of issues requiring investigation

Following the initial information collection a preliminary expert opinion was sought from Dr Johan Morreau, paediatrician, to assist in identifying any issues arising from the information gathered that warranted further investigation.

Initial independent advice to Commissioner

The following independent expert advice was received from Dr Johan Morreau, paediatrician.

"I have read the supporting information commencing with:

1. Copy of the [Public Hospital] clinical records for [Master A's] admission dated 26–27 June 2001
2. Letter from [Ms M], [second Public Hospital] and copy of […]Flight Retrieval Team clinical records for attendance to [Master A] on 27 June 2001
3. Statement from [Ms E], Registered Nurse
4. Post mortem report from […] Forensic Pathologist
5. [Public Hospital] Paediatric Services protocol – March 2001
6. [Public Hospital] Inter-Facilities Transfer of Patient Procedure
7. Statement from [Ms A], mother of [Master A]
8. Response from [Mr B]
9. Report from [Dr C], Paediatrician
10. Report of Coroner's inquest
11. Action note of conversation between [Ms M] and Investigation Officer in relation to helicopter retrieval service and records

By assessing the information in the above sequence I am able to derive my own conclusions and review the sequence of clinical care as it presented to the clinicians involved.

BACKGROUND
When I reviewed the above information it was apparent that [Master A] was a previously fit 27 month old boy who on the night of 24 June 2001 began to vomit. He was initially seen by a General Practitioner on 25 June 2001, thought to have an ear infection and started on antibiotics (Bactrim). [Master A] had had a temperature of 38.6^{o}C that day, did not settle and had his first convulsion on the night of 25 June 2001.

On 26 June 2001 [Master A's] mother, [Ms A], had him reviewed further. [Master A's] temperature was noted as being 39.0^{o}C and following discussion with [Dr B] he was referred from [a medical centre] to [the Public Hospital]. Prior to this [Master A]

had, at 1400 hours, appropriately received his first dose of Ceftriaxone (50 milligrams per kilogram) and meningitis was considered to be a possible diagnosis. [Master A] was then assessed at [the Public] Hospital, firstly by [a doctor] who documented that [Master A] had sunken eyes, a temperature of 38.1°C and heart rate of 113. Heart rate recorded by the nursing staff was 100 with his blood pressure normal.

Following this [Master A] was assessed by [Dr B], Adult Physician, who appropriately discussed him with Dr [D], On Call Paediatrician, [at the second Public Hospital]. At this stage decisions were made to continue with Ceftriaxone as a treatment for possible meningitis (no specific diagnosis made) and it is not clear as to whether Dr [B] felt that he was significantly dehydrated. Certainly there were no overt signs of meningism, suggestive of meningitis at that time.

As indicated [Master A's] Ceftriaxone was continued and although planned as a 50 milligrams per kilogram, 24 hourly dosage was given in the appropriate (for meningitis) 50 milligrams per kilogram, 12 hourly dosage.

Fluids administered over the first 4.5 hours were a combination of plasmalyte and normal saline given at a total rate of 70mls hourly (maintenance requirements for a 14kg child would ordinarily be 50mls hourly). For the next 14.5 hours (27 June 2001) [Master A] was given around 1000mls of fluid, again a combination of plasmalyte and normal saline equating to a total rate of 70mls hourly.

I note that throughout [Master A's] initial admission period (26 June 2001 until 1430 on 27 June 2001) he passed urine regularly but did have a sodium that was, despite the normal saline and plasmalyte above 133mmol/l at admission and subsequently 134, 132 and 131 through the day of 27 June 2001.

I note also that while [Master A] remained clinically stable initially that increasing concern arose during the morning of 27 June 2001 culminating in Dr [B's] discussions with Dr [C], Paediatrician [at the second Public] Hospital, regarding the performing of lumbar puncture and subsequent transfer.

