

The investigation of a complaint
by Mrs T
against Cardiff and Vale University
Local Health Board

A report by the
Public Services Ombudsman for Wales
Case: 201204130

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Introduction

This report is issued under section 16 of the Public Services Ombudsman (Wales) Act 2005.

In accordance with the provisions of the Act, the report has been anonymised so that, as far as possible, any details which might cause individuals to be identified have been amended or omitted. The report therefore refers to the complainant as Mrs T and the patient, her late husband, as Mr T.

Summary

Mrs T complained about the treatment her husband, Mr T, received in hospital. She complained that he received excess intravenous fluids and that this fluid overload caused subsequent health problems, including multiple strokes, from which he sadly died in May 2011. Mrs T also complained that errors were made in her husband's medication when admitted to hospital, that the diagnosis of his stroke was delayed and that had he received appropriate and timelier treatment, he may have survived.

The Ombudsman found that the instance of fluid overload was not clinically significant in terms of the sad outcome. However, the Ombudsman upheld Mrs T's complaint, finding that the Health Board had failed to act in accordance with national guidelines for the treatment of stroke. The Ombudsman concluded that errors were made with Mr T's regular medication and that opportunities to diagnose Mr T's stroke and to implement treatment which may have increased his chances of survival were missed.

The Ombudsman recommended that the Health Board should:

1. Issue to Mrs T and her family a comprehensive apology for the failings identified in this report.
2. Review its arrangements in respect of post-admission medication reconciliation and ensure that a systematic medicine reconciliation programme is in place.
3. Ensure that staff training in respect of recognising acute stroke is up to date, with particular reference to the 2012 Stroke Guidelines issued by the Royal College of Physicians.
4. Ensure that use of the Rosier score system (or a similarly recognised tool), in order to identify patients who are likely to have had an acute stroke, is implemented.

5. With particular reference to the current Stroke Guidelines and NICE guidance, review its arrangements for the identification and treatment of acute stroke and consider including the following measures:
 - a) All patients who may have had an acute stroke (i.e. have been assessed as having a positive Rosier score) should be immediately assessed by a physician trained in stroke medicine to determine whether thrombolysis is suitable;
 - b) Suitable patients should have immediate CT scanning and, in all cases, within one hour.
 - c) All patients who may have had an acute stroke should be admitted immediately to a specialist acute stroke unit.
 - d) All patients who may have had an acute stroke should have a swallowing screening test, using a validated tool, by a trained professional within four hours.
6. Review the findings set out in its various complaint responses to Mrs T and to this office and take action to ensure that its own complaints investigations are in accordance with the Putting Things Right scheme, are sufficiently robust, demonstrably independent and, where appropriate, critical of identifiably poor care, which should include the introduction of a quality assurance audit of a sample of its completed complaint investigations.
7. Issue to Mrs T a cheque in the sum of £5000 in respect of the time and trouble to which she has been put in pursuing this complaint and in recognition of the additional distress caused to her and her family as a result of the uncertainty with which they now live over whether Mr T might have survived the initial stroke.

The complaint

1. Mrs T complained about the treatment her husband received in hospital after having been referred there by his GP. Mr T sadly died four weeks after being admitted to hospital.
2. Mrs T complained that, within 24 hours of his admission, her husband had swollen up through intravenous fluid overload and then had to be treated with diuretics in order to reduce the excess fluid in his body. Mrs T was concerned that this led to subsequent health problems.
3. Mrs T also complained that staff did not identify that her husband had suffered a stroke whilst in hospital. She said that he developed two black eyes and slurred speech, but that a poor quality CT scan failed to identify a stroke.
4. Mrs T also complained that, at the time that a stroke was suspected (although not yet confirmed), staff continued to attempt to feed her husband, without the benefit of an assessment from the Speech and Language Team ("SALT"), which led to him choking as a result of his swallowing difficulties.
5. Mrs T complained that her husband's regular blood thinning medication (aspirin) was stopped and restarted either side of his first stroke occurring, an event which she felt could have been avoided if appropriate medication had been maintained.

Investigation

6. I obtained comments and copies of relevant documents from Cardiff and Vale University LHB and considered those in conjunction with the evidence provided by Mrs T. I have not included every detail investigated in this report but I am satisfied that nothing of significance has been overlooked.
7. I have also taken clinical advice from one of my professional advisers, an experienced stroke consultant, who is involved in the formulation of national guidelines for the treatment of stroke patients and currently sits on the national executive of the British Association of Stroke Physicians. His name is Dr Robert Neil Baldwin.

8. Both Mrs T and Cardiff and Vale University LHB were given the opportunity to see and comment on a draft of this report before the final version was issued.

