Field Fisher Waterhouse

GENERAL MEDICAL COUNCIL

-and-

DR BARTON

ALICE WILKIE

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ffw/mylos

Field Fisher Waterhouse

GENERAL MEDICAL COUNCIL

-and-

DR BARTON

ALICE WILKIE

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GENERAL MEDICAL COUNCIL

DR BARTON

Index to Alice Wilkie's File

File 1

1. Medical Report prepared by Dr K Mundy dated 18 October 2001.

2. Medical Report prepared by Professor G A Ford dated 12 December 2001.

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KIM/gnt/gosport

18 October 2001

CONFIDENTIAL

Detective Superintendent J James
Hampshire Constabulary
Major Incident Complex
Kingston Crescent
North End
PORTSMOUTH
PO2 8BU

Dear DS James

CONFIDENTIAL MEDICAL REPORT REGARDING MEDICAL MANAGEMENT OF PATIENTS AT GOSPORT WAR MEMORIAL HOSPITAL

Thank you for asking me to give a report on the management of four patients who died at Gosport War Memorial Hospital. I have based my personal opinion on my qualification as a specialist in geriatric medicine, my 13 years experience as a Consultant Geriatrician with several years experience working at the local hospice.

USE OF OPIOID ANALGESICS

Opioid analgesics are used to relieve moderate to severe pain and also can be used to relieve distressing breathlessness and cough. The use of pain killing drugs in palliative care (ie the active total care of patients whose disease is not responsive to curative treatment) is described in the British National Formulary which is the standard reference work circulated to all doctors in Great Britain. The guidance in the BNF suggests that non-opioid analgesics such as Aspirin or Paracetamol should be used as first line treatment and occasionally non-steroidal anti-inflammatory drugs may help in the control of bone secondaries. If these drugs are inadequate to control the pain of moderate severity then a weak opioid such as Codeine or Dextropropoxyphene should be used either alone or in combination with the simple pain killers in adequate dosage. If these weak opioid preparations are not controlling the pain Morphine is the most useful opioid analgesic and is normally given by mouth as an oral solution every 4 hours, starting with a dose between 5 mg and 20 mg, the aim being to choose the lowest dose which prevents pain. The dose should be adjusted with careful assessment of the pain and use of other drugs should also be considered. If the pain is not well controlled the dose should be increased in a step-wise fashion to control the pain.

Sometimes modified release preparations of Morphine are given twice daily once the required dose of Morphine is established, as this may be more convenient for the patient.

If the patient becomes unable to swallow the equivalent intra-muscular dose of Morphine is half the total 24 hour dose given orally. Diamorphine is preferred for injections over Morphine as it is more soluble and can be given in smaller volume, therefore with less distress to the patient.

Subcutaneous infusions of Diamorphine by syringe driver are standard practise if the patient requires repeated intra-muscular injections, to save the patient unnecessary distress. This is standard treatment in Hospices and other medications can be added to deal with anxiety, agitation and nausea as they can safely be mixed with Diamorphine (such as Haloperidol, Cyclizine and Midazolam). The other indications for use of the parenteral route are when the patient is unable to take medicines by mouth due to upper gastro-intestinal problems and occasionally if the patient does not wish to take regular medication by mouth.

The BNF has a table showing the equivalent doses of oral Morphine and parenteral Diamorphine for intramuscular injection or subcutaneous infusion as a guide to the dosage when switching from the oral to the injection route, eg 10 mg of oral Morphine 4 hourly is equivalent to 20 mg of Diamorphine by a subcutaneous infusion every 24 hours, and 100 mg oral Morphine 4 hourly is equivalent to 240 mg of Diamorphine subcutaneously every 24 hours.

SUMMARY

It is clear from the above that a doctor trying to control pain should first start the patient on a non-opioid analgesic, move on to a weak opioid analgesic if the pain is not controlled, consider changing the patient to regular oral Morphine if the pain remains poorly controlled and only start parenteral Diamorphine if the patient is unable (or unwilling) to take Morphine by mouth and would otherwise need regular painful injections of Diamorphine to try and control the pain. There is clear guidance on the dose of Morphine to use in a syringe driver when transferring from oral Morphine to the subcutaneous route. Finally the dose of Morphine or Diamorphine should be reviewed regularly and only increased if the symptom of pain is not adequately controlled.

CASE NOTE REVIEWS

1 ARTHUR CUNNINGHAM

Mr Cunningham was known to suffer with depression, Parkinson's disease and cognitive impairment with poor short term memory. He suffered with long standing low back pain following a spinal injury sustained in the Second World War which required a spinal fusion. He suffered with hypertension and non insulin diabetes mellitus, had a previous right renal stone removed, and bladder stones, and had a previous trans-urethral prostatectomy. Myelodysplasia had been diagnosed (a bone marrow problem affecting the production of the blood constituents). Mr Cunningham had a one month admission under the care of Dr Banks for depression in July and August 1998.

Mr Cunningham was admitted by Dr Lord, Consultant Geriatrician from the Dolphin Day Hospital to Dryad Ward at Gosport War Memorial Hospital on 21 09 1998 because of a large necrotic sacral ulcer with a necrotic area over the left outer aspect of the ankle (these are signs of pressure sores). Dr Lord's intention was to give more aggressive treatment to the sacral ulcer. He was seen by Dr Barton. A dose of 2.5 mg to 10 mg of Oromorph 4 hourly was prescribed and he was given 5 mg prior to his sacral wound dressing at 1450 and a further dose of 10 mg at 2015. Diamorphine via a syringe driver was prescribed at a dose of 20 mg to 200 mg in 24 hours and this was commenced at a dose of 20 mg for 24 hours with Midazolam at 2300 on 21 09 1998. Dr Barton reviewed the patient on 23 September when he was said to be "chesty", Hyoscine was added to the syringe driver and the dose of Midazolam was increased. The patient was noted to be in some discomfort when moved on that day and the next day he was said to be "in pain" and the Diamorphine dose was increased to 40 mg for 24 hours, then 60 mg the following day and 80 mg on the 26 September, there being no further comments as to the patient's condition. The dose of Midazolam and Hyoscine was also increased. The patient died at 2315 on 26 09 1998.

Comments

All the prescriptions for opiod analgesia are written in the same hand, and I assume they are Dr Barton's prescriptions although the signature is not decipherable. Morphine was started without any attempts to control the pain with less potent drugs. There was no clear reason why the syringe driver needed to be started as the patient had only received two doses of oral Morphine, the 24 hour dose requirement of Diamorphine could not therefore be established. The dose of Diamorphine prescribed gave a tenfold range from 20 mg to 200 mg in 24 hours which is an unusually large dose range in my experience. The patient was reviewed by Dr Barton on at least one occasion and the patient was noted to be in some discomfort when moved. The dose was therefore appropriately increased to 40 mg per 24 hours but there are no further comments as to why the dose needed to be progressively increased thereafter. In my view Morphine was started prematurely, the switch to a syringe driver was made without any clear reason and the dose was increased without any clear indication.

2 ALICE WILKIE

Miss Wilkie was known to suffer with severe dementia, depression and rectal bleeding attributed to piles. She had been admitted to Philip Ward with a urinary tract infection and immobility under the care of Dr Lord and a decision was made to transfer her to Daedalus ward at Gosport War Memorial Hospital for a few weeks observation prior to a decision on placement. She was transferred on the 6 August and was seen by Dr Peters. The nurses recorded that the patient was complaining of pain but it was difficult to establish the nature or site of this pain. Diamorphine was prescribed on 20 08 1998 in a dose of 20 mg to 200 mg per 24 hours and the signature is identical to that on Mr Cunningham's case which I assume is Dr Barton's. A dose of 30 mg was given on 20 08 1998 with Midazolam and an entry in the notes, again apparently by Dr Barton, comments on a "marked deterioration over last few days". The patient was given another 30 mg of Diamorphine on 21 08 1998 and died that day at 1830. The patient was said to be comfortable and pain free by the nursing staff on the final day.

Comments

There was no clear indication for an opiod analgesic to be prescribed, and no simple analgesics were given and there was no documented attempt to establish the nature of her pain. In my view the dose of Diamorphine that was prescribed at 30 mg initially was excessive and there is no evidence that the dose was reviewed prior to her death. Again the Diamorphine prescription gave a tenfold range from 20 mg to 200 mg in 24 hours.

3 ROBERT WILSON

Mr Wilson was known to suffer Code A with gastritis, hypothyroidism and heart failure. He was originally admitted via Accident & Emergency on the 22 September with a fractured left humerus and transferred to Dickens Ward under the care of Dr Lord. His fracture was managed conservatively. In view of the severe pain he received several doses of Morphine and was prescribed regular Paracetamol.

He was reviewed by Dr Luznat, Consultant Psychogeriatrician, who felt he had an early dementia and depression and recommended an anti-depressant. He was also noted to have poor nutrition.

Dr Lord made a decision to transfer Mr Wilson for a "short spell to a long term NHS bed" with the aim of controlling his pain and presumably to try to rehabilitate him. He was accordingly moved to Dryad ward at Gosport War Memorial Hospital on the 14 October. The transfer letter from Dickens.

ward shows that he was still " in a lot of pain in arm".

The prescription appears to have been written by Dr Barton once again. Paracetamol was prescribed but never given by the nursing staff. Oramorph was prescribed 10 mg 4 hourly and 20 mg nocte commencing on 15 10 1998 and the night time dose was given with "good effect" as judged by the nursing staff. The nursing report goes on to say that Mr Wilson had become "chesty" and had "difficulty in swallowing medications". Oramorph was also prescribed 5 mg to 10 mg as required 4 hourly and four doses were given, suggesting Mr Wilson was in persisting pain. on 16 10 1998 the patient was seen by Dr Knapman. The patient was said to be unwell, breathless, unresponsive with gross swelling of the arms and legs. No ECG or oxygen saturation was recorded but the patient's dose of Frusemide (a diuretic) was increased, so I assume the patient was thought to have worsening heart failure. The nurses report a "very bubbly chest". A Diamorphine/Midazolam subcutaneous infusion was prescribed on 16 10 1998 again, in Dr Barton's handwriting, the dose range from 20 mg to 200 mg in 24 hours. 20 mg of Diamorphine was given on 16 10 1998 and the nurses commented later that the "patient appears comfortable", the dose was increased to 40 mg the next day when copious secretions were suctioned from Mr Wilson's chest. On 18 10 1998 the patient was seen by Dr Peters and the dose of Diamorphine was increased to 60 mg in 24 hours and Midazolam and Hyoscine were added. The patient died on 18 10 1998 at 2340 hours.

Comments

Mr Wilson was clearly in pain from his fractured arm at the time of transfer to Dryad ward. Simple analgesia was prescribed but never given (there was an entry earlier in the episode of care that Mr Wilson had refused Paracetamol). No other analgesia was tried prior to starting morphine. Mr Wilson had difficulty in swallowing medication. The Oramorphine was converted to subcutaneous Diamorphine in appropriate dose as judged by the BNF guidelines. The patient was reviewed by a doctor prior to the final increase in Diamorphine. Once again the Diamorphine prescription had a tenfold dose range as prescribed.

It is clear that Mr Wilson's condition suddenly deteriorated probably due to a combination of worsening heart failure and terminal bronchopneumonia and I consider that the palliative care given was appropriate. A Do Not Resuscitate decision had been made by Dr Lord on 29 09 1998.

4 EVA PAGE

Mrs Page was known to suffer with hypertension, ischaemic heart disease with heart failure and paroxysmal atrial fibrillation, depression, episodic confusion and had sustained a minor stroke in the past. She was admitted on 06 02 1998 to Victory Ward with nausea, anorexia and dehydration and had recently been treated for depression. She was transferred to Charles Ward on 19 02 1998 and had been noted to have a 5 cm mass on chest

x-ray compatible with a lung cancer. She was transferred to Dryad ward, Gosport Memorial Hospital on 27 02 1998 for palliative care. On arrival she was noted to be calling out frequently, and anxious. She was prescribed Thioridazine (a tranquilliser) but this did not relieve her distress and she was prescribed Oramorph 5 mg to 10 mg as required 4 hourly, I believe, by Dr Barton. The nurses report "no relief". She was seen by another doctor who was not named in the nursing record who prescribed regular Thioridazine and Heminevrin at night. On 01 03 1998 it is recorded that Mrs Page "spat out medication", on 02 03 1998 there was an entry, I believe by Dr Barton, stating "no improvement on major tranquillisers. I suggest adequate opioids to control fear and pain". He prescribed a Fentanyl patch 25 mg (another opioid which can be given as a skin patch) and the prescription was countersigned by Dr Lord, I believe. The nursing records state she was "very distressed", she was reviewed by Dr Barton and Diamorphine 5 mg intramuscularly was given. She was then seen by Dr Lord and a further dose of intramuscular 5 mg Diamorphine was given. On 03 03 1998 a syringe driver was started, prescribed, I believe, by Dr Barton, at a dose of 20 mg to 200 mg in 24 hours. The initial dose given was 20 mg of Diamorphine with Midazolam which was started at 1050. The nurses record "rapid deterioration ..... right side flaccid" . The patient died at 2130 that evening.

Comments

Mrs Page had a clinical diagnosis of lung cancer. There was no documentation of any symptoms relevant to this and no evidence of metastatic disease. There was no documentation of any pain experienced by the patient. When she was transferred to Dryad Ward most medication was stopped but she required sedative medication because of her distress and anxiety. No psychogeriatric advice was taken regarding her symptom control and she was started on opioid analgesia, in my view, inappropriately. Following her spitting out of medication she was given a topical form of an opioid analgesic (Fentanyl). A decision was taken to start a syringe driver because of her distress. This included Midazolam which would have helped her agitation and anxiety.

