SUMMARY OF CONCLUSIONS

Elsie LAVENDER
DOB: Code A
Died: 06/03/96

Mrs Elsie Lavender was an 83 year-old lady admitted to the Haslar Hospital on 5th February 1996 following a fall and then transferred to Gosport War Memorial Hospital on 26th February 1996. She had long-standing problems with diabetes, a peripheral neuropathy, poor eyesight and registered blind. After admission she is found to be doubly incontinent, totally dependent with a probable quadriplegia, constant pains down her shoulders and arms and is found to have serious and unexplained abnormalities in various blood tests.

In the Gosport War Memorial Hospital, she fails to make any improvement, deteriorates with a bed sore that eventually becomes black and blistered. She receives pain relief and palliation for her deteriorating physical condition including subcutaneous Diamorphine and Midazolam and dies on 6th March 1996.

The expert opinion is:

> Mrs Elsie Lavender provides an example of a very complex and challenging problem in geriatric medicine. It included multiple medical problems and increasing physical dependency causing very considerable patient distress. Several doctors, including Consultants, failed to make an adequate assessment of her medical condition.
>
> There are particular significant concerns about the medical management in the Gosport War Memorial Hospital, and significant failings in the use of the drug charts at Gosport War Memorial Hospital.

1. INSTRUCTIONS

To examine the medical records and comment upon the standard of care afforded to the patient in the days leading up to her death against the acceptable standard of the day. Where appropriate, if the care is felt to be sub-optimal, comment upon the extent to which it may or may not disclose criminally culpable actions on the part of individuals or groups.

2. ISSUES

2.1. Was the standard of care afforded to this patient in the days leading up to her death in keeping with the acceptable standard of the day.

2.2. If the care is found to be suboptimal what treatment should normally have been proffered in this case.

3. CHRONOLOGY/CASE ABSTRACT. (The numbers in brackets refer to the page of evidence, the numbers with 'H' in front are the Haslar notes, 'M' in front are the microfilm notes).

3.1 The Gosport notes record that Mrs Lavender was an insulin dependent diabetes mellitus since the1940's (53). She is referred to the Diabetic Service because of more troublesome hypoglycaemia in 1984 (65). In 1985 she is known to have a mild peripheral neuropathy (73). Her weight in 1988 is 85 kgs (73) and in 1987 her weight is 89 kgs (77). By 1988 she has very poor eyesight (47M). She is also documented to have high blood pressure in 1986 (29).

3.2 Elsie Lavender was admitted to Haslar hospital on 5th February 1996 through A&E having had a fall at home (H15, H16). She is recorded as having right shoulder tenderness (H25) is moving all four limbs and her cervical spine is thought to be normal, written as (CX spine√) (H16). The notes record that x-rays were taken of her skull and both shoulders (H24). In a subsequent neurological examination, she is noted to have reduced power 3/5, cannot move her right fingers and has an extensor right plantar (H24). A Barthel on the 5th (H631) is recorded as 5/20.

Her past medical history is noted as insulin dependent, diabetes mellitus for 54 years (age 29) appendicectomy and a hysterectomy. She is noted to have previous collapses in the past (H47) but without weakness, although her clerking in 1995 (H48) suggested that she might have had some sensory loss and a mild diabetic peripheral neuropathy. Her Barthel in 1995 was 14/20 (H495) and she was able to mobilise at that stage with a walking stick (H497). She had diabetes, eye disease, was registered blind in 1988 (H 97). She had hypoglycaemic episodes going back many years (H 71) and pneumonia in 1985 (H317).

On transfer to the ward, both her legs are noted to be weak 4/5 (H35) no sensory loss is noted. The notes also state she does not normally go upstairs and her bed is downstairs (H29). However, her son stated that a large pool of blood was found at the top of the stairs (H23). She apparently goes out once a week with her son and is forgetful but not confused (H39).