9. I am issuing this report under Section 16 of the Public Services Ombudsman (Wales) Act 2005.

Relevant guidance

10. In December 2007, the National Institute for Clinical Excellence (“NICE”) issued guidance¹ on the need to ensure that medicines prescribed on admission correspond to those that the patient was taking before admission. The guidance said:

“All healthcare organisations that admit adult inpatients should put policies in place for medicines reconciliation² on admission...In addition to specifying standardised systems for collecting and documenting information about current medications, policies for medicines reconciliation on admission should ensure that:

- pharmacists are involved in medicines reconciliation as soon as possible after admission
- the responsibilities of pharmacists and other staff in the medicines reconciliation process are clearly defined; these responsibilities may differ between clinical areas

Errors may occur at a number of stages during the admission process, including when:

- determining the medication the patient is currently taking, from written records or the accounts of the patient, their families or carers
- transcribing details of the patient’s medication to the hospital clinical record

¹ PSG001: Technical patient safety solutions for medicines reconciliation on admission of adults to hospital, NICE, December 2007.

² The process, upon admission, of identifying the most accurate list of a patient’s current medicines

- prescribing medication for the patient after admission.

The aim of medicines reconciliation on admission to hospital is to ensure that medicines prescribed on admission correspond to those that the patient was taking before admission. The National Prescribing Centre defines medicines reconciliation as:

- collecting information on medication history (prior to admission) using the most recent and accurate sources of information to create a full and current list of medicines (for example, GP repeat prescribing record supplemented by information from the patient and/or carer), and
- checking or verifying this list against the current prescription chart in the hospital, ensuring any discrepancies are accounted for and actioned appropriately, and
- communicating through appropriate documentation, any changes, omissions and discrepancies. "

11. In 2007, NICE issued technical appraisal guidance regarding the use of thrombolysis³ with the drug Alteplase⁴ in stroke patients. The guidance said:

"Alteplase is recommended for the treatment of acute ischaemic stroke when used by physicians trained and experienced in the management of acute stroke... Treatment must be started within 3 hours of onset of the stroke symptoms and after prior exclusion of intracranial haemorrhage by means of appropriate imaging techniques... analysis indicated that Alteplase is associated with a statistically significant reduction in the risk of death or dependency at 3 months... The Committee noted that Alteplase, when compared with placebo, significantly reduced the risk of death or dependence after an ischaemic stroke..."

³ The breaking down of blood clots using drugs.

⁴ A type of thrombolysis drug.

12. In July 2008, the Royal College of Physicians issued the National Clinical Guideline for Stroke⁵, which said that:

“...On admission, people with acute stroke should have their swallowing screened by an appropriately trained healthcare professional before being given any oral food, fluid or medication... If the admission screen indicates problems with swallowing, the person should have a specialist assessment of swallowing, preferably within 24 hours of admission and not more than 72 hours afterwards... In people with dysphagia, food and fluids should be given in a form that can be swallowed without aspiration, following specialist assessment of swallowing...”

Brain imaging should be performed immediately (‘immediately’ was defined as ‘ideally the next slot and definitely within one hour’) for people with acute stroke if any of the following apply:

- indications for thrombolysis or early anticoagulation treatment
- on anticoagulant treatment
- a known bleeding tendency
- a depressed level of consciousness (Glasgow Coma Score below 13)
- unexplained progressive or fluctuating symptoms
- papilloedema, neck stiffness or fever
- severe headache at onset of stroke symptoms.

For all people with acute stroke without indications for immediate brain imaging, scanning should be performed as soon as possible (defined as within a maximum of 24 hours after onset of symptoms)

All patients should be reviewed immediately by an expert in stroke to determine and record:

- identification of possible underlying cardiovascular causes
- localisation of the cerebral area likely to have been affected
- treatable risk factors....

⁵ National clinical guideline for stroke, Royal College of Physicians, Intercollegiate Stroke Working Party, July 2008.

Any patient seen within three hours of starting symptoms and who has been shown not to have an intracerebral haemorrhage (or other contraindications) should be treated using Alteplase as recommended in the next three NICE recommendations.

Alteplase is recommended for the treatment of acute ischaemic stroke when used by physicians trained and experienced in the management of acute stroke. It should only be administered in centres with facilities that enable it to be used in full accordance with its marketing authorisation.

Alteplase should only be administered within a well organised stroke service with:

- staff trained in delivering thrombolysis and in monitoring for any associated complications
- care up to level 1 and level 2 nursing staff trained in acute stroke and thrombolysis
- immediate access to imaging and re-imaging, and staff appropriately trained to interpret the images.

Protocols should be in place for the delivery and management of thrombolysis, including post-thrombolysis complications.

Staff in A&E departments, if appropriately trained and supported, can administer Alteplase for the treatment of acute ischaemic stroke provided that patients can be managed within an acute stroke service with appropriate neuroradiological and stroke physician support...”