The prescription for subcutaneous Diamorphine infusion again showed a tenfold range from 20 mg to 200 mg. It was clear that her physical condition deteriorated rapidly and I suspect she may have had a stroke from the description of the nursing staff shortly prior to death.

CONCLUSIONS

I felt that the nursing records at Gosport War Memorial Hospital were comprehensive on the whole. The reason for starting opioid therapy was not apparent in several of the cases concerned. There had been no mention of any pain, shortness of breath or cough requiring relief. In several of the cases concerned oral morphine was not given for long enough to ascertain the patient's dose requirements, the reason for switching to parenteral Diamorphine via subcutaneous infusion was not documented and the prescription of a tenfold range (20 mg to 200 mg) of

Diamorphine on the "as required" section of the drug chart is, in my view, unacceptable. In my view the dose of Diamorphine should be prescribed on a regular basis and reviewed regularly by medical staff in conjunction with the nursing team. There was little indication why the dose of Diamorphine was increased in several of the cases and the dose appears to have been increased without the input of medical staff on several occasions.

Specimen signatures of Dr Lord and Dr Barton are necessary to confirm the identity of the prescribers and doctors making entries into the clinical notes.

I believe that the use of Diamorphine as described in these four cases suggest that the prescriber did not comply with standard practise. There was no involvement, as far as I could tell, from a palliative care team or specialist nurse advising on pain control. I believe these two issues require further consideration by the Hospital Trust.

I trust this report contains all the essential information you require. Please let me know if you wish me to give any further comment.

Yours sincerely

Code A

DR K I MUNDY FRCP
CONSULTANT PHYSICIAN AND GERIATRICIAN

MEDICO-LEGAL REPORT

Re: **Gladys Mabel RICHARDS**
Arthur "Brian" CUNNINGHAM
Alice WILKE
Robert WILSON
Eva PAGE

Prepared by:
Professor G A Ford, MA, FRCP
Consultant Physician, Freeman Hospital
Newcastle upon Tyne
Professor of Pharmacology of Old Age, University of Newcastle upon Tyne

For: **Hampshire Constabulary**

Date: **12th December 2001**

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Introduction and Remit of the Report

8.1 I am Professor of Pharmacology of Old Age in the Wolfson Unit of Clinical Pharmacology at the University of Newcastle upon Tyne, and a Consultant Physician in Clinical Pharmacology at Freeman Hospital. I am a Doctor of Medicine and care for patients with acute medical problems, acute poisoning and stroke. I have trained and am accredited on the Specialist Register in Geriatric Medicine, Clinical Pharmacology and Therapeutics and General Internal Medicine. I provide medical advice and support to the Regional Drugs and Therapeutics Centre Regional National Poisons Information Service. I was previously clinical head of the Freeman Hospital Care of the Elderly Service and have headed the Freeman Hospital Stroke Service since 1993. I undertake research into the effects of drugs in older people. I am co-editor of the book 'Drugs and the Older Population' and in 2000 was awarded the William B Abrams award for outstanding contributions to Geriatric Clinical Pharmacology by the American Society of Clinical Pharmacology and Therapeutics. I am a Fellow of the Royal College of Physicians and have practised as a Consultant Physician for nine years.

8.2 I have been asked by Detective Superintendent John James of Hampshire Constabulary to examine the clinical notes of five patients (Gladys Mabel Richards, Arthur "Brian" Cunningham, Alice Wilkie, Robert Wilson, Eva Page) treated at the Gosport War Memorial Hospital and to apply my professional judgement to the following:

- The gamut of patient management and clinical practices exercised at the hospital
- Articulation of the leadership, roles, responsibilities and communication in respect of the clinicians involved
- The accuracy of diagnosis and prognosis including risk assessments
- An evaluation of drugs prescribed and the administration regimes
- The quality and sufficiency of the medical records
- The appropriateness and justification of the decisions that were made
- Comment on the recorded causes of death
- Articulate the duty of care issues and highlight any failures

1.3 I have prepared individual reports on each case and an additional report commenting on general aspects of care at Gosport War Hospital from a consideration of all five cases.

1.4 I have been provided with the following documents by Hampshire Constabulary, which I have reviewed in preparing this report:

- Comment on the recorded causes of death
- Letter DS J James dated 15th August 2001
- Terms of Reference document
- Hospital Medical Records of Gladys Richards, Brian Cunningham, Alice Wilkie, Robert Wilson and Eva Page
- Witness statements by Leslie France Lack, and Gillian MacKenzie
- Report of Professor Brian Livesley
- Transcripts of police interviews with Gosport War Memorial staff Dr Barton, Mr Beed, Ms Couchman, Ms Joice

- Transcript of police interviews with Royal Hospital Haslar staff Dr Reid and Flt. Lt. Edmondson
- Transcript of interviews with patient transfer staff Mr Warren and Mr Tanner
- Transcript of police interviews with or statements from following medical and nursing staff: Dr Lord, LM Baldacchino, M Berry, JM Brewer, J Cook, E Dalton, W Edgar, A Fletcher, J Florio and A Funnell.

Gladys Mabel RICHARDS

Course of Events

2.1 Gladys Richards was 91 years old when admitted as an emergency via the Accident & Emergency Department to Haslar Hospital on 29Th July 1998. She had fallen onto her right hip and developed pain. At this time she lived in a nursing home and was diagnosed as having dementia. She had experienced a number of falls in the previous 6 months and the admission notes comments "*quality of life has ↓↓ markedly last 6/12*". She was found to have a fracture of the right neck of femur. An entry in the medical notes by Surgeon Commander Malcom Pott, Consultant orthopaedic surgeon dated 30 July 1998 states '*After discussion with the patient's daughters in the event of this patient having a cardiac arrest she is NOT for cardiopulmonary resuscitation. However she is to be kept pain free, hydrated and nourished.*' Surgery (right hemiarthroplasty) was performed on 30 July 1998.

2.2 On 3rd August she was referred for a geriatric opinion and seen by Dr Reid, Consultant Physician in Geriatrics on 3rd August 1998. In his letter dated 5th August 1998 he notes she had been on treatment with haloperidol and trazadone and that her daughters thought she had been 'knocked off' by this medication for months, and had not spoken to then for 6-7 months. Her mobility had deteriorated. Her daughters commented to Dr Reid that she had spoken to them and had been brighter mentally since the trazadone had been omitted following admission. Dr Reid found Mrs Richards to be confused but pleasant and cooperative, unable to actively lift her right leg from the bed but appeared to have little discomfort on passive movement of the right hip. He commented '*I understand she has been sitting out in a chair and I think that despite her dementia, she should be afforded the opportunity to try to re-mobilise her.* He arranged for her transfer to Gosport War Memorial Hospital.

2.3 Following Dr Reid's entry in the notes on 3rd August two further entries are made in the medical notes by the on call house officer (Dr Coales?) on 8th August 1998. Dr Coales was asked to see Mrs Richards who was agitated on the ward. She had been given 2mg haloperidol and was asleep when first seen at 0045h. At 02130 hr a further entry records Mrs Richards was '*noisy and disturbing other patients n ward. Unable to reason with patient. Prescribed 25mg thioridazine'.* A transfer letter for Sergeant Curran, staff nurse to the Sister in Charge dated 10th August 1998 describes Mrs Richards status immediately prior to transfer and notes *'Is now fully weight bearing, walking with the aid of two nurses and a zimmer frame. Gladys needs total care with washing and dressing eating and drinking. Gladys is continent, when she becomes fidgety and agitated it means she wants the toilet. Occasionally incontinent at night, but usually wakes.*

2.4 On 11th August 1998 Mrs Richards was transferred to Daedalus ward. Dr Barton writes *in the medical notes "Impression frail demented lady, not obviously in pain, please make comfortable. Transfers with hoist, usually continent, needs help with ADL Barthel 2. I am happy for nursing staff to confirm death".* The summary admitting nursing notes record *"now fully weight bearing and walking with the aid of two nurses and a Zimmer frame".* On 12th August the nursing notes record "*Haloperidol given at 2330 as woke from sleep. Very agitated, shaking and crying. Didn't settle for more than a few*

minutes at a time. Did not seem to be in pain" .On 13th August nursing notes record *"found on floor at 1330h. Checked for injury none apparent at time. Hoisted into safer chair. 1930 pain Rt hip internally rotated, Dr Brigg contacted advised Xray am and analgesia during the night. Inappropriate to transfer for Xray this pm."*

2.5 On 14th August 1998 Dr Barton wrote '*sedation/pain relief has been a problem. Screaming not controlled by haloperidol 1g ? but very sensitive to Oramorph. Fell out of chair last night. R hip shorter and internally rotated, Daughter nurse and not happy. Plan Xray . Is this lady well enough for another surgical procedure?"* A further entry the same day states "*Dear Cdr Spalding, further to our telephone conversation thank you for seeing this unfortunate lady who slipped from her chair and appears to have dislocated her R hip. Hemiarthroplasty was done on 30-8-98. I am sending Xrays. She has had 2.5ml of 10mg/5ml oramoroph at midday. Many thanks*".

2.6 Following readmission to Haslar hospital Mrs Richards underwent manipulation of R hip under iv sedation (2 mg midazolam) at 1400h. At 2215h the same day she was not responding to verbal stimulation but observations of blood pressure, pulse, respiration and temperature were all in the normal range. A further entry on 17th August by Dr Hamlin (House Officer) states "*fit for discharge today (Gosport War Mem) To remain in straight knee splint for 4/52. For pillow between legs (abduction) at night.*" A transfer letter to the nurse in charge at Daedalus ward states "*Thank you for taking Mrs Richards back under your care... was decided to pass an indwelling catheter which still remains in situ. She has been given a canvas knee immobilising splint to discourage any further dislocation and this must stay in situ for 4 weeks. When in bed it is advisable to encourage abduction by using pillows or abduction wedge. She can however mobilise fully weight bearing*".

2.7 Nursing notes record on 17th August " 1148h *returned from R.N.Haslar patient very distressed appears to be in pain. No canvas under patient – transferred on sheet by crew."* Later that day at 1305h "*in pain and distress, agreed with daughter to give her mother Oramorph 2.5mg in 5ml*". A further hip Xray was performed which demonstrated no fracture. Dr Barton writes on 17th August 1998 *"readmission to Daedalus ward. Closed reduction under iv sedation. Remained unresponsive for some hours. Now appears peaceful. Can continue haloperidol, only for Oramorph if in severe pain. See daughter again"* and on 18th August "*still in great pain, nursing a problem, I suggest sc diamorphine/ haloperidol/midazolam. I will see daughters today. Please make comfortable*". Nursing notes record "*reviewed by Dr Barton for pain control via syringe driver*". At 2000h "*patient remained peaceful and sleeping. Reacted to pain when being moved – this was pain in both legs*". On 19th August the nursing notes record "*Mrs Richards comfortable*" and in a separate entry "*apparently pain free*". There are no nursing entries I can find on 20th August. I can find no entries in the nursing notes describing fluid or food intake following admission on 17th August.

2.8 The next entry in the medical notes is on 21st August by Dr Barton "*much more peaceful. Needs hyoscine for rattly chest*". The nursing notes record "*patient's overall condition deteriorating. Medication keeping her comfortable*". A staff

nurse records Mrs Richards's death in the notes at 2120h later that day. The cause of death was recorded as bronchopneumonia.

2.9 Medication charts record the following administration of opiate, analgesic and sedative drugs during Mrs Richards's first admission to Haslar Hospital.

29 July 2000h Trazadone 100mg (then discontinued)
29 July to 11th August. Haloperidol 1mg twice daily
30 July 0230h Morphine iv 2.5mg
31 July 0150h morphine iv 2.5mg
1905h morphine iv 2.5 mg
1 Aug 1920h morphine iv 2.5mg
2 Aug 0720h morphine iv 2.5mg
Cocodamol two tablets as required taken on 16 occasions at varying times between 1-9th August

2.10 Medication charts record the following administration of opiate, analgesic and sedative drugs during Mrs Richards second admission to Haslar Hospital

14 Aug 1410h midazolam 2mg iv
15 Aug 0325h cocodamol two tablets orally
16 Aug 0410h haloperidol 2mg orally
0800h haloperidol 1mg orally
1800h haloperidol 1mg orally
2310h haloperidol 2mg orally
!7 Aug 0800h haloperidol 1mg orally

2.11 Medication charts record the following administration of opiate and sedative drugs on Daedalus ward:

11 Aug	1115h	5mg/5ml Oramorph
	1145h	10 mg Oramorph
	1800h	1 mg haloperidol
12 Aug	0615h	10 mg Oramorph
		haloperidol
13 Aug	2050h	10mg Oramorph
14 Aug	1150h	10mg Oramorph
17 Aug	1300h	5mg Oramorph
	?	5 mg Oramorph
	1645h	5mg Oramorph
	2030h	10mg Oramorph
18 Aug	0230h	10mg Oramorph
	?	10mg Oramorph
	1145h	diamorphine 40mg/24hr, haloperidol 5mg/24hr midazolam 20mg/24hrby
19 Aug	1120h	diamorphine 40mg/24hr, haloperidol 5mg/24hr midazolam 20mg/24hr, hyoscine 400microg/24hr
20 Aug	1045h	diamorphine 40mg/24hr, haloperidol 5mg/24hr midazolam 20mg/24hr, hyoscine 400microg/24hr
21 Aug	1155h	diamorphine 40mg/24h, haloperidol 5mg/24hr midazolam 20mg/24hr, hyoscine 400microg/24hr

Opinion on patient management

Leadership, roles, responsibilities and communication in respect of the clinicians involved

2.12 Primary responsibility for the medical care of Mrs Richards during her two admissions to Gosport Hospital lay with Dr Lord, as the consultant responsible for his care. My understanding is that day-to-day medical care was delegated to the clinical assistant Dr Barton and during out of hours period the on call doctor based at the Queen Alexander Hospital (statement of Dr Lord in interview with DC Colvin and DC McNally). Primary responsibility for the medical care of Mrs Richards during her two admissions to Queen Alexandra Hospital lay with Surgeon Commander Scott, Consultant Orthopaedic Surgeon. Junior medical staff were responsible for day-to-day medical care of Mrs Richards whilst at Queen Alexandra Hospital. Ward nursing staff were responsible for assessing and monitoring Mrs Richards and informing medical staff of any significant deterioration.