It is of significance that [Master A's] Ceftriaxone was continued appropriately in a dosage of 50 milligrams per kilogram 12 hourly, that [Master A's] lumbar puncture was performed at a time when while lethargic he had a Glasgow coma scale of 15 and was not showing worrying focal neurological signs. He did not receive a general anaesthetic (appropriately) for his urinary catheterisation and when the decision to transfer was made this was appropriately co-ordinated by the clinicians at [the second Public] Hospital.

[Master A's] condition was initially seen to be sufficiently stable to justify using the local transport service led by Dr [F].

Following arrival of Dr [F] and his retrieval team, although [Master A's] condition appeared reasonable initially, he did, following a repeat convulsion, appear to aspirate, vomited and deteriorated to the point of requiring ventilation. He was however not able to be stabilised on the transport ventilator and was therefore shifted to the Critical Care Unit at [the Public] Hospital for stabilisation prior to being collected by the [Children's] Hospital retrieval team. The latter had appropriately been arranged at a time when [Master A's] clinical condition had deteriorated to the point where a higher (tertiary) level of intensive care was known to be needed for him.

Subsequently during [Master A's] period of destabilisation clinical notes indicate that he was looked after largely by the Anaesthetists, Dr [I] and Dr [J] with Dr [F] leaving to return to [the second Public] Hospital in the late evening and at a time when:

1. [Master A] appeared stable on his ventilation
2. The arrival of the [Children's Hospital] retrieval team was anticipated

Of significance is that a number of clinicians were involved in [Master A's] care, that Dr [B] took initial responsibility for co-ordination of care, then when he went off duty transferred this to the Physician On Call, Dr [K] and the retrieval teams.

It is however not clear from the notes or correspondence as to the degree of involvement of Dr [K] over the period of [Master A's] deterioration that evening, whether he had in fact taken the anticipated responsibility or whether he saw that responsibility as having been given to the retrieval team. There is no indication as to whether any specific conversation was held with Dr [F], regarding this both before and after Dr [F's] departure from [the Public] Hospital.

I note from the POST MORTEM findings the diagnosis of a non specific viral meningitis – encephalitis, no evidence of aspiration pneumonia and some early evidence of foraminal herniation of the cerebral tonsils, ? secondary to cerebral oedema.

The brain is described as being moderately swollen with diffuse mild gyral flattening over the cerebral convexities with a bulging prominence of both unci also consistent with cerebral oedema. There is an associated interstitial pneumonitis consistent with an acute viral pneumonia that may also have explained some of the difficulties maintaining [Master A's] oxygenation on, eg. the transport ventilator.

COMMENT

1. Given the above I am comfortable that Dr [B] did seek appropriate advice as per the local hospital protocols. With this, relevant and appropriate treatment was given and continued.

2. I do however have some concern regarding [Master A's] fluid treatment. It is not clear as to whether this was discussed with Dr [D] and consideration given to:

(a) The type of fluid used
(b) The volume to be given

If a diagnosis of meningitis had been made (following lumbar puncture) or was being entertained, then giving normal saline and plasmalyte would not be appropriate without added glucose. Similarly, the volume given should then have been around 1/2–2/3rds of maintenance fluid which would equate to 1/2–2/3rds of 50 mls per hour, ie. 25–33 mls per hour. [Master A] received fluid volumes that in the context of meningitis and a presumed inappropriate Anti Diuretic Hormone Secretion would contribute to cerebral oedema. Given the frequency of passage of [Master A's] urine I do not believe that we would conclude that the fluid regimen given caused his cerebral oedema and death. However, I do have concerns that this may have been a significant factor additional to the primary meningitis – encephalitis and therefore contributing to his cerebral oedema and death. More information is needed from Dr [B] and Dr [D] regarding what was discussed / planned at that time. There may be explanation regarding this, though a heart rate of 100–113 per minute would not indicate significant dehydration in a febrile child of 27 months of age.