13. In June 2008, NICE issued guidance⁶ which said:

“All people with suspected stroke should be admitted directly to a specialist acute stroke unit following initial assessment, either from the community or from the A&E department.

⁶ Stroke: Diagnosis and initial management of acute stroke and transient ischaemic attack (TIA), NICE, July 2008

An acute stroke unit is a discrete area in the hospital that is staffed by a specialist stroke multidisciplinary team. It has access to equipment for monitoring and rehabilitating patients. Regular multidisciplinary team meetings occur for goal setting.”

The background events

14. Mr T was admitted to hospital on 6 April 2011 at the request of his GP following a two week history of general malaise, including a three day bout of vomiting, associated with muscle pain.

15. On admission, Mr T showed signs of infection and an initial diagnosis of cholangitis⁷ was made. Treatment with antibiotics and intravenous fluids was commenced.

16. On 7 April Mr T was found to be short of breath, with reduced oxygen saturation and chest crepitations.⁸ Following various tests and investigations, a provisional diagnosis of a respiratory tract infection or heart failure was made.

17. Later that day, Mr T was found to have been overloaded with intravenous fluid and a diagnosis of pulmonary oedema⁹ was made, resulting in fluid intake being restricted.

18. On 9 April, Mr T appeared to have improved sufficiently to be transferred to another ward, where he was recorded, on 10 April, as being self-caring, mobile and eating well.

19. In the early hours of 11 April, a nurse noted that Mr T’s eyes were red and swollen and a medical review was sought.

⁷ An infection in the bile duct.

⁸ Clicking, rattling or crackling noises heard in the lungs during inhalation, representing a symptom of a respiratory infection or fluid in the lung.

⁹ An accumulation of fluid in the lungs.

20. At 10.10am on 11 April, at the medical review, Mr T's red eyes were diagnosed as a sub-conjunctival haemorrhage¹⁰ and he was also noted to have dysarthria.¹¹ A provisional diagnosis of a stroke was made and a CT scan was requested.

21. A further review noted that Mr T had slurred speech and difficulty in opening his eyes. A neurological examination suggested that Mr T's left eyelid was drooping and that he had parasthesia¹² in his right hand. A provisional diagnosis of a transient ischaemic attack ("TIA")¹³ was made and the sub-conjunctival haemorrhage was suspected as being due to Mr T's aspirin dosage.

22. A review by an ophthalmologist revealed that Mr T did not open his eyes well and had reduced vision. No drooping of the eyelid was noted, but left sided facial weakness was recorded.

23. Later that day, at 9.10pm, the CT scan was performed and reported on. However, the CT scan was not entirely clear, most likely due to blurring caused by Mr T moving during the procedure.

24. The CT scan was initially reported as showing no intra-cerebral bleed,¹⁴ but a small lenticular infarct¹⁵ on the left side, but this report was later changed to record that it was a poor quality scan (due to the blurring) but that no gross abnormality was present.

25. Mr T was made "nil by mouth", further intravenous fluids were prescribed and medication to prevent blood clots was also prescribed.

¹⁰ Bleeding into the white of the eye caused by burst blood vessels.

¹¹ Difficulty in talking, caused by problems with the muscles used in speech.

¹² A sensation of tingling, prickling or burning of the skin, with no apparent long-term physical effect.

¹³ A TIA is also known as a "mini stroke" and is caused by a temporary disruption in the blood flow to part of the brain.

¹⁴ Bleeding inside the brain.

¹⁵ Tissue damage in the lenticular nucleus of the brain caused by an obstruction to the flow of oxygen from the blood to the area.

26. On 12 April, Mr T was reviewed by a Speech Therapist, who found him to have impaired oromotor function¹⁶ and with reduced strength and range of movement on the right. The Therapist also found that Mr T had difficulty in swallowing and slurred speech, with a high risk of aspiration.¹⁷

27. On 13 April, Mr T was transferred to the acute stroke ward.

28. On 13 April, Mr T's risk of aspiration remained and a dietetic review was undertaken, leading to a naso-gastric tube¹⁸ being fitted through which to feed him.

29. Also on 13 April, a neurological examination revealed a right homonymous hemianopia¹⁹ and a drooping left eyelid. It was concluded that Mr T had sustained a left carotid artery stroke and further investigations were ordered, which showed some thickening to the carotid artery in the neck but which did not cause significant narrowing. On the same day, a medical review confirmed the right homonymous hemianopia and also found a facial palsy.²⁰

30. Between 14 and 18 April, Mr T developed a raised temperature, signs of infection and an increased respiratory rate. A chest x-ray confirmed a diagnosis of hospital acquired pneumonia. However, Mr T's neurological signs and swallowing were improving and he was therefore transferred to a stroke rehabilitation ward on 18 April.