2.13 Dr Reid, Consultant Geriatrician was responsible for assessing Mrs Richards and making recommendations concerning her future care following her orthopaedic surgery, and arranged transfer to Gosport Hospital for rehabilitation.

Accuracy of diagnosis and prognosis including risk assessments

2.14 The initial assessment by the orthopaedic team was in my opinion competent and the admitting medical team obtained a good history of her decline in the previous six months. Surgeon Commander Pott discussed management options with the family and a decision was made to proceed with surgery but for Mrs Richards to not undergo cardiopulmonary resuscitation if she sustained a cardiac arrest, with a clear decision to keep Mrs Richards pain free, hydrated and nourished. There are good reasons to offer surgery for a fractured neck of femur to very frail patients with dementia even when a high risk of peri-operative death or complications is present. This is because without surgery patients continue to be in pain, remain immobile and nearly invariably develop serious complications such as pneumonia and pressure sores, which are usually fatal. From the information I have seen I would, as a consultant physician/geriatrician recommended the initial management undertaken. I consider it good management that the trazadone as discontinued when the history from the daughters suggested this might have been responsible for decline in the recent past.

2.15 After Mrs Richards was stable a few days following surgery it was appropriate to refer her for a geriatric opinion, and Dr Reid rapidly provided this. Dr Reid's assessment was in my opinion thorough and competent. He identified the potential for her to benefit from rehabilitation. I would consider his decision to refer her for rehabilitation despite her dementia to be appropriate. An elderly care rehabilitation, rather than an acute orthopaedic ward is in general a preferable environment to undertake such rehabilitation. It is implicit in his decision to transfer her to Gosport War Memorial Hospital that she would receive rehabilitation there and not care on a continuing care ward without input from a rehabilitation team. Dr Lord in an interview with DC McNally and DC Colvin describes Daedalus ward as "*Back in '98 .. Daedalus was a continuing care ward with 24 beds of which 8 beds were for slow stream stroke*

rehabilitation". Although Mrs Richards had a fractured neck of femur and not stroke as her primary problem requiring rehabilitation I would assume, in the light of Dr Reid's letter that she was transferred to one of the 8 slow stream rehabilitation beds on Daedalus ward.

2.16 The transfer letter from Sergeant Curran provides a clear description of Mrs Richards's status at the time of transfer. The observation that she was walking with the aid of two nurses and a zimmer frame, and the usual cause of agitation was when she needed to use the toilet are relevant to subsequent events following transfer to Gosport Hospital. The use of a Barthel Index score as a measure of disability is good practice and demonstrates that Mrs Richards was severely dependent at the time of her transfer to Gosport Hospital.

2.17 The initial entry by Dr Barton following Mrs Richards' transfer to Daedalus ward does not mention that she has been transferred for rehabilitation, and focuses on keeping her 'comfortable' despite recording that she is "*not obviously in pain*". The statement '*I am happy for nursing staff to confirm death*" also suggests that Dr Barton's assessment was that Mrs Richards might die in the near future. Dr Barton in her statement to DS Sackman and DC Colvin, confirms this when she states "*I appreciated that there was a possibility that she might die sooner rather than later*". Dr Barton refers to her admission as a "*holding manoeuvre*" and her statement suggests a much more negative view of the potential for rehabilitation. She does not describe any rehabilitation team or focus on the ward and suggests her transfer was necessary because she was not appropriate for an acute bed, rather than her being appropriate for rehabilitation- "*.her condition was not appropriate for an acute bed. ....seen whether she would recover and mobilise after surgery. If as was more likely she would deteriorate due to her age, her dementia, her frail condition and the shock of the fall followed by the major surgery, then she was to be nursed in a clam environment away from the stresses of an acute ward*". In my opinion this initial note entry and the statement by Dr Baron indicate a much less proactive view of rehabilitation, less appreciation than Dr Reid of the potential for Mrs Richards to recover to her previous level of functioning, and probably a failure to appreciate the potential benefits of appropriate multidisciplinary rehabilitation to Mrs Richards. This leads me to believe that Dr Barton's approach to Mrs Richards was in the context of considering her as a continuing care patient who was likely to die on the ward. It was not wrong or incorrect of Dr Barton to believe Mrs Richards might die on the ward, but I would consider her apparent failure to recognise Mrs Barton's rehabilitation needs may have led to subsequent sub-optimal care.

2.18 There are a number of explanations and contributory factors that may have led to Dr Barton possibly not recognising Mrs Richard's rehabilitation needs in addition to her nursing and analgesic needs. First she may have not clearly understood Dr Reid's assessment that she needed rehabilitation. In her statement Dr Barton states " *Dr Reid was of the view that, despite her dementia, she should be given the opportunity to try to remobilise*" which suggests Dr Barton may not have considered the necessity for Mrs Richards to receive Physiotherapy as a necessary part of her opportunity to remobilise. Second the ward had both continuing care and rehabilitation beds and these patients may require very different care. It is not uncommon for "slow stream" rehabilitation beds to be in the same ward as continuing care beds, but it does

require much broader range of care to meet the medical and social needs of these patients. I would anticipate that some patients would move from the slow stream rehabilitation to continuing care category. Dr Lord describes the existence of fortnightly multidisciplinary ward case conference suggesting there was a structured team approach that would have made Dr Barton and nursing staff aware of rehabilitation needs of patients. In Mrs Richards's case no such case conference took place because she became too unwell in a short period. Third Dr Barton may not have received sufficient training or gained adequate experience of rehabilitation or geriatrics despite working under the supervision of Dr Lord. Dr Lord states that Dr Barton was "*an experienced GP*" who had rights of admission to a GP ward and that Dr Lord had admitted patients "*under her care say for palliative care*". Experience in palliative care may possibly have influenced her understanding and expectations of rehabilitating older patients.

2.19 The assessment of Mrs Richard's agitation the following day on 12th August was in my opinion sub-optimal. The nursing records state that she did not appear to be in pain. There is no entry from Dr Barton this day but in her statement she states which I have some difficulty in interpreting: "*When I assessed Mrs Richards on her arrival she was clearly confused and unable to give any history. She was pleasant and co-operative on arrival and did not appear to be in pain. Later her pain relief and sedation became a problem. She was screaming. This can be a symptom of dementia but could also be caused by pain. In my opinion it was caused by pain as it was not controlled by Haloperidol alone. Screaming caused by dementia is frequently controlled by this sedative. Given my assessment that she was in pain I wrote a prescription for a number of drugs on 11th August, including Oramorph and Diamorphine. This allowed nursing staff to respond to their clinical assessment of her needs rather than wait until my next visit the following day. This is an integral part of team management. It was not in fact necessary to give diamorphine over the first few days following her admission but a limited number of small doses of Oramorph were given totalling 20mg over the first 24 hours and 10mg daily thereafter. This would be an appropriate level of pain relief after such a major orthopaedic procedure*".

2.20 I am unable establish from the notes and Dr Barton's statement whether she saw Mrs Richards in pain after she wrote in the notes and then wrote up the opiate drugs later on the 11th August, or if she wrote up these drugs after seeing her when she was not in pain, because she considered she might develop pain and agitation. In either case there is no evidence that the previous information provided by Sergeant Curran that Mrs Richards usually required the toilet when she was agitated was considered by Dr Barton. Screaming is a well-described behavioural disturbance in dementia (Dr Barton was clearly aware of this), which can be due to pain but is often not. In some cases it is not possible to identify a clear precipitating cause although a move to a new ward could precipitate such a behavioural disturbance. I would consider the assumption by Dr Barton that Mrs Richards screaming was due to pain was not supported by her own recorded observations. There is no evidence from the notes that Dr Barton examined Mrs Richards in the first two days to find any evidence on clinical examination that pain from her hip was the cause of her screaming. If the screaming had been worse on weight bearing or movement of the hip this would have provided supportive evidence that her screaming was

due to hip pain. Staff Nurse Jennifer Brewer in her interview with DC Colvin and DC McNally states that the nursing staff had considered the need for toileting and other potential causes of Mrs Richards screaming.

2.21 Mrs Richards pain following surgery had been controlled at Haslar hospital by intermittent doses of intravenous morphine and then intermittent doses of cocodamol (paracetamol and codeine phosphate). Dr Barton did not prescribe cocodamol or another mild or moderate analgesic to Mrs Richards to take on a prn basis when she was transferred. This makes me consider it probable that Dr Barton prescribed prn Oramorph, diamorphine, hyoscine and midazolam when she first saw Mrs Richards and she was not in pain. If this is the case it is highly unusual practice in a patient who has been transferred for rehabilitation, was not taking any regular or intermittent analgesics for 36 hours prior to transfer, and had last taken two tablets of cocodamol. In a rehabilitation or continuing care ward without resident medical staff I would consider it reasonable and usual practice to prescribe a mild or moderate analgesic to take on an as required basis in case further pain developed. In Mrs Richards's case a reasonable choice would have been cocodamol since she had been taking this a few days earlier without problems. I do not consider it was appropriate to administer intermittent doses of oramorph to Mrs Richards before first prescribing paracetamol, non-steroidal anti-inflammatory drugs or mild opiate. It is not appropriate to prescribe powerful opiate drugs as a first line treatment for pain not clearly due to a fracture or dislocation to a patient such as Mrs Richards 12 days following surgery. Dr Barton's statement that diamorphine and oramorph were appropriate analgesics at this stage following surgery when she had been pain free is incorrect and in my opinion would not be a view held by the vast majority of practising general practitioners and geriatricians.

2.22 The management of Mrs Richards when sustained a dislocation of her hip on 13th August was in my opinion sub-optimal. The hip dislocation most likely occurred following the fall from her chair at 1330h. The nursing notes suggest signs of a dislocation were noted at 1930h. If there was a delay in recognising the dislocation I would not consider this indicates poor care, as hip fractures and dislocations can be difficult to detect in patients who have dementia and communication difficulties. Mrs Richards suspected dislocation or fracture was discussed with the on-call doctor, Dr Briggs, who I would assume is a medical house officer. Given the concern about a fracture or dislocation I would judge it would have been preferable for her to b transferred to the orthopaedic ward that evening and be assessed by the orthopaedic team. I certainly consider the case should have been discussed with either the on call consultant geriatrician or the orthopaedic team. The benefits of transfer that evening in a patient where it was highly probable a fracture or dislocation were present would have been Mrs Richards could have received manipulation earlier the following morning and possibly that same evening, and that traction could have been applied even if reduction was not attempted.

2.23 Mrs Richards was found to have a dislocation of her right hip and this was manipulated under intravenous sedation the same day. Although she was initially unresponsive, most probably due to prolonged effects of the intravenous midazolam, 3 days later on 17th August she was mobilising and fully weight bearing and not requiring any analgesia. Although there are few medical note entries, the management at Haslar hospital during this period

appears to be appropriate and competent. Shortly after transfer back to Daedalus ward Mrs Richards again became very distressed. The nursing notes indicate there was an incorrect transfer by the ambulance staff of Mrs Richards onto her bed. Repeat dislocation of the right hip was reasonably suspected but not found on a repeat Xray. My impression is that this transfer may have precipitated hip or other musculoskeletal pain in Mrs Richards but that other causes of screaming were possible.

2.24 Intermittent doses of oral morphine were first administered to Mrs Richards, again without first determining whether less powerful analgesics would have been helpful. On 18th August Dr Barton suggested commencing subcutaneous diamorphine, haloperidol and midazolam. The diamorphine and midazolam had been prescribed 7 days earlier. An infusion of the three drugs was commenced later that morning and hyoscine was added on 19th August. Both Dr Barton's notes and the nursing notes indicate Mrs Richards was in pain, although it is not clear what they considered was the cause of the pain at this stage, having excluded a fracture or dislocation of the right hip. Dr Barton states in her prepared statement "... *it was my assessment that she had developed a haematoma or large collection of bruising around the area where the prosthesis had been lying while dislocated*".

2.25 Although there are no clear descriptions of Mrs Richard's conscious level in the last few days, her level of alertness appears to have deteriorated once the subcutaneous infusion of diamorphine, haloperidol and midazolam was commenced. It also seems that she was not offered fluids or food and intravenous or subcutaneous fluids were not considered as an alternative. My interpretation is that this was most probably because medical and nursing staff were of the opinion that Mrs Richards were dying and that provision of fluids or nutrition would not change this outcome. In her prepared statement Dr Barton states "*As their mother was not eating or drinking or able to swallow, subcutaneous infusion of pain killers was the best way to control her pain.*" and "*I was aware that Mrs Richards was not taking food or water by mouth*". She then goes on to say "*I believe I would have explained to the daughters that subcutaneous fluids were not appropriate*".