Following admission, she is seen by a physiotherapist (157) who notes pain in both shoulders, can only stand with two people and is now having to be fed, washed and dressed, when previously independent.

No further neurological examination is recorded by the Haslar medical team and she is referred to Dr Lord on 13th February (H159). Dr Tandy actually sees her and confirms that she still has bilateral weakness of both arms and legs (H163) and finds that her left plantar is extensor (H163) confirmed in his letter (H253) but is not sure about the right plantar which has previously been found to be extensor.

The importance of this finding is that it suggests that she has a bilateral neurological event in the brain, brain stem or spinal cord somewhere above the thoracic spine.

Dr Tandy records "probable brain stem CVA"..... "she has had her neck x-rayed, I assume it was normal" (H167). I was unable to find any x-ray request recorded in the notes for a cervical spine, nor any reports of an x-ray of a cervical spine or indeed reports on the x-rays that were recorded as being requested (i.e. the skull and shoulder x-rays).

Dr Tandy notes her mild anaemia of 9.7 with an MCV of 76.5 (H17) and says that he will consider investigation into anaemia later (H164). Abnormal blood tests are also available in the notes on 9th February (H609) an albumin of 32, a Gamma GT 128 and Alkaline Phosphatase of 362. No investigations are done to determine whether these are a hepatic effect of her diabetes or other problems with the raised alkaline phosphatase potentially coming from a fracture.

Dr Tandy's letter says Mrs Lavender will be transferred for rehabilitation as soon as possible although his written notes say that "I'm not sure she will be able to get back home, but we'll try." She is transferred on the 22nd February 1996 to the Gosport War Memorial Hospital.

On the 20th February Mrs Lavender is again seen by a physiotherapist (H165), her bilateral shoulder pain is again documented and she needs two to transfer. Reviewing her drug charts (H684 and H690) she receives regular analgesia comprising Co-proxamol and Dihydrocodeine all through her admission.

3.3 Mrs Lavender is transferred on the 22nd February 1996 to the GWMH. The medical notes in Gosport (45M) 22nd February 1996 state that she "fell at home from the top to the bottom of the stairs and had lacerations on her head". It also states that she has severe incontinence and leg ulcers. Once in Gosport there is no apparent examination of the patient and no examination recorded. In some of the nursing cardex there is a series of assessments confirming that this lady is highly dependent. She has no mobility and bed rest is maintained all through her stay (100 -101). She has leg ulcers both legs (107 - 109). She is catheterised throughout, although there is no suggestion that she had a catheter prior to her admission to

hospital (111). She has a sacral bed sore noted; "a red and broken sacrum on 21st February" (115) and this progresses to a black and blistered bed sore on the 27th February (115). She is thought to be constipated on assessment, then continually leaks faeces throughout her admission (119).

3.4 Barthel is documented at 4/20 on 22nd February (165) (i.e. grossly dependent). Her mental test score is normal 10/10 on the same date (165). Lift handling score (171) also confirms high dependency.

3.5 Investigation tests reported on 23rd February 1996 find that she has a normal haemoglobin of 12.9 with a slightly reduced mean cell volume of 75.6 and gross thrombocytopenia (a low platelet count) of 36,000 (57M). The report on the film (58M) shows that this is a highly abnormal full blood count with distorted red blood cells and polychromasia. A repeat blood film is suggested. This is repeated on 27th February (57M) and thrombocytopenia is now even lower at 22,000. The urea is normal at 7.1 on 23rd February but has increased and is abnormal at 14.6 on 27th February (187). Her alkaline phosphatase is 572 (over 5 times the upper limit of normal) her albumin is low at 32 (187). No comment is made on any of these significantly abnormal blood tests in any of the Gosport notes, though the low platelet count is noted in nursing summary on 23rd February (151). The platelet count had been normal at 161 on admission to the Haslar (H17).