31. On 26 April, there was a sudden deterioration in Mr T's neurological condition, with increased drowsiness and a more marked right hemiparesis. A medical review suggested that Mr T had developed internuclear ophthalmoplegia,²¹ which was judged to represent a new brain stem stroke. A further CT scan was undertaken which was initially thought to be unchanged

¹⁶ The movement of the mouth, jaw and facial expressions.

¹⁷ The inhalation of food into the lungs.

¹⁸ The insertion of a tube through the nose and into the stomach to allow the administration of food and/or medication.

¹⁹ Homonymous hemianopia is visual field loss on the same side of both eyes.

²⁰ A weakness in the facial muscles.

²¹ The abnormal movements of one or both eyes, often with involuntary, rapid, rhythmic horizontal movement, causing double vision.

from the previous scan and showed no haemorrhage. However, upon review by a neuroradiologist, it was thought that the scan showed early changes in the brain stem, with a new infarction on the left Pons²² area of the brain and that Mr T had therefore sustained a further stroke.

32. On 27 April, a clinical review concluded that the first CT scan had missed the stroke and that a further stroke had occurred on 26 April.

33. On 29 April, Mr T deteriorated further and a repeat CT scan showed progression of the infarction on the Pons, together with further infarctions elsewhere in the brain. The medical team concluded that further treatment was not possible and, following discussion with Mr T's family, moved to palliative care.

34. Sadly, Mr T died on 4 May.

Mrs T's evidence

35. Mrs T said that her husband should not have been given intravenous fluids until his heart had been checked and that, once he did have a chest X-ray, it was concluded that he had heart failure. Mrs T said that she felt that the fluid overload led to heart failure which caused the strokes that ultimately resulted in Mr T's death.

36. Mrs T said that she clearly recalled her husband's eyes being black on 8 April and that they were noticeable to anybody who saw him. However, she said that it was not until he was seen by the ophthalmologist, on 11 April, that the sub-conjunctival haemorrhage was diagnosed. Mrs T said that this delay was unacceptable.

37. Mrs T said that although the Health Board had told her that Mr T's regular aspirin dosage had been stopped as a result of the sub-conjunctival haemorrhage, he was in fact taken off of aspirin before that time. Mrs T said that she was concerned that, since the aspirin was recommenced following the stroke, her husband had been without medication for some time which could have prevented clots from forming and might have prevented the strokes from which he subsequently suffered.

²² A part of the brain stem.

38. Mrs T was also concerned about the interpretation of the various CT scans carried out on her husband. Specifically, Mrs T said that she felt that the scan taken on 11 April should have been redone, due to the poor quality. She also felt that reinterpretation of the scan undertaken on 26 April showed that a stroke had been missed and that had this been identified initially then Mr T's treatment plan might have been different.

39. Mrs T said that she recalled being told by a doctor, on 11 April, that her husband's CT scan had not shown any clot but that there was a "blockage" in his neck which would be operated on if he was well enough at a later date.

40. Mrs T said that Mr T was not assessed by the SALT until 12 April, at which point he was declared to be for nil by mouth. Mrs T said that attempts were made to feed Mr T prior to this assessment and that this led him to choke, necessitating the suctioning of his throat to remove food.

The Cardiff and Vale University LHB's evidence

41. The Health Board said that intravenous fluids were given at the appropriate time and that Mr T was catheterised and his fluid balance monitored. Whilst, in hindsight, the Health Board agreed that there was a fluid overload, it said that the treatment was undertaken in good faith and with sound underpinning rationale and that any overload that may have occurred was not responsible for the subsequent strokes.

42. The Health Board said that had Mr T had black eyes on 8 April then these would have been seen and recorded during ward rounds by his doctor. The Health Board went on to say that although Mr T's eyes were documented by a nurse as being red and swollen on 11 April, Mr T had denied any pain or irritation.

43. The Health Board said that Mr T's aspirin was withdrawn following the discovery of the sub-conjunctival haemorrhage, as a known side effect of this medication is bleeding. The Health Board said, however, that Mr T continued to receive clexane to thin his blood.

44. The Health Board said that it did not consider there to be a delay in the identification and management of the sub-conjunctival haemorrhage, as Mr T was seen by an ophthalmologist on the same day as he was referred for an ophthalmology review, but that, in any event, this condition was not clinically significant in terms of the eventual sad outcome.

45. The Health Board said that when slurring speech and difficulty in swallowing was identified, appropriate action to assess and move to nasogastric feeding was taken.

46. The Health Board said that Mr T did not initially show symptoms of stroke and that, when he did, these were appropriately identified and managed, both in terms of investigation and treatment.