Evaluation of drugs prescribed and the administration regimens

2.26 The decision to prescribe oral opiates and subcutaneous diamorphine to Mrs Richards initial admission to Daedalus ward was in my opinion inappropriate and placed Mrs Richards at significant risk of developing adverse effects of excessive sedation and respiratory depression. The prescription of oral paracetamol, mild opiates such as codeine or non-steroidal anti-inflammatory drugs such as ibuprofen, naproxen would have been appropriate oral and preferable with a better risk/benefit ratio. The prescription of subcutaneous diamorphine, haloperidol and midazolam infusions to be taken if required was inappropriate even if she was experiencing pain. Subcutaneous opiate infusions should be used only in patients whose pain is not controlled by oral analgesia and who cannot swallow oral opiates. The prescription by Dr Barton on 11th August of three sedative drugs by subcutaneous infusion was in my opinion reckless and inappropriate and placed Mrs Richards at serious risk of developing coma and respiratory depression had these been administered by the nursing staff. It is exceptionally unusual to prescribe subcutaneous infusion of these three drugs with powerful effects on conscious level and respiration to

frail elderly patients with non-malignant conditions in a continuing care or slow stream rehabilitation ward and I have not personally used, seen or heard of this practice in other care of the elderly rehabilitation or continuing care wards. The prescription of three sedative drugs is potentially hazardous in any patient but particularly so in a frail older patient with dementia and would be expected to carry a high risk of producing respiratory depression or coma.

2.27 I consider the statement by Dr Barton "*my use of midazolam in the dose of 20mg over 24 hours was as a muscle relaxant, to assist movement of Mrs Richards for nursing procedures in the hope that she could be as comfortable as possible. I felt it appropriate to prescribe an equivalence of haloperidol to that which she had been having orally since her first admission.*" Indicates poor knowledge of the indications for and appropriate use of midazolam administered by subcutaneous infusion to older people. Midazolam is primarily used for sedation and is not licensed for use as a muscle relaxant. Doses of benzodiazepine that produce significant muscle relaxation in general produce unacceptable depression of conscious level, and it is not usual practice amongst continuing care and rehabilitation wards to administer subcutaneous midazolam to assist moving patients.

Quality and sufficiency of the medical records

2.28 The medical and nursing records relating to Mrs Richards admissions to Daedalus ward are in my opinion not of an adequate standard. The medical notes fail to adequately account for the reasons why oramorph and then infusions of diamorphine and haloperidol were used. The nursing records do not adequately document hydration and nutritional needs of Mrs Richards during her admissions to Daedalus ward.

Appropriateness and justification of the decisions that were made

2.29 There are a number of decisions made in the care of Mrs Richards that I consider to be inappropriate. The initial management of her dislocated hip prosthesis was sub-optimal. The decision to prescribe oral morphine without first observing the response to milder opiate or other analgesic drugs was inappropriate. The decision to prescribe diamorphine, haloperidol and midazolam by subcutaneous infusion was, in my opinion, highly inappropriate.

Recorded cause of death

2.30 The recorded cause of death was bronchopneumonia. I understand that the cause of death was discussed with the coroner. A post mortem was not obtained and the recorded cause was certainly a possible cause of Mrs Richards's death. I am surprised the death certificate makes no mention of Mrs Richards's fractured neck of femur or her dementia. It is possible that Mrs Richards died from drug induced respiratory depression without bronchopneumonia present or from the combined effects of bronchopneumonia and drug-induced respiratory depression. Mrs Richards was at high risk of developing pneumonia because of the immobility that resulted following her transfer back to Daedalus ward even if she had not received sedative and opiate drugs. Bronchopneumonia can also occur as a secondary complication of opiate and sedative induced respiratory depression. In the absence of post-mortem, radiological data (chest Xray) or recordings of Mr Cunningham's respiratory rate I would consider the recorded cause of death of bronchopneumonia was possible. However given the rapid decline in

conscious level that preceded the development of respiratory symptoms (rattly chest) I would consider it more likely that Mrs Richards became unconscious because of the sedative and opiate drugs she received by subcutaneous infusion, that these drugs caused respiratory depression and that Mrs Richards died from drug induced respiratory depression and/or without bronchopneumonia resulting from immobility or drug induced respiratory depression. There are no accurate records of Mrs Richards respiratory rate but with the doses used and her previous marked sedative response to intravenous midazolam it is highly probable that respiratory depression was present.

Duty of care issues

2.31 Medical and nursing staff on Daedalus ward had a duty of care to deliver medical and nursing care to attempt to monitor Mrs Richards and to document the effects of drugs prescribed. In my opinion this duty of care was not adequately met. The prescription of diamorphine, midazolam and haloperidol was extremely hazardous and Mrs Richards was inadequately monitored. The duty of care of the medical and nursing staff to meet Mrs Richard's hydration and nutritional needs was also in my opinion probably not met.

Summary

2.32 Gladys Richards was a frail older lady with dementia who sustained a fractured neck of femur, successfully surgically treated with a hemiarthroplasty, and then complicated by dislocation. During her two admissions to Daedalus ward there was inappropriate prescribing of opiates and sedative drugs by Dr Baron. These drugs in combination are highly likely to have produced respiratory depression and/or the development of bronchopneumonia that led to her death. In my opinion it is likely the administration of the drugs hastened her death. There is some evidence that Mrs Richards was in pain during the three days prior to her heath and the administration of opiates can be justified on these grounds. However Mrs Richards was at high risk of developing pneumonia and it possible she would have died from pneumonia even if she had not been administered the subcutaneous sedative and opiate drugs.

Arthur "Brian" CUNNINGHAM

Course of Events

3.1 Mr Cunningham was 79 years old when admitted to Dryad ward, Gosport Hospital under the care of Dr Lord. Dr Lord had assessed him on a number of occasions in the previous 4 years. A letter dated 2nd December 1994 from Dr Bell, Clinical Assistant, indicates Parkinson's disease had been diagnosed in the mid 1980s and that he was having difficulties walking at this time. In 1998 it was noted he had experienced visual hallucinations and had moved into Merlin Park Rest Home. His weight was 69Kg in August 1998. In July 1998 he was admitted under the care of Dr Banks, Consultant in Old Age Psychiatry to Mulberry Ward A and discharged after 6 weeks to Thalassa Nursing Home. He was assessed to have Parkinson's disease and dementia, depression and myelodysplasia. Dr Lord in a letter dated 1 September 1998 summarises her assessment of Mr Cunningham when she saw him on Mulberry Ward A on 27 August 1998 before he was discharged to Thalassa Nursing Home. At this time he required 1-2 people to transfer and was unable to wheel himself around in his wheelchair. She commented that more levodopa might be required but was concerned it would upset his mental state. She arranged to review him at the Dolphin Day Hospital.

3.2 On 21st September 1998 he was seen at the Dolphin Day Hospital by Dr Lord who recorded *'very frail, tablets found in mouth, offensive large necrotic sacral sore with thick black scar. PD - no worse. Diagnoses listed as sacral sore (in N/H), PD, old back injury, depression and element of dementia, diabetes mellitus –diet, catheterised for retention. Plan – stop codanthramer and metronidazole. looks fine. TCI Dyad today –aserbine for sacral ulcer – nurse on side – high protein diet – oramorph prn if pain. N/Home to keep bed open for next 3/52 at least. Pt informed of admission agrees. Inform N/Home Dr Banks and social worker. Analgesics prn.'* He was admitted to Dyad ward. An entry by Dr Baron on 21 September states *'make comfortable, give adequate analgesia. Am happy for nursing staff to confirm death.'* On 24th September Dr Lord has written *'remains unwell. Son has ??? again today and is aware of how unwell he is. sc analgesia is controlling pain just. I am happy for nursing staff to confirm death.'* The next entry by Dr Brook is on 25th September *'remains very poorly. On syringe driver. For TLC'.*

3.3 Medication charts record the following administration of opiate and sedative drugs:

21 Sep 1415h Oramorph 5mg
1800h Coproxamol two tablets
(subsequent regular doses not administered)
2015h Oramorph10mg
21 Sep 2310h Diamorphine 20mg/24hr, midazolam 20mg/24hr infusion sc
22 Sep 2020h Diamorphine 20mg/24hr, midazolam 20mg/24hr infusion sc
23 Sep 0925h Diamorphine 20mg/24hr, hyoscine 200microg/24hr
midazolam 20 mg/24hr infusion sc
2000h Diamorphine 20mg/24hr, hyoscine 200microg/24hr
midazolam 60mg/24hr infusion sc
24 Sep 1055h Diamorphine 20mg/24hr, hyoscine 800microg/24hr
midazolam 80mg/24hr infusion sc
25 Sep 1015h Diamorphine 60mg/24hr, hyoscine 1200mg/24hr

midazolam 80mg/24hr infusion
26 Sep 1150h Diamorphine 80mg/24hr, hyoscine 1200mg/24hr
midazolam 100mg/24hr infusion
Sinemet 110 5 times/day was discontinued on 23rd September

3.4 The nursing notes relating to the admission to Dyad ward record on 21st Sept *'remained agitated until approx 2030h. Syringe driver commenced as requested* (unclear who made this request) *diamorphine 20mg, midazolam 20mg at 2300. Peaceful following".* On 22nd Sep *'explained that a syringe driver contains diamorphine and midazolam was commenced yesterday evening for pain relief and to allay his anxiety following an episode where Arthur tried to wipe sputum on a nurse saying he had HIV and going to give it to her. He also tried to remove his catheter and empty the bag and removed his sacral dressing throwing it across the room. Finally he took off his covers and exposed himself.'*

3.5 On 23rd Sep *'Has become chesty overnight to have hyoscine added to driver. Stepson contacted and informed of deterioration. Mr Farthing asked is this was due to the commencement of the syringe driver and informed that Mr Cunningham was on a small dosage which he needed.'* A later entry *'now fully aware that Brian is dying and needs to be made comfortable. Became a little agitated at 2300h, syringe driver adjusted with effect. Seems in some discomfort when moved, driver boosted prior to position change'.* On 24th Sept *'report from night staff that Brian was in pain when attended to, also in pain with day staff – especially his knees. Syringe driver renewed at 1055".* On 25th Sept *'All care given this am. Driver recharged at 1015 –diamorphine 60mg, midazolam 80mg and hyoscine 1200mcg at a rate of 50mmols/hr. Peaceful night - unchanged, still doesn't like being moved.'* On 26th September *'condition appears to be deteriorating slowly'.*

3.6 On 26th September staff nurse Tubbritt records death at 2315h. Cause of death was recorded on the death certificate as bronchopneumonia with contributory causes of Parkinson's disease and Sacral Ulcer.

Opinion on patient management

Leadership, roles, responsibilities and communication in respect of the clinicians involved

3.7 Primary responsibility for the medical care of Mr Cunningham during his last admission lay with Dr Lord, as the consultant responsible for his care. She saw Mr Cunningham 5 days before his death in the Dolphin Day Hospital, and 2 days before his death on Dyad ward. My understanding is that day-to-day medical care was the responsibility of the clinical assistant Dr Barton and during out of hours period the on call doctor based at the Queen Alexander Hospital. Ward nursing staff were responsible for assessing and monitoring Mr Cunningham and informing medical staff of any significant deterioration.

Accuracy of diagnosis and prognosis including risk assessments

3.8 Initial assessment by Dr Lord was comprehensive and appropriate with a clear management plan described. The nursing staff record Mr Cunningham was agitated following admission on 21st September. Dr Lord had prescribed prn (intermittent as required) oramorph for pain. Nursing staff made the decision to administer oramorph but there is no clear recording in the nursing notes that he

was in pain or the site of pain. The nursing entry on 22nd Sept indicates a syringe driver was commenced for 'pain relief and to allay anxiety. Again the site of pain is not states. My interpretation of the records is that the nursing staff considered his agitation was due to pain from his sacral ulcer. The medical and nursing teams view on the cause of Mr Cunningham's deterioration on 23rd September when he became 'chesty' are not explicitly stated, but would seem to have been thought to be due to bronchopneumonia since this was the cause of death later entered on the death certificate. The medical and nursing staff may not have considered the possibility that Mr Cunningham's respiratory symptoms and deterioration may have been due to opiate and benzodiazepine induced respiratory depression. The nursing staff filed to appreciate that the agitation Mr Cunningham experienced on 23rd Sept at 2300h may have been due to the midazolam and diamorphine. It was appropriate for nursing staff to discuss Mr Cunningham's condition with medical staff at this stage.

3.9 When Dr Lord reviewed Mr Cunningham on 24th September the notes imply that he was much worse that when she had seen him 3 days earlier. There is clear recording by Dr Lord that Mr Cunningham was in pain. The following day the diamorphine dose was increased three fold from 20mg/24hr to 60mg/24hr and the dose was further increased on 26th September to 80mg/24hr although the nursing and medical notes do not record the reason for this. The notes suggest that the nursing and medical staff may have failed to consider causes of agitation other than pain in Mr Cunningham or to recognise the adverse consequences of opiates and sedative drugs on respiratory function in frail older individuals.