3.6 An MSU (59M) sent on 5th February showed a heavy growth of strep faecalis there are no other MSU or other blood culture results in the notes.

3.7 Medical progression (documented on pages 45M and 46M) is of catheterisation and treatment for a possible U.T.I on 23rd February. On 26th February, Dr Barton records that the patient is not so well, also that Mrs Lavender's "bottom was very sore needs Pegasus mattress institute, S/C analgesia if necessary". The family were seen regarding progress. Nursing cardex reports (153) a meeting with the son occurred on the 24th February and state "son is happy for us just to make Mrs Lavender comfortable". "Syringe driver explained".

3.8 The medical notes on 5th March say "deteriorated over the last few days..., in some pain, therefore start subcutaneous analgesia." On 6th March "analgesia commenced, comfortable overnight I am happy for the night staff to confirm death". It is then confirmed at 21.28 hours on 6th March.

3.9 The nursing care plan first mentions significant pain on 27th February (95) and describes pain on most days up until 5th March where the pain is uncontrolled and the patient is distressed, at which point a syringe driver is commenced (97). On 6th March pain is controlled.

3.10 **Drug management in Gosport.** I shall concentrate on the use of analgesia. Throughout the patient received appropriate doses of insulin, Co-amilofruse (a diuretic), Digoxin, Iron and steroid inhalers up unto the last twelve hours. She also received a course of Trimethoprim (an antibiotic) between 23rd and 27th February.

3.11 Morphine slow release (MST) (67M)was started at 10 mgs bd on the 24th February and is given until 26th February when MST 20 mgs bd (145)is started, this continues until the 3rd March. On 4th March Oramorph 30 mgs bd is written up and given during 4th March (139). On 5th March Diamorphine is written up 100 – 200 mgs subcut in 24 hours (137). 100 mgs is prescribed and started at 08.30 in the morning, together with Midazolam 40 mgs (137) (61M). Midazolam had been written up at 40 – 80 mgs subcut in 24 hours. Diamorphine and Midazolam pump is filled at 09.45 hours (61M) on 6th March together with another 40 mgs of Midazolam.

3.12 When admitted into hospital Dihydrocodeine PRN for pain had been written up together Hyoscine. Diamorphine 80 – 160 mgs subcut in 24 hours was written up on 26th February together with Midazolam 40 – 80 mgs in 24 hours subcut, but these drugs were never prescribed (141).

3.13 The notes document (for example page 65M) Dr Lord was the consultant responsible for this patient although the patient only appears to have been seen medically at any stage by Dr Barton, and a different consultant Dr Tandy saw the patient in the Haslar Hospital.

Drug	Date prescribed	Prescribed as	Prescriber	Given
Dihydrocodeine	22/02	TT oral Qds, PRN	Barton	22/02 – 24/02 03/03
Diamorphine	26/02	80 – 160 mgs S/C in 24 hours PRN	Barton	-
Midazolam	26/02	40 – 80 mgs S/C in 24 hours PRN	Barton	-
MST	24/02	10 mgs oral b.d Regular	Barton	24/02 2 doses 25/02 2 doses 26/02 am only
MST	Probably 26/02	20 mgs oral b.d Regular	Barton	26/02 pm dose 27/02 2 doses 28/02 2 doses 29/02 1 dose 01/03 2 doses 02/03 2 doses 03/03 2 doses
NEW PRESCRIPTION CHART				
Oramorphine SR Tablets and MST (in	04/03	30 mgs oral b.d Regular	Barton	04/03 2 doses 05/03 not given but prescription not

same prescription box)				crossed out.		
Diamorphine	05/03	100 – 200 mgs S/C in 24 hours Regular	Barton	05/03 06/03	0830 0845	100 mgs 100 mgs
Midazolam	05/03	40 – 80 mgs S/C in 24 hours Regular	Barton	05/03 06/03	0830 0845	40 mgs 40 mgs

4. TECHNICAL BACKGROUND / EXAMINATION OF THE FACTS IN ISSUE

4.1 This section will consider whether there were any actions so serious that they might amount to gross negligence or any unlawful acts, or deliberate unlawful killing in the care of Elsie Lavender. Also whether there were any actions or admissions by the medical team, nursing staff or attendant GP's that contributed to the demise of Mrs Lavender, in particular, whether beyond reasonable doubt, the actions or omissions more than minimally, negligibly or trivially contributed to death.