47. The Health Board said that Mr T's symptoms on 11 April were suggestive of a TIA, rather than a stroke. The Health Board said that he was not thrombolysed as clinicians decided that the risks outweighed the benefits of such treatment at that stage. The Health Board said that if Mr T had been considered for thrombolysis at this stage, his score on the National Institutes of Health Stroke Scale²³ would not have been above 4 and that thrombolysis is not proven to be of benefit under these circumstances. The Health Board did however accept that these comments were made retrospectively, with hindsight and that there was no evidence recorded in the notes that this course of action was actually considered by clinicians at the time and then discounted.

48. The Health Board said that the CT scans initially showed no abnormality and then no change between scans, but subsequent review suggested evidence of stroke and that there was a degree of movement artefact²⁴ in one of the scans which hampered interpretation.

49. The Health Board said that Mr T was commenced on the stroke care pathway whilst on the ward on 12 April and received appropriate care as part of an integrated care pathway. The Health Board said that Mr T was then

²³ The National Institutes of Health Stroke Scale is a tool used by healthcare providers to objectively quantify the impairment caused by a stroke.

²⁴ Blurring of the scan image, usually caused by the patient moving whilst being scanned.

transferred to the acute stroke ward on 13 April, before receiving rehabilitation treatment on the stroke rehabilitation ward on 18 April. The Health Board said that this was in line with the targets implemented across Wales.

50. The Health Board said that Mr T was on aspirin and atorvastatin²⁵ at the time of his admission for his previous history of ischaemic heart disease and that this drug combination was also used for stroke prevention. The Health Board said that Mr T was therefore already essentially taking medication to help protect him from stroke, but that such preventative measures cannot provide complete protection against stroke.

51. The Health Board said that there was some confusion in respect of the administration of aspirin, as the dates on the medication chart appeared to be wrong. The Health Board said that the chart appears to say that aspirin was administered on 3 April but not again until 12 April, but that since Mr T was not in hospital on that earlier date, there appeared to be an error in the chart.

52. The Health Board said that Mr T was reviewed by a junior doctor on 26 April at 3.20pm, who concluded that he had decompensated neurologically²⁶ due to his acute illness in addition to his recent stroke. The Health Board said that Mr T was reviewed ten minutes later, by a registrar, by which time he had developed further new neurological signs, including asymmetric pupils and abnormal eye signs, consistent with a brain stem stroke.

53. The Health Board said that Mr T's stroke was evolving at this time and that the signs were initially subtle. The Health Board said, therefore, that these signs were unlikely to be picked up on by a nurse unless they were highly experienced in stroke care. The Health Board said, however, that nursing staff appropriately sought a medical review as soon as concerns about Mr T's condition were raised. The Health Board said that, in light of the concerns raised by Mrs T in her complaint, further teaching sessions were being arranged for nursing staff in respect of the early recognition of neurological symptoms.

²⁵ A drug used to lower cholesterol in the blood.

²⁶ Where the brain becomes unable to maintain proper function.

54. The Health Board said that although the CT scan of 26 April was initially reported as showing no change, a senior neuroradiologist reviewed the scan (with a view to deciding whether or not to carry out an MRI scan) and noted evidence of a brain stem stroke. The Health Board said that the CT scan report was therefore updated to reflect this new opinion.

55. The Health Board said that there are documented discussions with Mrs T on 27 April, in which the likelihood of a clot having caused Mr T's stroke was addressed. The Health Board said, however, that there was no discussion about surgery on Mr T's neck being considered.

Professional advice

56. The Adviser said that Mr T's initial presentation of symptoms suggested that he was suffering from a serious condition, consistent with suspected acute cholecystitis²⁷ or cholangitis.²⁸ The Adviser said that the initial plan and treatment with intravenous fluid replacement and antibiotics was appropriate.

57. The Adviser went on to say that although, in retrospect, too much fluid was given, the estimation of fluid replacement is not an exact science. The Adviser said that, once fluid overload had been identified, appropriate treatment was commenced.

58. The Adviser did not consider that this instance of fluid overload resulted from any failing in care, nor was it clinically significant in terms of subsequent events. Specifically, the Adviser said that he did not consider that the fluid overload was the cause of Mr T's subsequent strokes.

59. The Adviser said that Mr T's regular medication was not listed on the GP referral letter and that it appeared that he was not given aspirin from the time of his admission up until 11 April. The Adviser said that the Health Board had not undertaken medicine reconciliation, in order to confirm details of any regular medication which needed to be continued whilst in hospital, and he said that this was not good practice.²⁹

²⁷ An inflammation of the gallbladder

²⁸ An infection of the bile duct.