Evaluation of drugs prescribed and the administration regimens

3.10 The prescription of oramorph to be taken 4 hourly as required by Mr Cunningham was reasonable if his pain was uncontrolled from cocodamol. I consider the decision by Dr Barton to prescribe and administer diamorphine and midazolam by subcutaneous infusion the same evening he was admitted was highly inappropriate, particularly when there was a clear instruction by Dr Lord that he should be prescribed intermittent (underlined instruction) doses of oramorph earlier in the day. I consider the undated prescription by Dr Baron of subcutaneous diamorphine 20-200mg/24hr prn, hyoscine 200-800microg/24hr and midazolam 20-80mg/24hr to be poor practice and potentially very hazardous. In my opinion it is poor management to initially commence both diamorphine and midazolam in a frail elderly underweight patient such as Mr Cunningham. The combination could result in profound respiratory depression and it would have been more appropriate to review the response to diamorphine alone before commencing midazolam, had it been appropriate to commence subcutaneous analgesia, which as I have stated before was not the case.

3.11 In my opinion it is doubtful the nursing and medical staff understood that when a syringe infusion pump rate is increased it takes an often appreciable effect of time before the maximum effect of the increased dose rate becomes evident. Typically the time period would be 5 drug half-lives. In the case of diamorphine this would be between 15 and 25 hours in an older frail individual.

Quality and sufficiency of the medical records

3.12 In my opinion the medical and nursing records are inadequate following Mr Cunningham's admission to Dryad ward. The initial assessment by Dr Lord on 21st September is in my opinion competent and appropriate. The medical notes following this are inadequate and do not explain why he was commenced on subcutaneous infusions of diamorphine and midazolam. The nursing notes are variable and at times inadequate.

Appropriateness and justification of the decisions that were made

3.13 An inappropriately high dose of diamorphine and midazolam was first prescribed. There was a failure to recognise or respond to drug induced problems. Inappropriate dose escalation of diamorphine and midazolam and poor assessment by Dr Lord. The assessment by Dr Lord on 21st September 1998 was thorough and competent and a clear plan of management was outlined. There is a clear note by Dr Lord that oramorph was to be given intermittently (PRN) for pain and not regularly. It is not clear from the medical and nursing notes why Mr Cunningham was not administered the regular cocodamol he was prescribed following the initial dose he received at 1800h following admission. It is good practice to provide regular oral analgesia, with paracetamol and a mild opiate, particularly when a patient has been already taking this medication and to use prn morphine for breakthrough pain. I consider the prescription by Dr Barton on admission of prn subcutaneous diamorphine 20-200mg/24hr prn, hyoscine 200-800microg/24hr and midazolam 20-80mg/24hr to be unjustified, poor practice and potentially very hazardous. It is particularly notable that only hours earlier Dr Lord had written that oramorph was to be given intermittently and this had been underlined in the medical notes. There is no clear justification in the notes for the commencement of subcutaneous diamorphine and midazolam on the evening following admission. If increased opiate analgesia was required increasing the oramorph dose and frequency could have provided this. I would judge it poor management to initially commence both diamorphine and midazolam. The combination could result in profound respiratory depression and it would have been more appropriate to review the response to diamorphine alone before commencing midazolam.

3.14 I am concerned by the initial note entry by Dr Barton on 21st September 1998 that she was happy for nursing staff to confirm death. There was no indication by Dr Lord that Mr Barton was expected to die, and Dr Barton does not list the reason she would have cause to consider Mr Cunningham would die within the next 24 hours before he was reviewed the following day by medical staff. In my opinion it is of concern that the nursing notes suggest the diamorphine and midazolam infusions were commenced because of Mr Cunningham's behaviour recorded in the nursing entry on 22nd September.

3.15 Hyoscine was commenced on 23rd September after Mr Cunningham had become 'chesty' overnight. I consider it very poor practice that there is no record of Mr Cunningham being examined by a doctor following admission on 21st September, and a decision to treat this symptomatically with hyoscine appears to have been made by the medical staff. At this stage Mr Cunningham's respiratory signs are likely to have been due to bronchopneumonia or respiratory depression resulting in depressed clearance of bronchial secretions. A medical assessment was very necessary at this

stage to diagnose the cause of symptoms and to consider treatment with antibiotics or reduction in the dose of diamorphine and midazolam.

3.16 Again I consider it very poor practice that the midazolam was increased from 20mg/24hr to 60mg/24 hr at 2000h on 23rd September. There is no entry in the medical notes to explain this dose increase. The decision to triple the midazolam dose appears to have been made by a member of nursing staff as the nursing notes record *"agitated at 2300h, syringe driver boosted with effect".*

3.17 A medical assessment should have been obtained before the decision to increase the midazolam dose was made. At the very least Mr Cunningham's problems should have been discussed with on call medical staff. Mr Cunningham's agitation may have been due to pain, where increasing analgesia would have been appropriate, or hypoxia (lack of oxygen). If Mr Cunningham's agitation was due to hypoxia a number of interventions may have been indicated. Reducing the diamorphine and midazolam dose would have been appropriate if hypoxia was due to respiratory depression. Commencement of oxygen therapy and possibly antibiotics would have been appropriate if hypoxia was due to pneumonia. Reducing the dose diamorphine or midazolam would have been indicated if hypoxia was due to drug-induced respiratory depression. The decision to increase the midazolam dose was not appropriately made by the ward nursing staff without discussion with medical staff.

3.18 When Mr Cunningham was reviewed by Dr Lord on 24th September he was very unwell but there is not a clear description of his respiratory status or whether he had signs of pneumonia. At this stage Dr Lord notes Mr Cunningham is in pain, but does not state the site of his pain. It is not clear to me whether the subsequent alteration in infusion rate of diamorphine, hyoscine and midazolam was discussed with and sanctioned by Dr Lord or Dr Barton. I consider the increase in midazolam from 60mg/24 hr to 80mg/24 hr was inappropriate as a response to the observation that Mr Cunningham was in pain. It would have been more appropriate to increase the diamorphine dose or even consider treatment with a non-steroidal anti-inflammatory drug. The increase in midazolam dose to 80mg/24 hr would simply make Mr Cunningham less conscious than he already appears to have been (there is not a clear description of his conscious level at this stage).

3.19 The increase in hyoscine dose to 800microg/24 hr is also difficult to justify when there is no record that the management of bronchial secretions was a problem. The subsequent threefold increase in diamorphine dose later that day to 60mg/24 hr is in my view very poor practice. Such an increase was highly likely to result in respiratory depression and marked depression of conscious level, both of which could lead to premature death. The description of Mr Cunningham, was that analgesia was 'just' controlling pain and a more cautious increase in diamorphine dose, certainly no more than two fold, was indicated with careful review of respiratory status and conscious level after steady state levels of diamorphine would have been obtained about 20 hours later. A more appropriate response to deal with any acute breakthrough pain is to administer a single prn (intermittent) dose of opiate by the oral or intramuscular route, depending on whether Mr Cunningham was unable to swallow at this time.

3.20 The increase in both diamorphine dose and midazolam dose on 26th September is difficult to justify when there is no record in the medical or nursing notes that Mr Cunningham's pain was uncontrolled. Although it is possible to accept the increase in diamorphine dose may have been appropriate if Mr Cunningham was observed to be in pain, I find the further increase in midazolam dose to 100mg/24hr of great concern. I would anticipate that this dose of midazolam administered with 80mg/24hr of diamorphine would be virtually certain to produce respiratory depression and severe depression of conscious level. This would be expected to result in death in a frail individual such as Mr Cunningham. I would expect to see very clear reasons for the use of such doses recorded in the medical notes.

3.21 I can find no record of Mr Cunningham receiving food or fluids following his admission on 21st September despite a note from Dr Lord that Mr Cunningham was to receive a 'high protein diet'. There is no indication in the medical or nursing notes as to whether this had been discussed, but given that Mr Cunningham was admitted with the intention of returning to his Nursing Home (it was to be held open for 3 weeks) I would expect the notes to record a clear discussion and decision making process involving senior medical staff accounting for the decision to not administer subcutaneous fluids and/or nasogastric nutrition once Mr Cunningham was commenced on drugs which may have made him unable to swallow fluids or food.

Recorded causes of death

3.22 The recorded cause of death was bronchopneumonia with contributory causes of Parkinson's disease and sacral ulcer. A post mortem was not obtained and the recorded causes were in my opinion reasonable. It is possible that Mr Cunningham died from drug induced respiratory depression without bronchopneumonia present or from the combined effects of bronchopneumonia and drug-induced respiratory depression. Mr Cunningham was at high risk of developing pneumonia even if he had not received sedative or opiate drugs, bronchopneumonia can occur as a secondary complication of opiate and sedative induced respiratory depression. In the absence of post-mortem, radiological data (chest Xray) or recordings of Mr Cunningham's respiratory rate I would consider the recorded cause of death of bronchopneumonia as reasonable. Even if the staff had considered Mr Cunningham had drug-induced respiratory depression as a contributory factor, it would not be usual medical practice to enter this as a contributory cause of death where the administration of such drugs was considered appropriate for symptom relief.

Duty of care issues

3.23 Medical and nursing staff on Dryad ward had a duty of care to deliver medical and nursing care to attempt to heal Mr Cunningham's sacral ulcer and to document the effects of drugs prescribed. In my opinion this duty of are was not adequately met and the denial of fluid and diet and prescription of high doses of diamorphine and midazolam was poor practice and may have contributed to Mr Cunningham's death.

Summary

3.24 In summary although Mr Cunningham was admitted for medical and nursing care to attempt to heal and control pain from his sacral ulcer, Dr Barton and the ward staff appear to have considered Mr Cunningham was dying and had been admitted for terminal care. The medical and nursing records are inadequate in documenting his clinical state at this time. The initial prescription of subcutaneous diamorphine, midazolam and hyoscine by Dr Barton was in my view reckless. The dose increases undertaken by nursing staff were inappropriate if not undertaken after medical assessment and review of Mr Cunningham. I consider it highly likely that Mr Cunningham experienced respiratory depression and profound depression of conscious level due to the infusion of diamorphine and midazolam. I consider the doses of these drugs prescribed and administered were inappropriate and that these drugs most likely contributed to his death through pneumonia and/or respiratory depression.

ALICE WILKIE

Course of Events

4.1 Alice Wilkie was 81 years old when admitted under the care of Dr Lord, by her general practitioner on 31st July 1998 from Addenbrooke Rest Home to Phillip Ward, Department of Medicine for Elderly People, at the Queen Alexandra Hospital, Portsmouth. The general practitioner referral letter states "*This demented lady has been in this psychogeriatric care home for a year. She had a UTI early this week and has not responded to trimethoprim. Having fallen last night, she is not refusing fluids and is becoming a little dry*". The medical admitting notes record she was taking prozac (fluoxetine) syrup 20 mg once daily, codanthramer 5-10ml nocte, lactulose 10ml once daily zopiclone 1.875 or 3.75mg nocte and promazine syrup 25mg as required. On examination she had a fever and bilateral conjunctivitis but no other significant findings. The admitting doctor diagnosed a urinary tract infection and commenced intravenous antibiotics to be administered after a blood culture and catheter specimen of urine had been obtained. The following day DNR (do not resuscitate) is recorded in the notes. On 3rd August 1998 the medical notes record the fever had settled, that she was taking some fluids orally, was taking the antibiotic Augmentin elixir orally and receiving subcutaneous fluids. The notes then record (date not clear) that her Mental Test Score was 0/10 and Barthel 1/20 (indicating severe dependency). Mrs Wilkie was to be transferred to Daedalus NHS continuing care ward on 6th August 1998 with a note that her bed was to be kept at Addenbrooke Rest Home.

4.2 Following transfer on 6th August an entry in the medical notes states "*Transferred from Phillips Ward. For 4-6/52 only. On Augmentin for UTI*". Dr Lord writes on 10th August 1998 '*Barthel 2/20. Eating and drinking better. Confused and slow. Give up place at Addenbrooke's. R/V* (review) *in 1/12* (one month) *–if no specialist medical or nursing problems D* (discharge) *to a N/Home. Stop fluoxetine'.* The next entry is by Dr Barton on 21st August "*Marked deterioration over last few days. sc analgesia commenced yesterday. Family aware and happy*". The final entry is on the same day at 1830h where death is confirmed. The most recent record of the patient's weight I can find is 56Kg in April 1994.

4.3 The nursing notes, which have daily entries during her one week stay on Phillip ward note she was catheterised, was confused at times and was sleeping well prior to transfer. The nursing notes on Daedalus ward record "6/8/98 *Transferred from Philip ward QAH for 4-6 weeks assessment and observation and then decide on placement. Medical history of advanced dementia, urinary tract infection and dehydration"* and that she was seen by Dr Peters. The nursing assessment sheet notes *"does have pain at times unable to ascertain where"*. The nutrition care plan states on 6th August 1998 "*Due to dementia patient has a poor dietary intake*". And dietary intake is recorded between 12th August and 18th August but not before or following these dates. Nursing entries in the contact record state on 17th August 1998 "*Condition has generally deteriorated over the weekend Daughter seen- aware that mums condition is worsening, agrees active treatment not appropriate and to use of syringe driver if Mrs Wilkie is in pain*". There is no entry in the notes on 20th August or preceding few days indicating Mrs Wilkie was in pain.

4.4 A nursing entry on 21st August 1998 at 1255h states "*Condition deteriorating during morning. Daughter and granddaughters visited and stayed. Patient comfortable and pain free*". There are a number of routine entries in the period 6th August 1998 to death on 21st August 1998 in nutrition, pressure area care, constipation, catheter care, and personal hygiene. The nursing care plan records no significant deterioration until 21st August where it is noted death was pronounced at 2120h by staff nurse Sylvia Roberts. Cause of death was recorded as bronchopneumonia.