3. With regard to co-ordination of [Master A's] retrieval, my reading of this is that given the resources available to them, Drs [C], [F], and [G] did respond appropriately to a situation that was changing. I do however have some concern as to what level of ongoing co-ordination of care was provided by Dr [K] following hand over from Dr [B] when he finished his duty early in the evening of 27 June 2001. Further information is required from Drs [K], Dr [F] and Dr [B] regarding whether it was clear who was taking responsibility for [Master A's] care following Dr [B's] departure.

My own view of how a system should operate is that hand over of the care of a patient, particularly an ill patient, must be clear cut with those involved understanding who is in charge at a given time. My reading of the notes does not confirm Dr [K's] ongoing involvement and taking of a responsibility of care from the time of hand over and I wonder whether it was clear to Dr [F] whether he was supporting the Anaesthetists, Drs [I] and [J] in [Master A's] resuscitation, or whether the Physician Dr [K] had the over-riding co-ordination responsibility. Dr [F] left the hospital prior to [another flight] Retrieval Team arriving. Was this agreed with those assuming responsibility for [Master A's] care at that time? Whatever the arrangements these need to be defined clearly with those involved understanding their responsibilities.

4. It is appropriate for the hospital to which the patient is being referred, ie. the immediate secondary / tertiary resource ([a city]) to take responsibility for co-

ordinating the transport arrangements, although clearly this is difficult to do without a paediatrically focused transport team. [The second Public Hospital] needs to make decisions regarding how to provide a paediatrically focused retrieval service for the [region].

5. In answer to the question as to whether [Master A] should have been transferred to [the second Public] Hospital when the retrieval team arrived at 1730 hours, it was not possible to transfer [Master A] at that time as he was not able to be stabilised adequately on the transport ventilator and it was therefore not safe to move him. The doctors therefore acted appropriately in stabilising [Master A] in the local Critical Care Unit.

6. [The second Public Hospital] has clearly tried hard to provide a safe paediatric service at [the Public] Hospital. The region is an isolated one and [the second Public Hospital] and its Child Health Service have clearly thought intensively regarding how to provide a service that combines requirements for access, quality etc. The Inter-Facilities Transfer of Patient Procedure and preceding [Public Hospital] Paediatric Services protocol – March 2001, demonstrate the overall service commitment to a functioning safe service. The population base there does not warrant the provision of a full time Specialist Paediatric Service there. It is inevitably with goodwill that that service is provided by adult physicians, linked to the Paediatric Service at [a city].

I have concerns as to whether a lumbar puncture should have been performed at admission to [the Public] Hospital (a partially treated bacterial or viral meningitis in a 27 monther may not exhibit neck stiffness at presentation) and whether this would then have resulted in more appropriate fluid management.

It is however difficult to find fault with an adult physician providing the service by proxy regarding:

(a) Performing of lumbar puncture early on in the admission
(b) Incorrect fluid management

Similarly, it is difficult to be critical of the telephoned clinician (Dr [D]) who has only the verbal description of the case to make decisions by and has to trust the information of the reviewing doctor (Dr [B]).

I would see this as likely to reflect a potentially unresolvable (with resource limitations) systems issue. The only suggestion I have is that consideration be given to the planned transfer of all patients under a given age, eg. ?3 years who have an indication for lumbar puncture and that this occurs in the context of treatment already tailored to a potential meningitis.

The outstanding issues with regards to this case are therefore:

1. Fluid management and whether this issue was addressed by Drs [B] / [D]
2. Who was responsible for co-ordinating [Master A's] care after Dr [B] finished his duty on the evening of 27 June 2001 and was this clear to those involved
3. Consideration being given to the planned transfer of all patients under a given age, eg. ?3 years who have an indication for lumbar puncture and that this occurs in the context of treatment already tailored to a potential meningitis
4. [The second Public Hospital] needs to make decisions regarding how to provide a paediatrically focused retrieval service for the [region].

I am aware that reports from Drs [D], [K], [F], as well as the Anaesthetists involved in [Master A's] resuscitation will be needed, in addition to additional comment from Dr [B]. I would be happy to discuss this and peruse further the relevant responses, if this is thought to be helpful."