²⁹ NICE guidance, December 2007

60. The Adviser said that he was surprised that aspirin was not recorded as being taken, bearing in mind Mr T's previous coronary problems. The Adviser said that the decision to prescribe aspirin on 11 April was appropriate and in line with relevant stroke guidelines, but that the failure to do so at an earlier stage, in a patient with recognised stroke risk factors, was a significant omission which would have significantly increased the risk of a vascular event, including a stroke.

61. The Adviser said that the absence of Mr T's regular dose of aspirin from 6 to 11 April was likely to have led to the evolution of the first stroke he suffered.

62. The Adviser said that the first record of any eye abnormality was a nursing entry in the early hours of 11 April and medical staff were appropriately informed. He went on to say that a diagnosis of a subconjunctival haemorrhage was made at 10.10am and confirmed later that day, following an ophthalmological review. The Adviser said that this is a common disorder which did not require more urgent management and was not clinically significant in respect of later developments.

63. The Adviser said that, following his first suspected stroke on the morning of 11 April, Mr T was not declared to be treated as Nil By Mouth until 8.01pm – some 10 hours after the suspected stroke occurred. The Adviser said that no formal swallowing screening test had been recorded and nursing staff had been encouraging him to eat and drink in the interim. The Adviser said that this was inappropriate and that the national stroke guidelines³⁰ recommend that stroke patients should be screened for swallowing difficulties before being given food, fluid or medication.

64. He went on to say that it was not until some 48 hours after the initial stroke that the SALT assessment took place and identified significant difficulties in swallowing, with a high risk of aspiration. The Adviser said that, at this stage, a nutritional assessment was undertaken and feeding via a nasogastric tube was appropriately introduced.

³⁰ National Clinical Guideline for Stroke

65. In respect of the quality of the CT scan, the Adviser said that movement artefact, causing a sub-standard image, was common in patients with acute stroke, due to restlessness.

66. The Adviser said that the scan caused diagnostic uncertainty initially, with possible diagnoses of a TIA or a stroke. The Adviser went on to say that the quality of the CT scan was inadequate to definitively confirm or refute a stroke and that an MRI scan is recommended in these circumstances.

67. However, the Adviser said that the CT scan was sufficient to show the absence of an intracranial haemorrhage,³¹ which led to the prescription of medication which was appropriate in this case.

68. The Adviser said therefore that even though he felt that an MRI should have been considered, the CT scan was interpreted appropriately and the correct treatment followed.

69. However, in respect of the time taken to identify a stroke, the Adviser had significant concerns.

70. The Adviser said that Mr T was first noted to have symptoms suggestive of an acute stroke at 10.10am on 11 April, but that the CT scan was not performed and reported on until 9.10pm. The Adviser said that all stroke patients should have a CT scan within one hour.³²

71. The Adviser said that there was no mention in the record that clinicians had considered the early use of thrombolysis with Alteplase once a stroke was suspected. He went on to explain that this treatment is known to improve the outcome in some patients, where they are treated within three hours, by increasing the survival rate by around 18%.³³

72. The Adviser said that he considered it unacceptable that a patient being treated for acute cardiac failure and who was being closely monitored should have had a stroke which was not recognised immediately. The Adviser said

³¹ A bleed within the skull.

³² National clinical guideline for stroke

³³ NICE Technology appraisals TA122 and TA264, June 2007 and September 2012 respectively.

that an appropriately trained stroke physician would have been best placed to interpret the CT scan and other clinical details and such a clinical assessment may have led to the immediate administration of treatment with Alteplase.

73. The Adviser said that a scan taken on 13 April showed some minor fatty deposits in the carotid artery in Mr T's neck, but that there was not any significant narrowing and a procedure to clear this would not have helped to prevent a further stroke.

74. The Adviser said that the scan on 26 April was initially interpreted as showing no changes, but that a neuroradiologist,³⁴ upon reviewing the scan, identified a new stroke involving the Pons.³⁵ The Adviser said that a failure to recognise infarction³⁶ in the brain stem where the Pons is found is common when a non-specialist reviews such a scan.

75. However, the Adviser did say that this delay in correctly identifying this infarction was not clinically significant as it would not have changed the course of treatment. The Adviser said that Mr T was already being given treatment which would have been recommended at this stage and it would not have been possible to offer thrombolysis by then as it is contraindicated in patients who have recently suffered an ischaemic stroke.³⁷

76. The Adviser also said that the second stroke occurred in a different area to that of the first, which he said indicated that the clots originated from the heart rather than from the arteries in the neck.

77. However, the Adviser went on to say that a significant cause of cerebral infarction is atrial fibrillation³⁸ or a blood clot in the heart. The Adviser said that Mr T's history of heart problems made this cause a strong possibility.

78. The Adviser said that although some appropriate investigations into this were undertaken by clinicians, other investigations, such as a 24 hour ECG,³⁹

³⁴ A specialist radiologist, dealing with CT and MRI scans of the spine, neck and head.