4.5 The drug charts records that Dr Barton prescribed as a regular daily review (not intermittent as required) prescription diamorphine 20-200mg/24hr, hyoscine 200-800microg/24hr and midazolam 20-80mg/24hr all to be administered subcutaneously. The prescription is not dated. Drugs were first administered on 20th August, diamorphine at 30mg/24hr and midazolam 20mg/24hr from 1350h and then again on 21st August. Mrs Wilkie had not been prescribed or administered any analgesic drugs during her admission to Daedalus ward prior to administration of the diamorphine and midazolam infusions. During the period 16th-18th August she was prescribed and received zopiclone (a sedative hypnotic) 3.75mg nocte and co-danthramer 5-10ml (a laxative) orally.

Opinion on patient management

Leadership, roles, responsibilities and communication in respect of the clinicians involved

4.6 Primary responsibility for the medical care of Mrs Wilkie during her admission to Daedalus ward lay with Dr Lord, as the consultant responsible for her care. She saw Mrs Wilkie on 10th August 1998, 11 days prior to her death. My understanding is that day-to-day medical care was the responsibility of the clinical assistant Dr Barton and during out of hours period the on call doctor based at the Queen Alexander Hospital. Ward nursing staff were responsible for assessing and monitoring Mrs Wilkie and informing medical staff of any significant deterioration.

Accuracy of diagnosis and prognosis including risk assessments

4.7 The initial diagnosis of a urinary tract infection and dehydration was reasonable and appears correct. Mrs Wilkie had a diagnosis of dementia, which there was clear evidence for. The entry by Dr Lord on 10th August 1998 provides a reasonable assessment of her functional level at this time, and a plan to review appropriate placement in one month's time. No diagnosis was made to explain the deterioration Mrs Wilkie is reported to have experienced around 15th August. There is no medical assessment in the notes following 10th August except documentation on 21st August 1998 of a marked deterioration. There is no clear evidence that Mrs Wilkie was in pain although she was commenced on opiate analgesics.

Evaluation of drugs prescribed and the administration regimens

4.8 No information is recorded in the medical or nursing notes to explain why Mrs Wilkie was commenced on diamorphine and hyoscine infusions. In my opinion there was no indication for the use of diamorphine and hyoscine in Mrs Wilkie. Other oral analgesics, such as paracetamol and mild opiate drugs could and should first have been tried, if Mrs Wilkie was in pain, although there is no evidence that she was. If these were inadequate oral morphine would have

been the next appropriate choice. From the information I have seen in the notes it appears the diamorphine and midazolam may have been commenced for non-specific reasons, perhaps as a non-defined palliative reasons as it was judged she was likely to die in the near future.

4.9 I consider the undated prescription by Dr Barton of subcutaneous diamorphine 20-200mg/24hr prn, hyoscine 200-800microg/24hr and midazolam 20-80mg/24hr to be poor practice and potentially very hazardous. I consider it poor and hazardous management to initially commence both diamorphine and midazolam in a frail elderly underweight patient with dementia such as Mrs Wilkie. The combination could result in profound respiratory depression and it would have been more appropriate to review the response to diamorphine alone before commencing midazolam, had it been appropriate to commence subcutaneous analgesia, which as I have stated before was not the case.

Quality and sufficiency of the medical records

4.10 The medical and nursing records during her stay on Daedalus ward are inadequate not sufficiently detailed, and do not provide a clear picture of Mrs Wilkie's condition. In my opinion the standard of the notes falls below the expected level of documentation on a continuing care or rehabilitation ward. The assessment by Dr Lord on 10th August 1998 is the only satisfactory medical note entry during her 15 day stay on Daedalus ward.

Appropriateness and justification of the decisions that were made

4.11 As discussed above I do not consider the decision to commence diamorphine and hyoscine was appropriate on the basis of the information recorded in the clinical notes.

Recorded causes of death

4.12 There was no specific evidence that bronchopneumonia was present, although this is a common pre-terminal event in frail older people, and is often entered as the final cause of death in frail older patients. I am surprised the death certificate did not apparently refer to Mrs Wilkie's dementia as a contributory cause. It is possible Mrs Wilkie's death was due at least in part to respiratory depression from the diamorphine she received, or that the diamorphine led to the development of bronchopneumonia. However since there are no clear observations of Mrs Wilkie's respiratory observations it is difficult to know whether respiratory depression was present Mrs Wilkie deteriorated prior to administration of diamorphine and midazolam infusion, and in view of this, my opinion would be that although the opiate and sedative drugs administered may have hastened death, and these drugs were not indicated, Mrs Wilkie may well have died at the time she did even if she had not received the diamorphine and midazolam infusions.

Duty of care issues

4.13 Medical and nursing staff on Daedalus ward had a duty of care to deliver medical and nursing care, to monitor, and to document the effects of drugs prescribed to Mrs Wilkie. In my opinion this duty of care was not adequately met, the prescription of diamorphine and midazolam was poor practice and this may have contributed to Mrs Wilkie's death.

Summary

4.14 In my opinion the prescription of subcutaneous diamorphine and midazolam was inappropriate, and probably resulted in depressed conscious level and respiratory depression, which may have hastened her death. However Mrs Wilkie was a frail very dependent lady with dementia who was at high risk of developing pneumonia. It is possible she would have died from pneumonia even if she had not been administered the subcutaneous sedative and opiate drugs.

Robert WILSON

5.1 Mr Wilson was 75 years old man when he was admitted to Queen Alexandra Hospital on 22nd September 1998 after he sustained a proximal fracture of the left humerus. He was treated with morphine, initially administered intravenously and then subcutaneously. He developed vomiting. On 24th September he was given 5mg diamorphine and lost sensation in the left hand. On 29th September an entry in the medical notes states "*ref to social worker, review resus status. Not for resuscitation in view of quality of life and poor prognosis*".

5.2 On 7th October the notes record he was "*not keen on residential home and wished to return to his own home*". Dr Lusznat, Consultant in Old Age Psychiatry on 8th October 1998, saw him. Dr Lusznat's letter on 8th October notes that Mr Wilson had been sleepy and withdrawn and low in mood but was now eating and drinking well and appeared brighter in mood. His Barthel score was 5/20. Dr Lusznat noted Code A years. At the time he was seen by Dr Lusznat her was prescribed thiamine 100 mg daily, multivitamins two tablets daily, senna two tablets daily, magnesium hydroxide 10 mls twice daily and paracetamol 1g four time daily. On examination he had mildly impaired cognitive function (Mini Mental State Examination 24/30). Dr Lusznat considered Mr Wilson might have developed an early dementia, Code A Alzheimer's disease or vascular dementia. An antidepressant trazadone 50mg nocte was commenced. Dr Lusznat states at the end of her letter "*On the practical side he may well require nursing home care though at the moment he is strongly opposed to that idea I shall be happy to arrange follow up by our team once we know when and where he is going to be discharged*". On 13th October the medical notes record a ward round took place, that he required both nursing and medical care, was at risk of falling and that a short spell in long-term NHS care would be appropriate. Reviewing the drug charts Mr Wilson was taking regular soluble paracetamol (1g four times daily) and codeine phosphate 30mg as required for pain. Between 8th and 13th October Mr Wilson was administered four doses of 30mg codeine. Mr Wilson's weight in March 1997 was 93Kg

5.3 On the 14th October Mr Wilson was transferred to Dryad Ward. An entry in the medical notes by Dr Barton reads "*Transfer to Dryad ward continuing care. HPC fracture humerus. needs help with ADL (*activities of Daily Living*), hoisting, continent, Barthel 7. Lives with wife. Plan further mobilisation*". On 16th November the notes record; '*Decline overnight with S.O.B. o/e ? weak pulse. Unresponsive to spoken work. Oedema ++ in arms and legs. Diagnosis ?silent MI, ? decreased __ function. ↑frusemide to 2 x 40mg om '*. On 17th October the notes record '*comfortable but rapid deterioration*'. On 18th October staff nurse Collins records death at 2340h. Cause of death is recorded as congestive cardiac failure.

5.4 Nursing notes state in the summary section on 14th October "*History of left humerus fracture, arm in collar and cuff. Long history of heavy drinking. LVF chronic oedematous legs. S/B Dr Barton. Oramorph 10mg/5ml given. Continent of urine – uses bottles*". On 15th October "*Commenced oramorph 10mg/5ml 4 hrly for pain in L arm. Wife seen by sis. Hamblin who explained Robert's condition is poor*". An earlier note states "*settled and slept well*". On 16th October "*seen by Dr Knapman an as deteriorated over night. Increase*

*frusemide to 80mgdaily. For A.N.C (*active nursing care*)*". Later that day a further entry states "*Patient very bubbly chest this pm. Syringe driver commenced 20mg diamorphine, 400mcgs hyoscine. Explained to family reason for driver*". A separate note on 16th October in the nursing care plan states "*More secretions – pharyngeal – during the night, but Robert hasn't been distressed. Appears comfortable*". On 17th October 0515h "*Hyoscine increased to 600mcgs as oro-pharyngeal secretions increasing. Diamorphine 20mg.*" Later that day a further entry states "*Slow deterioration in already poor condition. Requiring suction very regularly – copious amounts suctioned. Syringe driver reviewed at 15.50 s/c diamorphine 40mg, midazolam 20mcgs, hyoscine 800 mcgs*". A later note states "*night: noisy secretions but not distressing Robert. Suction given as required during night. Appears comfortable*". On 18th October "*further deterioration in already poor condition. Syringe driver reviewed at 14:40 s/c diamorphine 60mg, midazolam 40mg, hyoscine 1200mcg. Continues to require regular suction*".

5.5 The medication charts record administration of the following drugs:

14 Sep 1445h oramorph 10mg
2345h oramorph 10mg
16 Sep 1610h diamorphine 20mg/24 hr, hyoscine 400 microg/24hr subcutaneous infusion
17 Sep 0515h diamorphine 20mg/24hr, hyoscine 600 microg/24hr
1550h diamorphine 40mg/24hr, hyoscine 800 microg/24hr midazolam 20mg/24hr
18 Sep 1450h diamorphine 60mg/24hr, hyoscine 1200 microg/24hr midazolam 40mg/24hr

Frusemide was administered at a dose of 80mg daily at 0900h on 15th and 16th October. An additional 80 mg oral dose was administered at an unstated time on 16th October.

Opinion on patient management

Leadership, roles, responsibilities and communication in respect of the clinicians involved

5.6 Responsibility for the care of Mr Wilson during his admission to Dryad ward lay with Dr Lord as the consultant responsible for his care. My understanding is that day to day medical care was delegated to the clinical assistant Dr Barton and during the out of hours responsibility was with the on call doctor based at Queen Alexandra Hospital. Ward nursing staff were responsible for assessing and monitoring Mr Wilson and informing medical staff of any significant deterioration.

5.7 Dr Lusznat was responsible for assessing Mr Wilson and making further recommendations concerning his future care when he was seen at Queen Alexandra Hospital.

Accuracy of diagnosis and prognosis including risk assessments

5.8 Dr Barton assessed Mr Wilson on 14th October the day he was transferred to Dyad ward. There was a plan to attempt to improve his mobilisation through rehabilitation. There is no record of any significant symptomatic medical problems, in particular any record that Mr Wilson was in pain in the medical

notes. The nursing notes suggest Mr Wilson was prescribed oramorph for pain in his arm following his admission to Dryad Ward. He was prescribed paracetamol to take as required but did not receive any paracetamol whilst on Dryad Ward.

5.9 Mr Wilson deteriorated on 15th September when he became short of breath. The working diagnosis was of heart failure due to a myocardial infarct. I do not consider the assessment by the on call doctor of Mr Wilson was adequate or competent. There is no record of his blood pressure, clinical examination findings in the chest (which might have indicated whether he had signs of pulmonary oedema or pneumonia). In my opinion an ECG should have been obtained that night, and a Chest Xray obtained the following morning to provide supporting evidence for the diagnosis. Mr Wilson was admitted for rehabilitation not terminal care and it was necessary and appropriate to perform reasonable clinical assessments and investigations to make a correct diagnosis.

5.10 Following treatment Mr Wilson was noted to have had a rapid deterioration. The medical and nursing teams appear to have failed to consider that Mr Wilson's deterioration may have been due to the diamorphine infusion. In my opinion when Mr Wilson was unconscious the diamorphine infusion should have been reduced or discontinued. The nursing and medical staff failed to record Mr Wilson's respiratory rate, which was likely to have been reduced, because of respiratory depressant effects of the diamorphine. The diamorphine and hyoscine infusion should have been discontinued to determine whether this was contributing to his deteriorating state. There is no record of the reason for the prescribing of the midazolam infusion commenced the day before his death. At this time the nursing notes record he was comfortable. Mr Wilson did not improve. The medical and nursing teams did not appear to consider that the diamorphine, hyoscine and midazolam infusion could be a major contributory factor in Mr Wilson's subsequent decline. The infusion should have been discontinued and the need for this treatment, in my opinion unnecessary at the time of commencement, reviewed.

Evaluation of drugs prescribed and the administration regimens

5.11 The initial prescription and administration of oramorph to Mr Wilson following his transfer to Dryad ward was in my opinion inappropriate. His pain had been controlled with regular paracetamol and as required codeine phosphate (a mild opiate) prior to his transfer, and in the first instance these should have been discontinued.