4.2 In particular I have discussed:
a) Her medical conditions
b) Whether she had become terminally ill during her admission
c) Whether the treatment that was then provided was appropriate.

4.3 Mrs Lavender had a number of serious underlying medical conditions. The most serious of which was her insulin dependent diabetes mellitus going back to the 1940's complicated by hypoglycaemia's, which had led, to falls on previous occasions, peripheral neuropathy which may also contribute to falls and with a combination of diabetes and other processes she had become registered blind. She also had documented frailty prior to admission, for example, already having moved her bed downstairs with an exercise tolerance of 10 yards with a stick. Her son was documented to do her shopping (11). However, she was still living alone, was only documented to have stress incontinence (11) and was cognitively intact (MTS 10/10) (165).

4.4 She was then admitted to Haslar Hospital having had a fall, which was from the top to the bottom of the stairs. No explanation is given as to how she was at the top of the stairs, if she was already set up with her bed downstairs at home. Following this she is documented both at the assessment at Haslar Hospital and then on admission to Gosport Hospital as being severely dependent. She cannot use her arms properly, her hands and wrists are noted to be weak and she cannot stand and walk, she is so incontinent she needs a catheter and she has continual faecal leakage. Barthel is 4/10. I believe this lady was misdiagnosed and had quadriplegia from a high cervical Spinal cord injury secondary to her fall. This diagnosis appears to have been missed by all the doctors who saw her. Although the A&E notes in Haslar state

"cervical spine normal" (H18), presumably on clinical, not x-ray, grounds. Also Dr Tandy mistakenly believes she had her neck x-rayed and it was normal (H163). No-one checks this statement is correct.

4.5 Other on-going serious medical problems have also not been explained. She has a documented low platelet count on admission to Gosport, which on repeat is extremely low and at a level that makes life threatening bleeding at any time quite probable. The blood film is also highly abnormal which suggests that there is now some systemic illness going on, probably involving this lady's bone marrow. In the absence of infection or a likely drug culprit, then cancer involving the bone marrow would be a possibility. She also has a very rapidly rising alkaline phosphatase, which suggests either liver, or bone pathology. No other information is now available that would help me clarify this further.

I would have expected that these very abnormal blood tests would have been reviewed and commented on by the doctor in charge of the case. There is no point in undertaking investigations if the results are ignored. The blood results appear to be complex to interpret and I would have expected a clinical assistant or General Practitioner to have taken advice from the consultant in charge of the case as to their relevance and whether further action was required. If further discussion did take place or the results were properly looked at, this is simply not recorded in the notes.

4.6 Other evidence that this lady was frail and ill is provided by the pressure sore which appears to deteriorate during admission and a low albumin documented on admission.

4.7 In my view this lady received a negligent medical assessment in both Haslar and Gosport. In particular the cervical spine xrays, if undertaken, were not checked or reported in Haslar, she was not examined on admission to Gosport, or if she was it was not documented in the notes. Thus no medical explanation beyond the "possible brain stem CVA" is made. This would not explain all her physical symptoms, or her profound neurological deficit. Also no medical diagnosis was made for pain that she continually complained of down her arms, which again would fit with a high cervical Spinal cord fracture or similar injury. Also, no attempt was made to determine why this lady had a very low platelet count and rising alkaline phosphatase. Without making an adequate medical assessment it is impossible to plan appropriate management. The lack of an adequate medical assessment and adequate documentation make it very difficult to be certain as to what treatment should normally have been given.