Issues requiring further investigation

The outstanding issues identified by Dr Morreau as requiring further investigation were:

1. Master A's fluid management and how decision making was made
2. The co-ordination of Master A's care after Dr B finished his duty on the evening of 27 June 2001.

Further information reviewed

Following Dr Morreau's first advice, further information was obtained and reviewed. In particular:

- Letter from Dr B, dated 7 April 2003
- Note of conversation between Dr [G] and Investigation Officer, dated 7 May 2003
- Letter from Dr C, dated 8 May 2003
- Letter from Dr F dated 15 May 2003, and follow-up email dated 27 May 2003
- Letter from Dr D, dated 20 May 2003
- Letter and accompanying documentation relating to the patient transfer service from the Clinical Leader Patient Transfer Service, second Public Hospital, dated 30 May 2003
- Letter from Ms M, second Public Hospital, dated 3 June 2003, with further information re inter facilities transfer of patients procedure
- Note of conversations between the investigator and Dr K, dated 13 June 2003
- Letter of response from Dr K, dated 23 June 2003

- Note of conversation between the Investigation Officer and Dr J, dated 24 June

Facts gathered during investigation

On 24 June 2001 Master A was first noticed to be unwell. On 25 June Master A's mother, Ms A, took him to a medical centre as he had been vomiting in the night. Master A was diagnosed with an ear infection and the medical centre doctor prescribed antibiotics (Rocephin) and Panadol. The following morning, 26 June, Master A was seen again at the medical centre. His temperature was 39°C, he had been vomiting and he had had convulsions. The doctor suspected meningitis and sent Master A to the Public Hospital to be admitted.

On 26 June at 4.30pm the casualty doctor saw Master A and diagnosed dehydration and a viral illness, possibly meningitis. Master A was admitted to the paediatric ward overnight for rehydration and blood tests.

Children are admitted to the Public Hospital under the care of the physician on call. Nurse E advised the Coroner that there was a set protocol for liaison with the Paediatric Department at the second Public Hospital in relation to the management of all paediatric medical conditions. This was developed by Nurse E and approved by the service manager at the Public Hospital and the Professor of Paediatrics at the second Public Hospital. Under the protocol, the admitting physician must discuss the admission with the second Public Hospital's paediatric consultant on call, and agree a care plan.

Dr B, the physician on call, saw Master A. Dr B contacted Dr D, paediatrician at the second Public Hospital. Dr D agreed that the Rocephin, commenced by the general practitioner, be continued for two days or more and advised that all routine blood tests should be done. Dr B said Dr D felt that a lumbar puncture was not required at that point as Rocephin was the drug of choice for most infections including meningitis. According to the medical record Master A was commenced on plasmalyte oral rehydration fluid. During the afternoon Master A had drunk approximately 50mls orally and an intravenous infusion of normal saline 1000mls at 41mls per hour was commenced.

Dr B said that he discussed Master A's fluid management with Dr D. This is supported in his contemporaneous medical record. Dr D informed me that while he did not have records of his conversation with Dr B he did recall discussing the choice of antibiotic but that the type and rate of intravenous fluid was left to Dr B's discretion. Dr D commented that Master A was considered to be clinically hydrated and thus appropriately commenced on normal saline.

On 27 June, at 11am, Master A's mother called the nurse as she was concerned that Master A had a fluctuating blotchy red rash on his face and body. His temperature was 38°C and his pulse 100bpm. The house surgeon saw Master A at 11.30am and noted that Master A was becoming sleepy and saying "things that did not make sense". The house surgeon noted that

Master A's condition had deteriorated since 11am and rang Dr B, who requested that Master A be given his next dose of antibiotics then instead of in the evening, when they were due. Dr B saw Master A approximately 15 minutes later and noted that he was drowsier and his mother was worried about him. Dr B telephoned Dr C, the paediatrician on call at the second Public Hospital, and discussed Master A's condition with him. Dr C suggested that a lumbar puncture be done. Dr B said he had also discussed Master A's fluid management with Dr C.

