MEDICO-LEGAL REPORT

Re: **Gladys Mabel RICHARDS**
[redacted]

Prepared by:

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For: **Hampshire Constabulary**

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Contents

Introduction and Remit of the Report

8.1 [redacted]

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, [redacted] 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 [redacted] dated 15th August 2001
- Terms of Reference document
- Hospital Medical Records of Gladys Richards, [redacted]
- Witness statements by Leslie France Lack, and Gillian MacKenzie
- Report of Professor Brian Livesley
- Transcripts of police interviews with Gosport War Memorial staff [redacted]

- Transcript of police interviews with Royal Hospital Haslar staff [redacted]
- Transcript of interviews with patient transfer staff [redacted]
- Transcript of police interviews with or statements from following medical and nursing staff: [redacted]

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 [redacted] *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 [redacted], 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 [redacted] that she had spoken to them and had been brighter mentally since the trazadone had been omitted following admission. [redacted] 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 [redacted]s entry in the notes on 3rd August two further entries are made in the medical notes [redacted] on 8th August 1998. [redacted] 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 [redacted] 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,* [redacted] *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* [redacted] *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 [redacted] 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 [redacted] 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 [redacted] in interview with [redacted] and [redacted]). Primary responsibility for the medical care of Mrs Richards during her two admissions to Queen Alexandra Hospital lay with [redacted] 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 [redacted] 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. [redacted] 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 [redacted] rapidly provided this. [redacted] 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. [redacted] an interview with [redacted] and [redacted] 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 [redacted] letter that she was transferred to one of the 8 slow stream rehabilitation beds on Daedalus ward.

2.16 The transfer letter from [redacted] 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 [redacted] and [redacted] 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 [redacted] 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 [redacted] assessment that she needed rehabilitation. In her statement Dr Barton states " [redacted] *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. [redacted] 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 [redacted] [redacted] states that Dr Barton was "*an experienced GP*" who had rights of admission to a GP ward and that [redacted] 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 [redacted] 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 [redacted] in her interview with [redacted] and [redacted] 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, [redacted], 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 [redacted] 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.

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. [redacted] 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 [redacted] 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

GMC and Dr Barton
Report on Gladys Richards (Patient E)

Professor Gary A Ford, FRCP
Consultant Physician

21 April 2009

GMC and Dr Barton
Report on Patient E

1. This report is provided on the instruction of Field Fisher Waterhouse Solicitors. I have been asked to prepare a report on the medical care of Patient E, commenting on the care and treatment carried out by Dr Barton in relation to this patient to assist the GMC Panel in determining whether Dr Barton has fallen short of what is reasonably expected from a medical practitioner in the circumstances that she was practising. I note the allegations presented to the Fitness to Practice Panel that prescriptions by Dr Barton on 11 August 1998 of diamorphine and midazolam were in too wide a dose range and created a situation whereby drugs could be administered to patient E which were excessive to her needs; that prescriptions of oramorphine, diamorphine and midazolam were inappropriate, potentially hazardous and not in the best interests of Patient E.

2. I am the Jacobson Chair of Clinical Pharmacology at Newcastle University and a consultant physician at the Newcastle upon Tyne Hospitals Foundation Trust. I am a Doctor of Medicine and am trained and accredited on the specialist register in Geriatric Medicine, Clinical Pharmacology and Therapeutics in General and Internal Medicine. I was previously Clinical Head of the Freeman Hospital Care of the Elderly Service I undertook research into the effects of drugs in older people. I am current editor of the book Drugs in the Older Population and in 2000 I was awarded the William B. Abrams Award for Outstanding Contributions to Charity and Clinical Pharmacology by the American Society of Clinical Pharmacology and Therapeutics. I am a fellow of the Royal College of Physicians and practiced as consultant physician for 16 years. My curriculum vitae is separately attached.

3. This report should be read in the context of the general report I have provided on the Principles of Medical Care and Matters Specific to Gosport War Memorial Hospital and the medico-legal report I provided to Hampshire Constabulary dated 12 December 2001. In that report pages 4-13 I described the course of events relating to Patient E's admission to the Royal Hospital Haslar on 29 July 1998 subsequent care following her transfer to Daedalus ward, Gosport War Memorial Hospital on 11 August prior to her death on 21 August 1998.

4. This report is based on my review of the following documents: medical records of Patient E; statements of [redacted] police statements of Dr Barton; statement made by Dr Barton in relation to patient E.

5. **Course of events**

   I have described these in my report to Hampshire Constabulary dated 12 December 2001. I have no changes or corrections to make to my statement of the course of events as outlined in that report.

6. **Drug therapy prescribed and received at Gosport War Memorial Hospital.**

   In the next section I list all drug therapy received providing more detail of Dr Barton's prescribing previously outlined in section 2.11 of my report to Hampshire Constabulary (12 December 2001).