4.8 There can be no doubt though that the family, Dr Barton and the nursing staff all recognised this lady was seriously ill. Although the doctors fail to come to a diagnosis and therefore could not determine whether there was any treatable underlying problem. Evidence for this is that there was already discussion, within 2 days of admission, with the family about prognosis for recovery and how best to manage her illness. A syringe driver was already being discussed with the family on 24th February. Indeed all the markers of illness I have found, suggest this lady was very seriously ill.

4.9 Even if a high cervical Spinal cord fracture had been diagnosed, the potential for neurosurgical intervention in an elderly lady with diabetes is low and treatment with prolonged immobilisation has a very high mortality rate in itself. The unexplained low platelet count also suggests other significant serious pathology, which was never diagnosed, more complex in a patient who needing all care with leg ulcers and pressure sores. In my view, there were only two options by 24th February, **a)** to get a further specialist opinion or **b)** treat symptomatically and provide palliative care.

4.10 In view of the complexity of the medical problems, it would have been wise and appropriate to have obtained a further specialist opinion, probably from the consultant in charge of the case before deciding this lady was definitely terminally ill. I can see no evidence in the notes that this was considered.

It was appropriate though to provide pain relief for someone who was both in pain and distressed with loss of totally bodily function. To start MST at a normal low dose on the 24th February was appropriate.

4.11 If the pain was not resolved, increasing the dose to 20 mgs bd on both the 26th February adding the Oramorph 30 mgs bd on 4th March were all appropriate symptomatic responses.

4.12 An unusually large dose of Diamorphine (80 – 160 mgs subcut in 24 hours) is written up on the 26th February on the PRN section of the drug chart. Midazolam 40 - 80 mgs subcut is also written up PRN. Although never given, there is no justification in the notes for why such an apparently large dose of Diamorphine was written to be given if needed.

4.13 I have little doubt this lady was moving to a terminal phase of her illness by the 5th March. There had been no improvement in her quadriplegia, she remained faecally incontinent, the nursing cardex documents increasing pain, her platelet count has fallen further and her urea has doubled to 14.6 (187). At this stage a decision to start Diamorphine 100 mgs once a day subcutaneously and 40 mgs once a day Midazolam is

made.

4.14 Midazolam is widely used subcutaneously in doses from 5 – 80 mgs for 24 hours and is particularly used for terminal restlessness. The dose of Midazolam used was 40 mgs for 24 hours, which is within current guidance, although many believe that elderly patients may need a lower dose of 5 – 20 mgs per 24 hours. (Palliative Care. Chapter 23 in Brocklehurst Text Book of Geriatric Medicine, 6th Edition 2003).

4.15 The Diamorphine was specifically prescribed for pain and is commonly used for pain in terminal care, Diamorphine is compatible with Midazolam and can be mixed in the same syringe driver. The dose of Diamorphine actually prescribed was 100 mgs in 24 hours. At that time Mrs Lavender was receiving 60 mgs a day of Oramorphine. Diamorphine subcutaneously is usually given at a maximum ratio of 1:2 (i.e. up to 30 mgs of Diamorphine in 24 hours for 60 mgs of Oramorphine). (Wessex Guidelines). However if her pain was not controlled and it would be appropriate to give a higher dose of the Diamorphine. Conventionally this would be 50% greater than the previous days; (Wessex Guidelines) some clinicians might give up to 100%. Thus a starting dose of Diamorphine of 45 – 60 mgs in 24 hours would seem appropriate. Mrs Lavender actually was prescribed a dose of 100 mgs of Diamorphine, in my view excessive.

4.16 Diamorphine is compatible with Midazolam and can be used in the same syringe driver. It is documented above though that she received a significant dose of Midazolam and an excessive, and in my view, inappropriately large dose of Diamorphine. Together these drugs are likely to have caused excessive sedation and respiratory depression. However there is no evidence in the notes to prove these complications occurred.