At approximately 1.15pm a lumbar puncture was performed on Master A by Dr J, anaesthetist. Dr J explained that Master A was admitted under a physician, Dr B, who was not a paediatrician. In such situations the physician usually refers the technical aspects of care to the anaesthetists, as they are the ones most likely to have such expertise. Dr B examined Master A again and noticed that he had a distended bladder but was unable to catheterise him. Dr H, consultant locum surgeon, performed the catheterisation and emptied the bladder of 500mls of urine. In response to my provisional opinion, Ms A said that she believed Master A had aspirated vomit during a fit in the recovery area following the lumbar puncture and that "he was basically drowning on vomit in his lungs". There is no mention of aspiration of vomit in the clinical record. The postmortem report identified that the appearance of the lungs was consistent with acute viral pneumonia.

Between 3pm and 4pm the results of the lumbar puncture were available showing that Master A had viral meningitis. Dr B informed Ms A. Dr C had also received the result of the lumbar puncture. Dr B discussed Master A's treatment with Dr C. Dr C asked that Master A be transferred to the second Public Hospital for further assessment and continuation of treatment. Dr B and Nurse E discussed how best to transport Master A and decided on air transport and the retrieval team.

Dr F, the retrieval doctor, said a request for air transport was received by the ambulance service in the city at 4pm on 27 June. Dr F said that taking a paediatric registrar from the second Public Hospital was considered but the pilot advised that as the town's airport had no night lights, take-off should occur as soon as possible. This meant there was no time to organise a paediatrician. Dr F also said that Master A had been described as "clinically stable and not seriously ill" at the time the retrieval decision was made.

The retrieval team arrived at 5.45pm. Dr B and Dr K, on-call physician for the evening, were both present in the ward when the retrieval team arrived. Dr B left the hospital at 6pm and Dr K was then the physician in charge. Dr K said that he was present in the hospital most of the evening, but that the anaesthetists were most qualified to manage Master A in the absence of a paediatric intensivist or paediatric intensive care.

During Dr F's initial assessment (soon after his arrival) Master A's condition deteriorated suddenly. Dr I, anaesthetist at the Public Hospital, took over management of Master A's resuscitation. Based on this action Dr F said he concluded that he had not accepted responsibility of care for Master A but assisted in the resuscitation and management of Master A. Dr J accepted ongoing care when Dr I left to attend an urgent operation in theatre. Dr J said that while technically the physician is responsible for the co-ordination of care, in the

country setting they work as a team. The anaesthetists are often the best people to do technical things. Dr J said they all pitched in – there was no dissension and they were all doing their best for Master A, in consultation with the paediatrician at the Children's Hospital.

Dr C said that he was contacted by Dr G, the Airflight co-ordinator, after he had spoken to Dr F at the Public Hospital. Dr C and Dr G agreed that getting Master A to the Children's Hospital in a city would be ideal. Dr G called Dr C again later to suggest that Master A be taken to the second Public Hospital first to stabilise him. Dr C explored this possibility by speaking with the intensive care consultant at the second Public Hospital, who told him he did not think that the second Public Hospital intensive care unit was the right place for Master A as there was insufficient expertise in dealing with young children. Dr C said he explored the possibility of sending a neonatal registrar to the Public Hospital to support Dr F but the neonatal unit was unable to assist under the circumstances. Dr C contacted Dr L, a paediatrician at the Children's Hospital, who advised that the second airflight transport was already engaged but that he would try to affect a rapid turnaround.

Master A was transferred to the intensive care unit at the Public Hospital and mechanically ventilated. Dr J said that during the evening either she or her colleague, Dr I, were on the phone hourly to Dr L at the Children's Hospital. They had developed a good rapport with him and found him very supportive.