   Pages 62-All prescriptions written by Dr Barton unless otherwise marked.

As required prescriptions

Oramorphine 10mg/5ml	11 Aug	1115h	10mg
2.5-5ml		1145h	10mg
Prescribed 11 Aug	12 Aug	0615h	10mg
	13 Aug	2050h	10mg
	14 Aug	1150h	10mg
	17 Aug	1300h	5mg
		?	5mg
		1645h	5mg
		2030h	10mg
	18 Aug	0230h	10mg
		?	10mg

Diamorphine subcut via syringe driver	None administered		
20-200mg/24hr			
Prescribed 11 Aug			
Hyoscine subcut via syringe driver	19 Aug	1120h	200ucg/24hr *? 400*
200-800 ucg/24hr	20 Aug	1045h	400ucg/24hr
Prescribed 11 Aug	21 Aug	1155h	40ucg/24hr
Midazolam subcut via syringe driver	18 Aug	1145h	20mg/24hr
20-80mg / 24 hr	19 Aug	1120h	20mg/24hr
Prescribed 11 Aug	20 Aug	1045h	20mg/24hr
	21 Aug	1155h	20mg/24hr

Regular prescriptions

Haloperidol 2mg/ml oral	13 Aug	One dose administered	
0.5ml 'If noisy'			
Heading 'REGULAR PRESCRIPTION' crossed out and replaced with 'PRN' for this prescription			
Haloperidol 2mg/ml, I mg twice daily	11 -14 Aug		
Prescribed 11 Aug	17 Aug then none administered		
Oramorphine 10mg/5ml	None administered		
2.5 ml four time daily			
Prescribed 12 Aug. Marked 'PRN'			
Oramorphine 10mg/5ml	None administered		
5ml nocte			
Prescribed 12 Aug. Marked 'PRN'			
Diamorphine subcut via syringe driver	18 Aug	1145h	40mg/24hr
40-200mg/24hr	19 Aug	1120h	40mg/24hr
Prescribed 17 Aug	20 Aug	1045h	40mg/24hr
	21 Aug	1155h	40mg/24hr
Haloperidol subcut via syringe driver	18 Aug	1145h	5mg/24hr
5-10mg/24hr	19 Aug	1120h	5mg/24hr
Prescribed 17 Aug	20 Aug	1045h	5mg/24hr
	21 Aug	1155h	5mg/24hr

Lactulose 10ml twice daily	11-14 Aug
Prescribed 11 Aug	17 Aug then none administered

Opinion on Patient Management

7. I have already provided my opinion on patient management in my report to Hampshire Constabulary. I am making additional comments which relate specifically to the allegations made to the Fitness to Practice Panel with respect to Dr Barton's prescribing. I have the following corrections to make to my report to Hampshire Constabulary:
   i) 2.26 line 11 *'The prescription by Dr Barton on 11th August of three sedative drugs by subcutaneous infusion was in my opinion reckless and inappropriate'* is incorrect as Dr Barton had prescribed two sedative drugs diamorphine and midazolam on 11th August. In this report I comment on the initial prescription of the two drugs in this report and the prescription of haloperidol by subcutaneous infusion on 17 August.
   ii) 2.30 line 13 *'In the absence of post-mortem. Radiological data (chest Xray) or recordings of Mr _____ respiratory rate...'* should read *"In the absence of post-mortem. Radiological data (chest Xray) or recordings of Patient E's respiratory rate...'.*

8. Patient E was a frail elderly woman with dementia who was living in a nursing home prior to admission following a fractured hip secondary to a fall. Following assessment by [redacted] (page 24,26 letter summarising assessment) on 3 Aug 1998 she was transferred to Daedalus Ward, Gosport War Memorial Hospital with the aim to improve her mobility. Prior to her transfer to Daedalus ward the orthopaedic nursing team documented on the 10 August that she was fully weight bearing and walking with the aid of two nurses and a Zimmer Frame.

9. The medical notes record a limited assessment by Dr Barton of patient E on 11 August following her admission to Daedalus ward but indicate she was *'not obviously in pain'*. The nursing records on 12 August also state that patient E did not appear to be in pain when she awoke from sleep very agitated. Prior to her transfer to Daedalus ward patient E had been taking cocodamol (paracetamol and codeine) as required. As I have previously commented (section 2.21 report to Hampshire Constabulary) I do not consider it was appropriate to prescribe oramorphine and a subcutaneous diamorphine infusion to patient E on 11 August. The medical records contain no information suggesting patient E's pain would not be controlled by as required or regular cocodamol which she had already been receiving.