³⁵ A part of the brain stem.

³⁶ Tissue damage caused by an obstruction in the blood flow.

³⁷ An ischaemic stroke is caused by an interruption to the blood supply, whilst a haemorrhagic stroke is caused by a ruptured blood vessel.

³⁸ A heart rhythm disorder.

³⁹ An electrocardiogram, which is a test to measure electrical activity in the heart, the rate and rhythm of heartbeats and any damage to the heart.

which might have identified atrial fibrillation, were not undertaken. The Adviser said that Mr T's chest infection developed at this time and therefore delayed further investigation into the possibility of a cardiac origin of the clots causing the stroke.

79. The Adviser said that the possibility of a cardioembolic source of the stroke was therefore not fully investigated. The Adviser said that had atrial fibrillation been identified then Mr T may have been treated with medication superior to aspirin, such as warfarin or Dabigatran, which may have prevented the second stroke.

80. Overall, the Adviser had serious concerns about the treatment for stroke that Mr T received. Along with the concerns he expressed regarding the failure to implement thrombolysis with Alteplase, the Adviser said that a further significant failing was that Mr T was not admitted to a specialist stroke unit immediately upon diagnosis of a stroke.

81. The Adviser said that national guidelines state that all patients with suspected stroke should be admitted directly to a specialist acute stroke unit following initial assessment.⁴⁰ The Adviser said that the benefit of doing so can reduce the risk of death or dependency by up to 25%.

82. The Adviser said that Mr T was not transferred to the acute stroke unit until 13 April and that the integrated care pathway was not appropriate as it did not ensure that Mr T received the appropriate care.

83. The Adviser said that Mr T did not receive the most effective care in the first 48 hours after the initial stroke and, as a consequence, he developed a chest infection which led to delays in the investigation of a possible cardiac cause of the stroke. The Adviser said that adequate investigation may have identified the presence of atrial fibrillation, a condition which increases the chance of suffering a stroke, which would have led to alternative preventative strategies.

⁴⁰ NICE guidance, June 2008

84. The Adviser said that, overall, the care Mr T received in respect of his stroke did not fall within the boundaries of acceptable practice and considered it likely that these failings were clinically significant in respect of Mr T's prognosis and the eventual sad outcome.

Analysis and conclusions

85. I should firstly like to offer to Mrs T and her family my sincere condolences at their sad loss. It is clear from her correspondence and Mrs T's conversations with my investigator how deeply events have affected Mr T's family and I recognise that they will find much of the detail in this report to be distressing. Having said that, I am conscious that they have felt that the uncertainty surrounding the quality of Mr T's treatment has left them unable to find closure and whilst therefore I understand that they will find this report upsetting, I do hope that the clarity that it brings is of some help to Mrs T and her family in answering their long outstanding queries.

86. In reaching my conclusions, I have considered carefully all of the information before me, including the report I have received from my professional adviser, whose advice I accept without reservation.

87. I should acknowledge from the outset that it is not possible to say definitively that the sad outcome would have been any different but for the failings identified in this report. However, having taken careful account of the evidence I have seen and the advice I have received, I do not feel able to reach any conclusion other than that Mr T's chances of survival were significantly reduced as a result of serious shortcomings in his care.

88. From the information I have seen, the successful treatment of a stroke is reliant upon two key factors – speed and specialist treatment. In order to improve the chances of survival and the reduction of life-changing consequences for the patient, it is critical that prompt investigation, diagnosis and treatment by appropriately trained specialists are delivered. I have found that Mr T's care was wanting in each of these respects.

89. Whilst there are examples of good care to be found – for example, in respect of the initial treatment of Mr T's presenting symptoms and his care on the stroke rehabilitation unit – there is overwhelming evidence of an abject

failure to treat the serious development represented by Mr T's stroke with the requisite urgency and specialist skill.

90. In reaching this conclusion, I am concerned to note the Health Board has, throughout the course of the lengthy complaints process, maintained that Mr T's treatment was timely and appropriate. Similarly, I am concerned that the Health Board has not itself identified the numerous failings noted by my adviser, which suggests that its own review of this episode of care lacked depth and a critical eye. That is an issue of governance which must be addressed.

91. In reviewing the care of a patient following the submission of a complaint about their treatment, it is vital that a robust investigation is undertaken, which includes the ability to retrospectively assess the standard of care delivered in an objective manner and with reference to any appropriate, applicable guidelines. In reaching the conclusions I have in respect of the clinical care Mr T received, it must necessarily follow that I must conclude that the Health Board's own consideration of Mrs T's complaint fell significantly short of what I regard as acceptable.