At 11.30pm the first airflight retrieval team handed over care of Master A and prepared to leave. The estimated time of arrival for the second airflight retrieval team was 2am. Dr F said that once the second airflight retrieval team arrival time had been confirmed and Master A appeared to be reasonably stable in the critical care unit, he advised Dr J that they could offer little more assistance. Dr J remained with Master A in the critical care area when the retrieval team left. At 12.07am Master A had a cardiac arrest and resuscitation was commenced. Telephone contact was maintained with Dr L at the Children's Hospital. Master A died at 12.45am on 28 June.

In response to my provisional opinion, Ms A commented:

> "CPR was commenced at 12.30[am] and they went for approximately 15 minutes and that's when he died. … They do not, you can ask anybody, they do not work on kids for half an hour, they don't do it."

According to the clinical record Master A's vital signs were recorded at 12.10am and 12.12am. The next entry is in the critical care arrest record at 12.15am and records a cardiac arrest and the administration of emergency drugs. The next entry in the critical care arrest record is at 12.27am and notes "no EMD [electromechanical dissociation] withdraw CPR [cardiopulmonary resuscitation]". According to Dr I Master A had a cardiac arrest at 12 midnight and resuscitation commenced then. At 12.27am when resuscitation was discontinued Master A did not respond and had no cardiac output. Dr I said that resuscitation was continued for a further 15 minutes and Master A was declared dead at 12.24am. The time of death on the critical care arrest record is 12.45am.

The pathologist's conclusion following the post mortem was:

> "Sudden death is an expected possible outcome of this disease process. There should be no inference drawn of medical mismanagement from the fact that the child died, given the severity and localisation in the brain of this disease. This pattern of encephalitis is usually a rare complication of viral infection with viruses commonly present in the community such as influenza or mumps virus. It is not related in any way to the more widely known bacterial meningitis."

Further expert advice

Further advice was obtained from Dr Morreau following his consideration of the additional information obtained.

> "**1. REGARDING FLUID INTAKE**
> At [Master A's] initial assessment there was no specific diagnosis reached. He looked relatively well (from a medical perspective), was seen to take some oral fluid satisfactorily without vomiting, so that fluid management was reasonable although clearly, in retrospect, I cannot be certain as to whether the volume of fluid he received did or did not contribute to his rapid deterioration. I do believe that the lack of an early diagnosis of meningitis in a non paediatric environment is an issue of concern.
>
> However, having said this I do believe that Dr [B] did seek appropriate advice, that he did act appropriately on the advice received and that the issue therefore is one of screening for those children who can reasonably be cared for in a [region] setting as compared with those that require early transfer.
>
> My recommendation in this context is that as well as defining:
>
> (a) Processes by which these decisions are made ([region] consultant to [the second Public Hospital] paediatrician consultation) that
> (b) Some children with possible as well as confirmed diagnoses may warrant automatic transfer. Clarification of the procedure for this is best carried out by a senior [second Public Hospital] paediatrician who has an over-riding responsibility for the child health systems, policies and guidelines as applied to the [region].
>
> With regard to the time when Dr [B] went off duty [Master A's] care was co-ordinated appropriately, using the relevant available skills by Drs [K], [I] and [J].

2. LACK OF VOMITING INITIALLY
Fluid volumes given would not usually have made a material difference and we will never know whether they did on this occasion or not. The outcome could not have been predicted.

3. PROCEDURE REGARDING INPATIENT CARE OF CHILDREN AT [THE PUBLIC] HOSPITAL – Consideration to be given regarding thresholds for transfer eg less than three years of age with a possible diagnosis of meningitis.
With regard to question 4, my assessment of the decision making process regarding transfer is that all those involved communicated satisfactorily, that [Master A's] rapid deterioration was not able to be 'kept up with' in that this demanded a changing level of transport team expertise.