10. The oramorphine patient E received between 11-13 August may have contributed to her confusion and agitation following admission to Daedalus ward and to her fall on 13 August leading to dislocation of the hip. However she had dementia, had been agitated prior to receiving the oramorphine and was also taking haloperidol, all of which increase the risk of falls and hip dislocation.

11. The prescription by Dr Barton of diamorphine in the dose range 20-200mg/24hr was excessively wide and placed patient E at a high risk of developing respiratory depression and coma if a higher infusion rate had been commenced. In my opinion from the information available in the notes the prescriptions on 11 August of as required oramorphine and diamorphine by subcutaneous infusion by Dr Barton were inappropriate and potentially hazardous to patient E. The recorded clinical assessment of patient E undertaken by Dr Barton did not justify the prescription of powerful opioid drugs at this stage, and no instructions were recorded in the medical or nursing records as to the circumstances under which oramorphine or diamorphine should be administered.

12. I can find no justification in the medical or nursing notes for the prescription and commencement of the midazolam infusion prescribed by Dr Barton to patient E on 11 August. Patient E had intermittent episodes of agitation and regular haloperidol with additional as required doses was appropriate to manage these symptoms. Midazolam is indicated for terminal restlessness and is also indicated in the Wessex Protocol' for the management of anxiety in a palliative care setting for patients already receiving drugs through a syringe driver. None of these applied to patient E.

13. The dose of subcutaneous midazolam prescribed by Dr Barton was in also in my opinion excessively high. Older patients are more susceptible to midazolam and at increased risk of developing respiratory and central nervous system depression. In an older frail patient in whom a midazolam infusion as indicated an appropriate starting dose would have been 10mg/24hr particularly when diamorphine had also been prescribed. The lower dose of 20mg/24hr was inappropriately high and the upper limit of the dose range prescribed 80mg/24hr unacceptably high. The prescribed dose range of midazolam particularly in conjunction with the diamorphine prescribed placed Patient E at risk of developing life threatening complications if these doses were administered by nursing staff.

14. Following patient E's readmission to Daedalus ward on 17 August the medical and nursing notes document that Patient E had hip pain. I consider the administration of opioids at this point was reasonable and appropriate. The cause of the hip pain was unclear and it would have been good practice for Dr Barton to discuss patient E with the responsible consultant and/or the orthopaedic team. However as no dislocation was present on the repeat XRay the focus would have been on the provision of effective pain relief. The medical and nursing notes Patient E was deteriorating rapidly at this stage. Hip fracture is often a pre-terminal event in frail patients with dementia. I would consider the focus of care was appropriately on palliating Patient E's symptoms of pain and agitation.

15. Oral morphine was initially used and a total of 45 mg morphine was administered to patient E between 17 August 1300h and 18 August 1145h when a diamorphine infusion was commenced. The medical notes do not record the justification for commencing a subcutaneous infusion rather than continuing to administer drugs by the oral route. The equivalent dose of subcutaneous diamorphine is one third to one half of the total oral morphine dose received which would have equated to 15-23mg/24hr. Patient E was still in pain so a further 50% increase in dose was reasonable which would equate to about 35mg/24hr subcutaneous diamorphine. I would consider the dose of diamorphine infused was high but not unreasonably so, although careful monitoring of patient E's conscious level and respiratory rate was required.

16. The nursing and medical notes indicate patient E was in pain and distressed on 17 August and it was appropriate to continue to administer haloperidol via a syringe driver which was commenced on 18 August at an equivalent dose to that she had been receiving orally. On 16 August patient E received 6 mg oral haloperidol (section 2.10 report to Hampshire Constabulary) whilst at Royal Hospital Haslar. Patient E received one dose of haloperidol on 17 August after transfer back to Daedalus ward and the medical notes record she was in pain and distress. I consider the prescription of haloperidol 5mg/24hr by syringe driver on 17 August was reasonable as this equated to the total oral dose received on 16 August. The administration of diamorphine and haloperidol required careful monitoring because these drugs alone or in combination may produce coma and/or respiratory depression.

17. In my view it was appropriate to prescribe opioid analgesia for pain and haloperidol for distress and agitation on 18 August. The medical notes do not record a clear indication for using subcutaneous infusion rather than continuing oral adminstration. However the doses of morphine and haloperidol that were commenced by subcutaneous infusion on 18 August were in my view reasonable.

18. The medical notes provide no justification for the administration of midazolam to patient E on 18 August. It would have been appropriate to observe the response of patient E to the infusion of diamorphine and haloperidol. If patient E remained agitated and distressed and this was not thought to be due to pain it would have been appropriate to increase the dose of haloperidol infused to 10mg/24hr the upper limit of the haloperidol infusion dose range. If this did not relieve Patient E's symptoms it would have been appropriate to consider replacing the haloperidol with midazolam. However as outlined in my report to Hampshire Constabulary II consider the prescription and administration of midazolam with haloperidol and diamorphine in the doses prescribed to be inappropriate and highly risky because of the combined risk of these three drugs to produce respiratory depression and coma. If patient E had remained highly distressed on adequate doses of diamorphine analgesia and haloperidol and substitution of midazolam for haloperidol had not improved control of symptoms of distress and restlessness it would then have been reasonable to consider administering both haloperidol and midazolam to patient E with careful monitoring to ensure patient E's symptoms were controlled without unnecessary adverse effects.