92. Whilst I accept that cases in which the exercise of clinical judgement and discretion are involved can often result in competing, but equally valid, views being offered by clinicians, I am not persuaded that this is the case here. From the information I have seen, the treatment that Mr T received was, at critical times, contrary to the fundamental standards set out in nationally recognised guidance. Accordingly, I have grave concerns that the errors identified in Mr T's case may have been – and may continue to be – made within the Health Board's hospitals.

93. In my view, the failings identified by this report indicate the existence of both individual and systemic errors – from the failure to check Mr T's regular medication, to delays in CT scanning, the lack of proper nutritional care and, most critically, a comprehensive failure to recognise the urgency and time sensitivity of the treatment Mr T required. In combination with one another, these failings resulted not only in appropriate treatment simply not being given, but also in developments in Mr T's condition which actively prevented other investigations and treatment from being implemented. These were serious, fundamental and unacceptable failures.

94. In particular, it seems that Mr T's regular dose of aspirin (which he was taking regularly prior to this hospital admission, due to his history of heart problems) was not continued during the early days of his admission. Whilst aspirin was subsequently introduced, the evidence I have seen suggests that he went without any dose from the point of his admission until 11 April – a period of some six days.

95. Although it is not possible to say definitively what impact this had on subsequent events, my adviser has offered his opinion that this omission led to the evolution of the stroke which Mr T suffered on 11 April. From the information I have seen, I concur with this view.

96. Since there are a number of different interacting factors which led to the eventual sad outcome – including pre-existing risk factors, poor care and unfortunate, unforeseeable developments – it is not possible to say with any certainty that Mr T would have survived but for the failings identified in this report. However, the Ombudsman's role is to consider outcomes on the basis of the "balance of probabilities" and I am satisfied that the evidence and advice I have seen is strongly suggestive of these failings having had a serious and detrimental impact on his health and chances of survival.

97. Accordingly, I consider there to be persuasive evidence that failings in the care delivered to Mr T significantly reduced the chances of a successful treatment outcome. I therefore **uphold** the complaint.

98. I regret that reading my conclusion that the failings identified significantly reduced Mr T's chances of surviving the strokes he suffered will undoubtedly add further to his family's continuing distress. There is no doubt that the service failures identified have resulted in an injustice to Mrs T and her family. I have a number of recommendations to make in this case which I set out below. I would like to stress that the financial redress I am minded to recommend is in no way to be seen as compensation for the family's loss.

Recommendations

98. In light of the failings identified in this report and having taken advice from my professional adviser, I consider it appropriate to make the following recommendations.

I **recommend** that the Health Board should:

1. Within 28 days of the date of this report, issue to Mrs T and her family a comprehensive apology for the failings identified in this report.
2. Within three months of the date of this report, review its arrangements in respect of post-admission medication reconciliation and ensure that a systematic medicine reconciliation programme is in place.
3. Within three months of the date of this report, ensure that staff training in respect of recognising acute stroke is up to date, with particular reference to the current 2012 Stroke Guidelines issued by the Royal College of Physicians.
4. Within three months of the date of this report, ensure that use of the Rosier score system (or similarly recognised tool), in order to identify patients who are likely to have had an acute stroke, is implemented.
5. Within three months of the date of this report, with particular reference to the current Stroke Guidelines and NICE guidance, review its arrangements for the identification and treatment of acute stroke and consider including the following measures:
 - a) All patients who may have had an acute stroke (i.e. have been assessed as having a positive Rosier score) should be immediately assessed by a physician trained in stroke medicine to determine whether thrombolysis is suitable;
 - b) Suitable patients should have immediate CT scanning and, in all cases, within one hour.
 - c) All patients who may have had an acute stroke should be admitted immediately to a specialist acute stroke unit.
 - d) All patients who may have had an acute stroke should have a swallowing screening test, using a validated tool, by a trained professional within four hours.

6. Within 28 days of the date of this report, in light of the clear failings identified, review the findings set out in its various complaint responses to Mrs T and to this office and take action to ensure that its own complaints investigations are in accordance with the Putting Things Right scheme, are sufficiently robust, demonstrably independent and, where appropriate, critical of identifiably poor care, which should include the introduction of a quality assurance audit of a sample of its completed complaint investigations.
7. Within 28 days of the date of this report, issue to Mrs T a cheque in the sum of £5000 in respect of the time and trouble to which she has been put in pursuing this complaint and in recognition of the additional distress caused to her and her family as a result of the uncertainty with which they now live over whether Mr T might have survived the initial stroke.

99. I am pleased to note that in commenting on the draft of this report the Cardiff and Vale University LHB has agreed to implement these recommendations and has already provided me with some evidence of significant systemic and procedural changes which have been made since the events described in this report and which have already addressed some elements of my recommendations.

Prof Margaret Griffiths
Acting Ombudsman

6 February 2014



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