Clearly [the second Public] Hospital has sought to improve their ability to provide a safe and consistent transfer system. There is however, with regard to children particularly, a need to have a **national paediatric transport system** linked to the Paediatric Intensive Care Unit at [the] Children's Hospital who function nationally, provide child health expertise, are familiar with the levels of child health intensive care available throughout the country and therefore in a position, when retrieving children, to make decisions regarding the appropriate place to go. They could then be in a situation to make the decision as to whether to transfer a given child to eg:

a) [the second Public] Hospital
b) [the] Children's Hospital

It is not reasonable to expect non paediatric specialists, non paediatric teams to make accurate decisions in this context."

Code of Health and Disability Services Consumers' Rights

The following provisions in the Code of Health and Disability Services Consumers' Rights (the Code) 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.
…
5) Every consumer has the right to co-operation among providers to ensure quality and continuity of services.

RIGHT 6

Right to be Fully Informed

1) Every consumer has the right to the information that a reasonable consumer, in that consumer's circumstances, would expect to receive, including –
(a) An explanation of his or her condition; …

Clause 3
Provider Compliance

1) A provider is not in breach of this Code if the provider has taken reasonable actions in the circumstances to give effect to the rights, and comply with the duties, in this Code.
2) The onus is on the provider to prove that it took reasonable actions.
3) For the purposes of this clause, "the circumstances" means all the relevant circumstances, including the consumer's clinical circumstances and the provider's resource constraints.

Opinion: No Breach – Dr B

Diagnosis and treatment
My expert initially advised that Dr B, who is a consultant physician, not a paediatrician, sought appropriate advice from a paediatrician in the city as per the local protocols, and in light of this advice gave relevant and appropriate treatment. However, he sought further information on Dr B's management of Master A's fluid intake; in particular, the type and volume of fluid used and whether Dr D, the second Public Hospital paediatrician, was involved in the decisions made. My expert also queried whether a lumbar puncture should have been performed on admission to the Public Hospital and whether this would have resulted in more appropriate fluid management. He asked for further information which clarified the facts as follows.

Dr B did discuss Master A's fluid management with Dr D in the city. This is supported by his contemporaneous medical record. Dr D commented that Master A was considered to be clinically hydrated and thus appropriately commenced on normal saline.

After considering the further information obtained my expert advised:

> "At [Master A's] initial assessment there was no specific diagnosis reached. He looked relatively well (from a medical perspective), was seen to take some oral fluid satisfactorily without vomiting, so that fluid management was reasonable although clearly, in retrospect, I cannot be certain as to whether the volume of fluid he received did or did not contribute to his rapid deterioration."

I am cognisant of my expert's comment that it is difficult to find fault in a situation where an adult physician tries to provide a service in a distant location with only telephone contact to a paediatrician. Similarly, my expert advised, it is difficult to be critical of the paediatrician's decision-making and advice in such a situation.

In relation to Dr B's actions, my expert commented:

> "I do believe that Dr [B] did seek appropriate advice, that he did act appropriately on the advice received and that the issue therefore is one of screening for those children who can reasonably be cared for in a [region] setting as compared with those that require early transfer."

I accept the advice of my independent expert that under the circumstances Dr B provided services with reasonable care and skill in relation to his diagnosis and management of Master A. Accordingly, in my opinion Dr B did not breach Right 4(1) of the Code.

Opinion: No Breach – Public Hospital

Co-ordination of care
My independent expert sought further information in relation to the co-ordination of, and responsibility for, Master A's care after Dr B went off duty early in the evening of 27 June 2001.

Further information was gathered from Dr I, Dr J, Dr F, Dr G and Dr K to gain a better understanding of how Master A's care was managed following Dr B's departure. Dr K informed me that he was the physician in charge and remained in the hospital for most of the evening. However, as Dr K is not a paediatrician, the anaesthetists were the most qualified to manage Master A in the absence of a paediatrician. Dr J informed me that in such situations anaesthetists are often the clinicians most suited to performing technical tasks and that everyone co-operated to achieve the best for Master A in the circumstances. Dr F informed me that the anaesthetists were responsible for Master A's care and, during the time he was there, he assisted with Master A's resuscitation and management.