19. Dr Barton stated that she used midazolam in patient E as a muscle relaxant (section 2.27 report to Hampshire Constabulary). This is not an appropriate use. The medical and nursing notes at the time of the midazolam prescription and administration do not contain any record of an assessment of tone or muscle stiffness in patient E. In my opinion the dose range of subcutaneous midazolam prescribed by Dr Barton was in excessively high. Older patients are more susceptible to midazolam and at increased risk of developing respiratory and central nervous system depression. The Wessex Protocols recommended a dose range of 10-60mg/24hr. In an older frail patient an appropriate starting dose would have been 10mg/24hr particularly when diamorphine had also been prescribed. The dose of 40mg/24hr hat was administered was inappropriately high and the upper limit of the dose range prescribed 80mg/24hr beyond that recommended. The prescribed dose range of midazolam prescribed particularly in conjunction with the diamorphine and haloperidol prescribed placed Patient E at high risk of developing life threatening complications.

20. I consider it likely that the diamorphine, midazolam and haloperidol infusions commenced on 18 August very likely produced respiratory depression and coma that led to her dying earlier than she would have done. However patient E required palliative care following her and was likely to die within a few days or weeks after her transfer back to Daedalus ward on 17 August and was likely to die within a short time period. The doses of subcutaneous diamorphine and haloperidol infusions administered were in my view appropriate but there was no justification in the medical notes for the prescription and administration of midazolam in addition to these drugs.

Summary of Conclusions

21. Patient E was a frail older lady with dementia who sustained a fractured neck of femur, which was successfully surgically treated but then complicated by dislocation and continuing pain following successful manipulation. She had a high risk of dying in hospital following these events. She was initially transferred to Daedalus ward with the aim of improving her

mobility before discharging her back to the nursing home she lived in. The information in the notes suggest there was inadequate assessment of patient E by Dr Barton as the doctor responsible for the day to day medical care of the patient when transferred to Deadalus ward on 11 August 1998. The medical notes record no evidence of hip pain at this time and no justification was provided for the prescriptions of oramorphine and subcutaneous diamorphine and midazolam. The prescriptions of subcutaneous infusions of diamorphine and midazolam in the wide dose ranges used were highly risky.

22. Patient E deteriorated rapidly after dislocating her hip on 14 August and treatment with opioids and haloperidol was appropriate. The medical records do not provide any justification for the prescription of midazolam by subcutaneous infusion or is administration on 18 August until Patient E's death on 21 August. In my opinion the midazolam infusion at the dose infused very likely led to respiratory depression and shortened patient E's life although at this stage she required palliative care and was likely to die within a few days or weeks.

23. In my opinion, Dr Barton in her care of Patient E failed to meet the requirements of good medical practice:
    - to provide a adequate assessment of a patient's condition based on the history and clinical findings and including where necessary an appropriate examination;
    - to keep clear, accurate contemporaneous patient records which report the relevant clinical findings, the decisions made, information given to patients and any drugs or other treatments prescribed;
    - to prescribe only the treatment, drugs or appliances that serve patients' needs.

24. I understand my duties as an expert, as set out at paragraph 57 of my Generic Report.

I believe that the facts I have stated in this report are true and that the opinions I have expressed are correct.

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GARY A FORD

GMC and Dr Barton
Supplementary Report on Gladys Richards (Patient E)

Professor Gary A Ford, FRCP
Consultant Physician

25 May 2009

GMC and Dr Barton
Supplementary Report on Patient E

1. This report is supplementary to my previous report dated 21 April 2009 and is made for the purpose of correcting drafting errors. All page number references in the report refer to the -123- format.

2. Section 2 line 4 "... service I undertook research into the effects of drugs in older people." changed to " ....service. I undertake research into the effects of drugs in older people."

Section 12 line 5	"..in the Wessex Protocol'..." corrected to " ... in the "Wessex Protocols"...".
Section 18 line 8	"..Constabulary II consider the prescription..." corrected to '..Constabulary I consider the prescription..."
Section 20 line 3	". ..required palliative care following her and was..." corrected to "required palliative care and was...".

3. I understand my duties as an expert, as set out at paragraph 57 of my Generic Report.

I believe that the facts I have stated in this report are true and that the opinions I have expressed are correct.

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GARY A FORD