4.17 Mrs Lavender is documented to be comfortable on the 6th and dies approximately 36 hours after the Midazolam and Diamorphine pumps were started.

The prediction of how long a terminally ill patient will live is virtually impossible and even Palliative Care experts show enormous variation (Higginson I J and Costantini M. Accuracy of Prognosis Estimates by 4 Palliative Care teams: A prospective cohort study. BMC Palliative Care 2002 1:1.)

4.18 The doses of Diamorphine used, in conjunction with a significant dose of Midazolam, was in my opinion excessively high. However, I can not find evidence to satisfy myself the standard of "beyond reasonable doubt", they had the definite effect of shortening her life in more than a minor

fashion of a few hours to a few days.

5. OPINION

5.1 Mrs Elsie Lavender provides an example of a very complex and challenging problem in geriatric medicine. It included multiple medical problems and increasing physical dependency causing very considerable patient distress. Several doctors, including Consultants, failed to make an adequate assessment of her medical condition.

5.2 There are significant concerns about the medical management of Mrs Lavender, in particular:

- The failure of doctors in both Haslar and Gosport to consider other possible neurological causes for her problems or to obtain expert neurological advice.
- The failure of doctors in Haslar to follow up the reports on the Cervical Spine xrays, if they were actually undertaken.
- The failure to examine or record the examinations of Mrs Lavender on admission to the Gosport War Memorial Hospital, and therefore missing the opportunities to review her diagnoses.
- The failure to consider the implications of abnormal blood tests requested in the Gosport War Memorial Hospital.
- The failure of Dr Barton to get further advice from her consultant on the 24th February.
- The prescription of a large range and a very large minimum dose of Diamorphine (80 mgs) on the PRN side of the drug chart on the 26th February.
- The lack of a through recorded assessment of pain before starting regular strong opioid analgesia or the syringe driver (see generic report).
- The use of Diamorphine at a dose of 100 mgs in 24 hours on the 5th March , in my view an excessive dose.

5.3 There are also significant failings in the use of the drug chart at Gosport War Memorial Hospital, in particular:

- The failure to cross out the regular prescription of MST when replaced by other medication.
- The prescription of a large range of controlled drugs on both the PRN and regular sides of the drug chart (see generic report).
- The failure to write dosages of controlled drugs in words and figures as well as total dosages to be given.

6. EXPERTS' DECLARATION

1. I understand that my overriding duty is to the court, both in preparing reports and in giving oral evidence. I have complied and will continue to comply with that duty.
2. I have set out in my report what I understand from those instructing me to be the questions in respect of which my opinion as an expert are required.
3. I have done my best, in preparing this report, to be accurate and complete. I have mentioned all matters, which I regard as relevant to the opinions I have expressed. All of the matters on which I have expressed an opinion lie within my field of expertise.
4. I have drawn to the attention of the court all matters, of which I am aware, which might adversely affect my opinion.
5. Wherever I have no personal knowledge, I have indicated the source of factual information.
6. I have not included anything in this report, which has been suggested to me by anyone, including the lawyers instructing me, without forming my own independent view of the matter.
7. Where, in my view, there is a range of reasonable opinion, I have indicated the extent of that range in the report.
8. At the time of signing the report I consider it to be complete and accurate. I will notify those instructing me if, for any reason, I subsequently consider that the report requires any correction or qualification.
9. I understand that this report will be the evidence that I will give under oath, subject to any correction or qualification I may make before swearing to its veracity.
10. I have attached to this report a statement setting out the substance of all facts and instructions given to me which are material to the opinions expressed in this report or upon which those opinions are based.

7. STATEMENT OF TRUTH

I confirm that insofar as the facts stated in my report are within my own knowledge I have made clear which they are and I believe them to be true, and the opinions I have expressed represent my true and complete professional opinion.

Signature: _____ Date: _____