At the time that Dr F left the Public Hospital, arrangements had been made for the second airflight transport to retrieve Master A and fly him to another city. Dr J and Dr I had constant telephone contact with Dr L, paediatrician at the Children's Hospital, with whom they had developed a good rapport and whom they found very supportive. There was little more Dr F could do.

Following review of the further information my expert advised that:

> "With regard to the time when Dr [B] went off duty [Master A's] care was co-ordinated appropriately, using the relevant available skills by Drs K, I and J … my assessment of the decision making process regarding transfer is that all those involved communicated satisfactorily, that [Master A's] rapid deterioration was not able to be 'kept up with' in that this demanded a changing level of transport team expertise."

I note that my expert's advice is consistent with the pathologist's conclusion that Master A suffered encephalitis associated with a severe and rare complication of a viral infection. This was not bacterial meningitis and, in the pathologist's opinion, no inference of medical mismanagement should be drawn.

In my opinion, given the circumstances, the clinicians at the Public Hospital combined their skills and co-operated in providing appropriate care for Master A. Accordingly, in my opinion, the Public Hospital did not breach Right 4(5) of the Code.

No further action

Ms A felt that Dr B and staff at the Public Hospital did not inform her of Master A's condition or diagnosis. Dr B informed me that he saw Ms A many times on the day of Master A's admission and communicated his view of Master A's condition at the time, Dr D's opinion and the management plan.

When Dr B saw Master A the following day he was initially alert but thereafter his condition deteriorated rapidly. A significant number of doctors, nurses and technicians in three different locations became involved in his care. Ms A was informed following the receipt of the lumbar puncture result that Master A had viral meningitis, which needed immediate treatment. Ms A was understandably very distressed. The rapid and severe nature of Master A's illness and the number of people involved in his care meant communication difficulties were more likely. Given the complex nature of events I am of the opinion that further investigation will not clarify or resolve this issue. For this reason I have decided to take no further action on this matter.

Response to provisional opinion

Following receipt of my provisional opinion Ms A provided a detailed oral submission to my investigators. Ms A continues to feel very strongly that no one listened to her or told her what was happening:

> "No one was telling me anything …, nobody was listening to me …, I wanted to stay there the whole time but they would not let me because I was crying …, I was not told

> that this was terminal …, nobody told me that there was no more that could be done basically, that he was terminally ill, that he was going to die."

I remain of the opinion that the staff at the Public Hospital acted reasonably in difficult circumstances. However, it is important to recognise the critical need for support and debriefing of all parties following such an incident. While the speed with which Master A's condition deteriorated complicated his treatment it was also a very traumatic experience for Ms A, his mother. I draw the Public Hospital's attention to the following publications as valuable resources in dealing with adverse events: Waitemata District Health Board, "Report into Operating Theatre Fire Accident, 17 August 2002" and Rae M. Lamb, David M. Studdert, Richard M.J. Bohmer, Donald M. Berwick, and Troyen A. Brennan, "Hospital Disclosure Practices: Results of a National Survey", *Health Affairs*, March/April 2003; 22(2): 73-83.

Actions taken

- I have written to the Public Hospital and the second Public Hospital and recommended that they review their joint policy and procedures for the management and planned transfer of child patients, in light of this report and my expert's comments.
- I have written to the Ministry of Health and requested that it consider auditing the Public Hospital system for paediatric transfer. Additionally, I intend to draw to the Ministry's attention my expert's comments in relation to the need for a national paediatric transport system linked to the Children's Hospital.

Follow-up actions

- A copy of this report will be sent to the Medical Council of New Zealand, the region's Coroner, and the second Public Hospital.

- A copy of this report, with personal identifying details removed, will be sent to the Royal Australasian College of Physicians, the Paediatric Society of New Zealand, and Ambulance New Zealand, and to the Chief Medical Advisors of all District Health Boards, and placed on the Health and Disability Commissioner website, www.hdc.org.nz, for educational purposes.