5.12 I am unable to establish when Dr Barton wrote the prescription for subcutaneous diamorphine 20-200mg/24hr, hyoscine 200-800microg/24hr, and midazolam 20-80mg/24hr as these are undated. The administration of diamorphine and hyoscine by subcutaneous infusion as a treatment for the diagnosis of a silent myocardial infarction was in my opinion inappropriate. The prescription of a single dose of intravenous opiate is standard treatment for a patient with chest pain following myocardial infarction is appropriate standard practice but was not indicated in Mr Wilson's case as he did not have pain. The prescription of an initial single dose of diamorphine is appropriate as a treatment for pulmonary oedema if a patient fails to respond to intravenous diuretics such as frusemide. Mr Wilson was not administered intravenous

frusemide or another loop diuretic. Instead only a single additional oral dose of frusemide was administered. In my opinion this was an inadequate response to Mr Wilson's deterioration. The prescription of continuous subcutaneous infusion of diamorphine and hyoscine is not appropriate treatment for a patient who is pain free with a diagnosis of a myocardial infarction and heart failure. When opiates are used to treat heart failure, close monitoring of blood pressure and respiratory rate, preferably with monitoring of oxygen saturation is required. This was not undertaken.

5.13 The increase in diamorphine dose to 40mg/24hr and then 60mg/24 hr in the following 48 hours is not appropriate when the nursing and medical notes record no evidence that Mr Wilson was in pain or distressed at this time. This was poor practice and potentially very hazardous. Similarly the addition of midazolam and subsequent increase in dose to 40mg/24hr was in my opinion highly inappropriate and would be expected to carry a high risk of producing profound depression of conscious level and respiratory drive.

Quality and sufficiency of the medical records

5.14 The initial entry in the medical records by Dr Barton on 14th October is reasonable and sufficient. The subsequent entries relating to Mr Wilson's deterioration are in my opinion inadequate, and greater detail and the results of examination findings should have been recorded. No justification for the increases in diamorphine, midazolam and hyoscine dose are written in the medical notes. The nursing notes are generally of adequate quality but I can find no record of fluid and food intake by Mr Wilson.

Appropriateness and justification of the decisions that were made

5.15 I consider the prescription of oramorph was inappropriate. The subsequent prescription and administration of diamorphine, hyoscine and midazolam was highly inappropriate, not justified by information presented in the notes and could be expected to result in profound depression of conscious level and respiratory depression in a frail elderly man such as Mr Wilson.

Recorded causes of death

5.16 The recorded cause of death was congestive cardiac failure. The limited clinical information recorded in the absence of a chest Xray result or post-mortem findings, suggest this may have been the cause of Mr Wilson's death. However in my opinion it is highly likely that the diamorphine, hyoscine and midazolam infusion led to respiratory depression and/or bronchopneumonia and it is possible that Mr Wilson died from drug induced respiratory depression.

Duty of care issues

5.17 Medical and nursing staff on Dryad ward had a duty of care to deliver appropriate medical and nursing care to Mr Wilson, and to monitor the effects of drugs prescribed. In my opinion this duty of care was not adequate. The administration of high doses of diamorphine and midazolam was poor practice and may have contributed to Mr Wilson's death.

Summary

5.18 Mr Wilson was a frail elderly man with early dementia who was physically dependent. Following his admission to Dryad ward he was, in my opinion, inappropriately treated with high doses of opiate and sedative drugs. These drugs are likely to have produced respiratory depression and/or the development of bronchopneumonia and may have contributed to his death.

Eva PAGE

6.1 Eva Page was 87 years old when admitted as an emergency on 6th February 1998 to the Department of Medicine for Elderly People at Queen Alexandra Hospital. The medical notes record that she had experienced a general deterioration over the last 5 days was complaining of nausea and reduced appetite and was dehydrated. She had felt 'depressed' during the last few weeks. On admission she was taking ramipril 5mg once daily (a treatment for heart failure and hypertension), frusemide 40mg once daily (treatment for fluid retention), digoxin 125microg once daily (to control irregular heart rate), sotalol 40 mg twice daily (to control irregular heart rate), aspirin 75 mg once daily (to prevent stroke and myocardial infarction) and sertraline 50mg once daily (an antidepressant commenced by her general practitioner on 26th January 1998). A discharge summary and medical notes relating to an admission in May 1997 states that she was admitted with acute confusion, had reduced movement on the right side and was discharged back to her residential home on aspirin. No admitting diagnosis is recorded in the clerking notes written by Dr Harris on 6th February 1998 but they record that *"patient refuses iv fluids and is willing to accept increased oral fluids"*.

6.2 On 7th February 1998 the medical notes record an opacity seen on the chest Xray and sate *"mood low. Feels frightened – doesn't know why. Nausea and ??. Little else. Nil clinically."* An increased white cell count is noted (13.0) and antibiotics commenced. A subsequent chest Xray report (undated) states there is a 5cm mass superimposed on the left hilum highly suspicious of malignancy. The medical notes on 11 February 1998 record this at the Xray meeting. On 12th February 1998 the notes record (? Dr Shain) *'In view of advanced age aim in the management should be palliative care. Charles Ward is suitable. Not for CPR'*. On 13th February the notes record *'remains v low Appears to have 'given up' d/w son re probably diagnosis d/w RH (residential home) re ability to cope'*. The notes record *'son agrees not suitable for invasive Tx* (treatment). *Matron from RH visiting today will check on ability to cope.'*

6.3 On 19th February the notes record she fell on the ward and experienced minor cuts. On 16th February *'gradual deterioration, no pain, confused. For Charles Ward she could be discharged to community from Charles Ward'*. On 19th February the notes summarise her problems *'probable Carcinoma of the bronchus, previous left ventricular failure, atrial fibrillation, digoxin toxicity and a transient ischaemic attack, that she was sleepy but responsive, states that she is frightened but doesn't know why. Says she has forgotten things, not possible to elicit what she can't remember, low MTS (mental test score). Plan encourage oral fluids, s/c fluid over night if tolerated. Continue antidepressants'*. On 18th February the medical notes state *"No change. Awaiting Charles Ward bed"*.

6.4 The nursing notes record she was confused but mobilised independently. On 19th February she was transferred to Charles Ward instead of the preferred option of a bed at Gosport Hospital, which the notes record was full ('no beds'). The Queen Alexandra Hospital medical notes record a summary of her problems on 19th February prior to transfer as follows " *Diagnosis CA bronchus probable [no histology] Diag based on CXR. PMH 95 LVF + AF 95 Digoxin toxicity 97 TIA. Admitted 6.2.98 general deterioration CXR ? Ca Bronchus.*

Well defined O lesion. Exam: sleepy but responsive answers appropriately. States that she is frightened but doesn't know why. Says she has forgotten things. Not possible to elicit what she can't remember. Low MTS" and *"Feels in general tired and very thirsty. Plan encourage oral fluids, s/c fluid overnight is tolerated continue antidepressants".*

6.5 The medical notes on 23rd February record diagnoses of depression, dementia, ? Ca bronchus, ischaemic heart disease and congestive heart failure. On 25th February Dr Lord records in the medical notes "*confused and some agitation towards afternoon – evening try tds* (three times daily) *thioridazine, son in Gosport, transfer to Gosport 27/2, heminevrin prn nocte'.* A further entry states *'All other drugs stopped by Dr Lord'.*

6.6 Mrs Page was transferred to Dryad ward at Gosport War Memorial Hospital on 27th February 1998. Dr Barton writes in the medical notes "*Transfer to Dryad ward continuing care, Diagnosis of Ca Bronchus on CXR on admission. Generally unwell off legs, not eating, bronchoscopy not done, catheterised, needs help with eating and drinking, needs hoisting, Barthel 0. Family seen and well aware of prognosis. Opiates commenced. I'm happy for nursing.staff to confirm death".* The nursing notes state she was admitted for *'palliative care'*, that she had a urinary catheter (inserted on 22nd February 1998) was incontinent of faeces, and was dependent for washing and dressing but could hold a beaker and pick up small amounts of food. Barthel Index was 2/20. The nursing action plan states *'encourage adequate fluid intake'.* On 28th February an entry in the medical notes by Dr Laing (duty GP) record *'asked to see: confused. Feels 'lost' agitated esp. night/evening, not in pain, to give thioridazine 25mg tds regular, heminevrin noct.* The nursing notes record she was very distressed and that she was administered thioridazine and Oramorph 2.5ml.

6.7 On 2nd March Dr Barton records *'no improvement on major tranquillisers. I suggest adequate opioids to control fear and pain; Son to be seen by Dr Lord today'.* A subsequent entry by Dr Lord on the same day states *' spitting out thioridazine, quieter on prn sc diamorphine. Fentanyl patch started today. Agitated and calling out even when staff present (diagnoses) 1) Ca Bronchus 2) ? Cerebral metastases. -ct* (continue) *fentanyl patches.'* A further entry by Dr Lord that day records *'son seen. Concerned about deterioration today. Explained about agitation and that drowsiness was probably due in part to diamorphine. He accepts that his mother is dying and agrees we continue present plan of Mx* (management)".

6.8 On 2nd March the nursing notes record "*commenced on Fentanyl 25mcg this am. Very distressed this morning seen by Dr Barton to have and diamorphine 5mg i/m (intramuscular) same given 0810h by a syringe driver.* A further entry the same day states *"S/B Dr Lord. Diamorphine 5mg i/m given for syringe driver with diamorphine loaded".* On 3rd March a rapid deterioration in Mrs Page's condition is recorded *'Neck and left side of body rigid – right side rigid,* At 1050h diamorphine and midazolam were commenced by syringe driver. Death is recorded later that day at 2130h, 4 days following admission to Dyad ward.

6.9 The prescription charts (which are incompletely copied in notes made available to me) indicate she received the following drugs during this admission Two doses of intramuscular diamorphine 5 mg were administered at 0800 and 1500h (date not visible)

28 Feb 1998	1300h thioridazine 25mg
	1620h oramorph 5mg
	2200h heminevrin 250mg in 5ml
1 Mar 1998	0700h thioridazine 25 mg
	1300h thioridazine 25 mg
	2200h heminevrin 250mg
2 Mar 1998	0700h thioridazine 25mg
	0800h fentanyl 25microg
3 Mar 1998	1050h diamorphine 20mg/24hr, midazolam 20 mg/24hr by subcutaneous infusion

On 27th February Dr Barton prescribed thioridazine 25mg (prn tds) and Oramorph (10mg/5ml) 4hrly prn. On 2nd March Dr Barton prescribed fentanyl 25microg patch (x3 days) to take as required (prn). On 3rd March Dr Barton prescribed diamorphine 20-200mg/24hr, hyoscine 200-800ucg/24hr and midazolam 20-80mg/24hr by subcutaneous infusion.
The notes do not indicate that the fentanyl patch was removed and I would assume this was continued when the diamorphine and midazolam infusion was commenced.

Opinion on patient management

Leadership, roles, responsibilities and communication in respect of the clinicians involved

6.10 Primary responsibility for the medical care of Mrs Page during her admission to Dryad Ward lay with Dr Lord, as the consultant responsible for his care. She saw Mrs Page 2 days before her transfer to Dryad ward and two days following her admission, the day before she died. My understanding is that day-to-day medical care was the responsibility of the clinical assistant Dr Barton and during out of hours period the on call doctor based at the Queen Alexander Hospital. Ward nursing staff were responsible for assessing and monitoring Mrs Page and informing medical staff of any significant deterioration.

Accuracy of diagnosis and prognosis including risk assessments

6.11 The assessment and management of Mrs Page at Alexandra Hospital was in my opinion competent and considered. From the information in the clinical notes I would agree with the diagnosis of probable carcinoma of bronchus. The decision to prescribe an antidepressant was in my opinion appropriate. Prior to transfer to Dryad ward she was not in pain but was transferred for palliative care. Although Mrs Page was clearly very dependent and unwell, it is not clear why Dr Barton prescribed opiates to Mrs Page on admission to Dryad ward when there is no evidence she was in pain. I suspect the reason was to provide relief for Mrs Page's anxiety and agitation. This is a reasonable indication for opiates in the palliative care of a patient with known inoperable carcinoma. Mrs Page was noted to be severely dependent, Barthel Index 0, and in conjunction with a probable carcinoma of the bronchus the assessment that she required palliative care and was likely to die in the near future was appropriate.

Evaluation of drugs prescribed and the administration regimens

6.12 The prescription of the major tranquilliser thioridazine for anxiety was reasonable and appropriate. The prescribing of the sedative/hypnotic drug heminevrin was similarly reasonable although potential problems of sedation from the combination need to be considered. Mrs Page was not in pain but I consider the prescription of oramorph on 28th February to attempt to improve her distress was reasonable. By 2nd March Mrs Page remained very distressed despite prescription of Oramorph, thioridazine and heminevrin. Since the notes reported she was more settled following intramuscular diamorphine and she had been spitting out her oral medication, I would consider it appropriate to prescribe a transdermal fentanyl patch to provide continuing opioid drugs to Mrs Page. The lowest dose patch was administered but it would have been important to be aware of the potential for depression of respiration and/or conscious level that could occur.

6.13 I do not understand why subcutaneous diamorphine and midazolam infusions were commenced on 3rd March when Mrs Page had deteriorated whilst on the fentanyl patch. There is no indication in the notes that Mrs Page was in pain or distressed. The notes describe her as having undergone a rapid deterioration, which could have been due to a number of different causes, including a stroke or an adverse effect of the fentanyl patch. In my opinion the prescription by Dr Barton of subcutaneous diamorphine 20-200mg/24hr prn, hyoscine 200-800microg/24hr and midazolam 20-80mg/24hr was poor practice and potentially very hazardous. I would judge it poor management to initially commence both diamorphine and midazolam in a frail elderly underweight patient such as Mrs Page who was already receiving transdermal fentanyl. I would expect very clear reasons to support the use of the drugs to be recorded in the medical notes. The combination could result in profound respiratory depression and there are no symptoms recorded which suggest the administration of either drug was appropriate.

Quality and sufficiency of the medical records

6.14 The medical and nursing records relating to Mrs Page's admission to Dryad ward are in my view of adequate quality, although as stated above the reasons for the use of midazolam and diamorphine are not recorded in either the medical or nursing notes.

Appropriateness and justification of the decisions that were made

6.15 In my opinion the majority of management and prescribing decisions made by medical and nursing staff were appropriate. The exception is the prescription of diamorphine and midazolam on the day of Mrs Page's death. From the information I have seen in the notes it appears that Dr Barton may have commenced the diamorphine and midazolam infusion for non-specific reasons or for non-defined palliative reasons when it was judged she was likely to die in the near future.

Recorded causes of death

6.16 In the absence of a post-mortem the recorded cause of death is reasonable. Mrs Page had a probable carcinoma of the bronchus and experienced a slow deterioration in her general health and functional abilities. It is possible that Mrs Page died from drug induced respiratory depression. However Mrs Page was at high risk of dying from the effects of her probable carcinoma of the bronchus even if she had not received sedative and opiate drugs. Bronchopneumonia

can also occur as a complication of opiate and sedative induced respiratory depression but also in patients deteriorating from malignancy. In the absence of post-mortem, radiological data (chest Xray) or recordings of Mrs Page's respiratory rate I would consider the recorded cause of death was possible. The deterioration on between the 2nd March and 3rd March could have been secondary to the fentanyl patch she received but again could have occurred in the absence of receiving this drug. There are no accurate records of Mrs Page's respiratory rate but significant potentially fatal respiratory depression was likely to have resulted could have resulted from the combination of diamorphine, midazolam and fentanyl.

Duty of care issues

6.17 Medical and nursing staff on Dryad ward had a duty of care to deliver medical and nursing care, to monitor Mrs Page and to document the effects of drugs prescribed. In my opinion this duty of care was adequately met except during the last day of her life when the prescription of diamorphine and midazolam was poor practice and may have contributed to Mrs Wilkie's death.

Summary

6.18 Mrs Page was a frail elderly lady with probable carcinoma of the bronchus who had been deteriorating during the two weeks prior to admission to Dryad ward. In general I consider the medical and nursing care she received was appropriate and of adequate quality. However I cannot identify a reason for the prescription of subcutaneous diamorphine, midazolam and hyoscine by Dr Barton on the 3rd March. In my view this was an inappropriate, potentially hazardous prescription. I would consider it highly likely that Mrs Page experienced respiratory depression and profound depression of conscious level from the combination of these two drugs and fentanyl but I cannot exclude other causes for her deterioration and death at this time such as stroke or pneumonia.

Opinion on clinical management at Gosport War Memorial Hospital based on review of five cases presented by Hampshire Police

7.1 My opinion on the five cases I have been asked to review at Gosport War Memorial Hospital must be considered in context. My understanding is that the five cases have been selected by Hampshire Police because of concerns expressed relating to the management of these patients. Therefore my comments should not be interpreted as an opinion on the quality of care in general at Gosport War Memorial Hospital or of the general quality of care by the clinicians involved. My comments also relate to a period 2-4 years ago and the current clinical practice at the hospital may be very different today. An opinion on the quality of care in general at the hospital or of the clinicians would require a systematic review of cases, selected at random or with pre-defined patient characteristics. Examination of selected cases is not an appropriate mechanism to comment on the general quality of care of an institution or individual practitioners.

7.2 However having reviewed the five cases I would consider they raise a number of concerns that merit further examination by independent enquiry. Such enquiries could be made through further police interviews or perhaps more appropriately through mechanisms within the National Health Service, such as the Commission for Health Improvement, and professional medical and nursing bodies such as the General Medical Council or United Kingdom Central Council for Nursery, Midwifery and Health Visiting.

7.3 My principle concerns relate to the following three areas of practice: prescription and administration of subcutaneous infusions of opiate and sedative drugs in patients with non-malignant disease, lack of training and appropriate medical supervision of decisions made by nursing staff, and the level of nursing and non-consultant medical skills on the wards in relation to the management of older people with rehabilitation needs.

7.4 In all five cases subcutaneous infusions of diamorphine and in combination with sedative drugs were administered to older people who were mostly admitted for rehabilitation. One patient with carcinoma of the bronchus was admitted for palliative care. Although intravenous infusion of these drugs are used frequently in intensive care settings, very close monitoring of patients is undertaken to ensure respiratory depression does not occur. Subcutaneous infusion of these drugs is also used in palliative care, but the British National Formulary indicates this route should be used only when the patient is unable to take medicines by mouth, has malignant bowel obstruction or where the patient does not wish to take regular medication (Appendix 2). In only one case were these criteria clearly fulfilled i.e. in Mrs Page who was refusing to take oral medication. Opiate and sedative drugs used were frequently used at excessive doses and in combination with often no indication for dose escalation that took place. There was a failure by medical and nursing staff to recognise or respond to severe adverse effects of depressed respiratory function and conscious level that seemed to have occurred in all five patients. Nursing and medical staff appeared to have little knowledge of the adverse effects of these drugs in older people.

7.5 Review of the cases suggested that the decision to commence and increase the dose of diamorphine and sedative drugs might have been made by nursing staff without appropriate consultation with medical staff. There is a possibility that prescriptions of subcutaneous infusions of diamorphine, midazolam and hyoscine may have been routinely written up for many older frail patients admitted to Daedalus and Dryad wards, which nurses then had the discretion to commence. This practice if present was highly inappropriate, hazardous to patients and suggests failure of the senior hospital medical and managerial staff to monitor and supervise care on the ward. Routine use of opiate and sedative drug infusions without clear indications for their use would raise concerns that a culture of "involuntary euthanasia" existed on the ward. Closer enquiry into the ward practice, philosophy and individual staff's understanding of these practices would be necessary to establish whether this was the case. Any problems may have been due to inadequate training in management of older patients. It would be important to examine levels of staffing in relation to patient need during this period, as the failure to keep adequate nursing records could have resulted from under-staffing of the ward. Similarly there may have been inadequate senior medical staff input into the wards, and it would be important to examine this in detail, both in terms of weekly patient contact and in time available to lead practice development on the wards. My review of Dr Lord's medical notes and her statement leads me to conclude she is a competent, thoughtful geriatrician who had a considerable clinical workload during the period the above cases took place.

7.6 I consider the five cases raise serious concerns about the general management of older people admitted for rehabilitation on Daedalus and Dryad wards and that the level of skills of nursing and non-consultant medical staff, particularly Dr Barton, were not adequate at the time these patients were admitted.

7.7 Having reviewed the five cases presented to me by Hampshire Police, I consider they raise serious concerns about nursing and medical practice on Daedalus and Dryad wards at Gosport War Memorial Hospital. In my opinion a review of practice at the institution is necessary, if this has not already taken place. I would recommend that if criminal proceedings do not take place, that these cases are brought to the attention of the General Medical Council and United Kingdom Central Council for Nursery, Midwifery and Health Visiting, in relation to the professional competence of the medical and nursing staff, and the Commission for Health Improvement, in relation to the quality of service provided to older people in the Trust.

APPENDIX 1

Pharmacology of Opiate and Sedative Drugs

Morphine

8.1 Morphine is a potent opiate analgesic considered by many to the 'drug of choice' for the control of acute pain (Therapeutic Drugs Dollery). Recommended starting dosage regimens for a fit adult of 70Kg are for intravenous bolus dosing 2.5mg every 5 min until analgesia achieved with monitoring of the duration of pain and dosing interval, or a loading dose of 5-15mg over 30min than 2,5mg – 5mg every hour. A standard reference text recommends 'morphine doses should be reduced in elderly patients and titrated to provide optimal pain relief with minimal side effects'. Morphine can be used for sedation where sedation and pain relief are indicated, Dollery comments '*it should be noted that morphine is not indicated as a sedative drug for long-term use. Rather the use of morphine is indicated where the requirement for pain relief and sedation coexist such as in patients admitted to intensive care units and other high dependency areas, the morphine dose should be titrated to provide pain relief and an appropriate level of sedation. Frequently other pharmacological agents (e.g.: benzodiazepines) are added to this regimen to increase the level of sedation".*

8.2 Diamorphine

8.3

8.4 **Fentanyl**

8.5 Fentanyl is a transdermal opioid analgesic available as a transdermal patch. The '25' patch releases 25microg/hr.

8.6 The British National Formulary (copy of prescribing in palliative care attached Appendix 2) comments on the use of syringe drivers in prescribing in palliative care that drugs can usually be administered by mouth to control symptoms, and that indications for the parenteral route are: patient unable to take medicines by mouth, where there is malignant bowel obstruction, and where the patient does not wish to take regular medication by mouth, It comments that staff using syringe drivers should be adequately trained and that incorrect use of syringe drivers is a common cause of drug errors.

Heminevrin

Midazolam

8.1 Midazolam is a benzodiazepine sedative drug. It is used as a hypnotic, preoperative medication, sedation for procedures such as dentistry and GO endoscopy, long-term sedation and induction of general anaesthesia. Iot is not licensed for subcutaneous use, but is described in the British National Formulary prescribing in palliative care section as 'suitable for a very restless patient: it is given in a subcutaneous infusion dose of 20-100mg/24 hrs.

8.2 DA standard text describes the use of sedation with midazolam in the intensive care unit setting, and states, "*sedation is most commonly met by a combination of a benzodiazepine and an opioid, and midazolam has generally replaced diazepam in this respect".* It goes on to state, "in critically ill patients, prolonged sedation may follow the use of midazolam infusions as a result of delayed administration". Potentially life threatening adverse effects are described, "Midazolam can cause dose-related CNS depression, respiratory and

cardiovascular depression. There is a wide variation in susceptibility to its effects, the elderly being particularly sensitive. Respiratory depression, respiratory arrest, hypotension and even death have been reported following its use usually during conscious sedation. The elderly are listed as a high-risk group; the elderly are particularly sensitive to midazolam. The dose should be reduced and the drug given slowly intravenously in a diluted form until the desired response is achieved. In drug interactions the following is stated. "*midazolam will also potentiate the central depressant effects of opioids, barbituates, and other sedatives and anaesthetics, and profound and prolonged respiratory depression might result.*

8.3

Hyoscine

8.4 The British National Formulary describes hyoscine hydrobromide as an antagonist (blocking drug) of acetylcholine. It reduces salivary and respiratory secretions and provides a degree of amnesia, sedation and antiemesis (antinausea). IN some patients, especially the elderly, hyoscine may cause the central anticholinergic syndrome (excitement, ataxia, hallucinations, behavioural abnormalities, and drowsiness). The palliative care section describes it as being given in a subcutaneous infusion dose of 0.6-2.4mg/24 hours.

8.5

Use of syringe drivers

8.1 The BNF states 'oral medication is usually satisfactory unless there is severe nausea and vomiting, dysphagia, weakness, or coma in which case parenteral medication may be necessary. In the pain section it comments the non-opioid analgesics aspirin or paracetamol given regularly will often make the use of opioids unnecessary. An opioid such as codeine or dextropropoxyphene alone or in combination with a non-opioid analgesic at adequate dosage may be helpful in the control of moderate pain id non-opioids are not sufficient. If these preparations are not controlling the pain, morphine is the most useful opioid analgesic. Alternatives to morphine are hydromoprhine, oxycodone and transdermal fentanyl. In prescribing morphine it states 'morphine is given as an oral solution or as standard tablets every 4 hour, the initial dose depending largely on the patient's previous treatment. A dose of 5-10mg is enough to replace a weaker analgesic. If the first dose of morphine is no more effective than the previous analgesic it should be increased by 50% the aim being to choose the lowest dose which prevents pain. The dose should be adjusted with careful assessment of the pain and the use of adjuvant analgesics (such as NSAIDs) should also be considered. Although morphine in a dose of 5-10mg is usually adequate there should be no hesitation in increasing it stepwise according to response to 100mg or occasionally up to 500mg or higher if necessary. The BNF comments on the parenteral route '*diamorphine is preferred for injection. The equivalent intramuscular or subcutaneous dose of diamorphine is approximately a third of the oral dose of morphine.*'

8.2 In the chapter on pain relief in 'Drugs and the Older Person' Crome writes on the treatment of acute pain ' *treat the underlying cause and give adequate pain relief. The nature of the painful condition, the response of the patient and the presence of comorbidity will dictate whether to start with a mild analgesic or to go immediately to a more potent drug. In order to avoid the situation that patients remain in pain, "starting low" must be followed by regular re-evaluation with, if necessary, frequent increases in drug dose. The usual method of*

prescribing morphine for chronic pain is to start with standard oral morphine in a dose of 5-10mg every four hours. The dose should be halved in frail older people.

Prescribing for the Elderly

The British National Formulary states in Prescribing for the Elderly section "*The ageing nervous system shows increased susceptibility to many commonly used drugs, such as opioid analgesics, benzodiazepines, antipsychotics and antiparkinsonian drugs, all of which must be used with caution*".

APPENDIX 2

BNF Prescribing in palliative care

4